

# Iranian Journal of Reproductive Medicine

VOLUME 11 SUPPLEMENT 2 MAY 2013 ISSN: 1680-6433

## ABSTRACT BOOK

Published by: Yazd Research and Clinical Center for Infertility  
In collaboration with: Iranian Society for Reproductive Medicine

### CHAIRMAN MANAGER

Vahidi, Serajedin M.D.

### EDITOR-IN-CHIEF

Aflatoonian, Abbas M.D.

### MANAGING EDITOR

Anvari, Morteza Ph.D.

### EXECUTIVE BOARD

Abdoli, Ali Mohammad M.D.

Dehghani, Maryam B.S.

Khani, Parisa M.D.

Mortazavifar, Zahra Sadat B.S.

Omid, Malihe B.S.

Sheikhha, Mohammad Hasan M.D., Ph.D.

### EDITORIAL BOARD

Ahmadi, Ali Ph.D. (USA)

Al-Hassani, Safa Ph.D. (GERMANY)

Hosseini, Ahmad Ph.D. (IRAN)

Hosseini, Seyed Jalil M.D. (IRAN)

Kalantar, Seyed Mehdi Ph.D. (IRAN)

Karimzadeh Meybodi, Mohammad Ali M.D. (IRAN)

Kazemeyni, Seyed Mohammad M.D. (IRAN)

Khalili, Mohammad Ali Ph.D. (IRAN)

Lenton, Elizabeth Ann Ph.D. (UNITED KINGDOM)

Monsees, Thomas Ph.D. (GERMANY)

Moini, Ashraf M.D. (IRAN)

Nasr-Esfahani, Mohammad Hossein Ph.D. (IRAN)

Pour-Reza, Maryam M.D. (IRAN)

Pourmand, Gholamreza M.D. (IRAN)

Yasini, Seyed Mojtaba M.D. (IRAN)

The Iranian Journal of Reproductive Medicine is indexed in *Institute for Scientific Information (ISI)*, *Scopus*, *Chemical Abstract Services*, *CAB Abstract*, *Index Copernicus*, *Index Medicus for the WHO Eastern Mediterranean Region (IMEMR)*, *Directory of Open Access Journals (DOAJ)*, *EBSCO*, *Socolar*, *ISC*, *Magiran*, *Scientific Information Database (SID)*, *Iran Medex*, *Open J-Gate*, *Bioline International* and approved by Medical Journals Commission of the Ministry of Health and Medical Education.

Publication Permission No.13372

IJRM Office, Research Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

P.O. Box: 89195-999 Yazd, Iran Tel/Fax: +98 (351) 8248348

Email: [ijrm@ssu.ac.ir](mailto:ijrm@ssu.ac.ir)

Website: [www.ijrm.ir](http://www.ijrm.ir)

## Instructions to Authors

### Aims and Scope

The *Iranian Journal of Reproductive Medicine (IJRM)* is an international scientific monthly publication of the Research and Clinical Center for Infertility of Shahid Sadoughi University of Medical Sciences and Health Services.

Publication of *IJRM* benefits from copyright protection in accordance with Universal Copyright Convention. All published articles will become the property of the *IJRM*. The editor and publisher accept no responsibility for the statements expressed by the authors here in. Also they do not guarantee, warrant or endorse any product or service advertised in the journal.

This journal accepts Original Papers, Review Articles, Short Communications, Case Reports and Letters to the Editor in the fields of fertility and infertility, ethical and social issues of assisted reproductive technologies, cellular and molecular biology of reproduction, including the development of gametes and early embryos, assisted reproductive technologies in model system and in a clinical environment, reproductive endocrinology, andrology, epidemiology, pathology, genetics, oncology, surgery, psychology and physiology. Emerging topics including cloning and stem cells are encouraged.

### Submission of manuscript

All authors must sign the "submission form" agreement before the article can be processed. This transfer agreement enables *IJRM* to protect the copyright material for the authors. The copyright transfer covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations, and includes the right to adapt the article for use in conjunction with computer system and programs, including reproduction or publication in machine-readable form and incorporation in retrieval systems. Authors are responsible for obtaining from the copyright holder permission to reproduce all figures for which copyright exists.

Always submit three photocopies of the entire manuscript and a diskette that contains the manuscript and had been created by Microsoft Word, along with three sets of photographs, illustration, diagrams etc to mentioned address. A covering letter identifying the person (full name, address, telephone, fax numbers and e-mail) responsible for correspondence concerning the submitted article should accompany all manuscripts. Manuscripts are received with the understanding that they are not under simultaneous consideration by another publication. The author's transmittal letter must accompany the manuscript and contain these statements: "The manuscript has been seen and approved by all authors involved and is neither being published nor being considered for publication elsewhere. The authors transfer copyright to the *IJRM*."

In case of **electronic submission** of the manuscript the authors must declare that it is being exclusively contributed to *IJRM*. The text should be submitted in Microsoft Word format as an attachment. The figures should be sent in a format of JPEG or GIF which will produce high quality images in the online edition of the journal. Submission is also acceptable via Journal URL: <http://www.ijrm.ir>

### Guidelines for preparation of manuscript

#### Manuscript length

Papers should be of a length appropriate for the amount of information they contain. Failure to restrict the length of manuscripts can negatively influence the editor's decisions.

#### Style

Manuscripts should be written using clear and concise English. The manuscript should include: **Title page; the Abstract; Introduction; Materials and Methods; Results; Discussion; Acknowledgement and References.**

#### Manuscript format

The format of the *IJRM* manuscripts, including tables, references, and figure legends must be type written, double-spaced, on one side of A4 paper, with margins of 2.5 cm. Pages should be numbered consecutively, beginning with the title page and continuing through the last page of typewritten material. Avoid underlining.

#### ❖ Original articles should have the following format:

##### *Title page*

The title page must contain (1) title of article, (2) correct names and highest academic degree of each author, (3) each author's official academic and/or clinical title and affiliation, (4) name and address of the institution(s), (5) name, address, telephone number, e-mail and fax number of author to whom correspondence should be sent.

##### *Running title*

The author should provide a running title of no more than 50 characters.

##### *Abstract*

All original articles must contain a structured abstract of not more than 250 words. The abstract should include; Background, Objective, Materials and Methods, Results, Conclusions and at least 3 to 5 Key words, chosen from the Medical Subject Headings (MeSH) list of index medicus (<http://www.nlm.nih.gov/mesh/MBrowser.html>). They should therefore be specific and relevant to the paper. Authors need to be careful that the abstract reflects the content of the article accurately.

For Randomized Controlled Trials the method of randomization and primary outcome measure should be stated in the Abstract.

##### *Introduction*

This should summarize the purpose and the rationale for the study. It should neither review the subject extensively nor should it have data or conclusions of the study.

##### *Materials and Methods*

This should include the study design and exact method or observation or experiment, definitions such as for diagnostic criteria, the population or patient samples, and laboratory and statistical methods. If an apparatus is used, its manufacturer's name and address should be given in parenthesis. If the method is established, give reference but if the method is new, give enough information so that another author is able to perform it. Statistical method must be mentioned and specify any general computer programme used.

##### *Results*

This should include the pertinent findings in a logical sequence with tables and figures as necessary. It must be presented in the form of text, tables and illustrations. The contents of the tables should not be all repeated in the text. Instead, a reference to the table number may be given. Long articles

may need sub-headings within some sections (especially the Results and Discussion parts) to clarify their contents. Unnecessary overlap between tables, figures and text should be avoided.

### **Discussion**

The discussion should emphasize the present findings and the variations or similarities with other work done in the field by other workers. Conclusions based on the findings, evidence from the literature that supports the conclusions, applicability of the conclusions, and implications for future research. The detailed data should not be repeated in the discussion again. Emphasize the new and important aspects of the study and the conclusions that follow from them. It must be mentioned whether the hypothesis mentioned in the article is true, false or no conclusions can be derived.

### **Acknowledgements**

All contributors who do not meet the criteria for authorship should be covered in the acknowledgement section. Financial and material support should also be acknowledged. Personal acknowledgement should precede those of institutions or agencies

### **References**

All manuscripts should be accompanied by relevant references. The Reference should provide the following information as stated in the presented models as follows:

1. References should be numbered sequentially as they appear in the text according to the Vancouver style. When citing authors in the text, acknowledge only the first author where there are three or more authors, e.g. Williams *et al* (1) stated that.... Where there are two authors cite both, e.g. Jones and Smith (2) reported that.... Citations in the reference list are to be arranged by number in the following format including punctuation.

**Journals:** Author(s). Title of article. Title of journal (in italics with no full stops) Year; Volume number: Page numbers. (Abbreviations for journals used in the reference list should conform to Index Medicus.) e.g. Salehnia M, Arianmanesh M, Beigi M. The impact of ovarian stimulation on mouse endometrium: a morphometrical study. *Iran J Rep Med* 2006; 4:7-11.

**Books:** Author(s). Title: sub-title. Edition. Place of publication: Publisher; Year. e.g. Speroff L, Robert H. Clinical gynecology endocrinology & infertility .6<sup>th</sup> Ed. Philadelphia; Robert-D; 1999.

**Chapter in a book:** Author(s) of chapter. Title: sub-title of chapter. In: Author(s) (or editors) of the book. Title: sub-title of book. Place of publication: publisher; Year; page numbers.

Inclusive page numbers should be given for all references. Print surnames and initials of all authors when there are six or less. In the case of seven or more authors, the names of the first six authors followed by *et al* should be listed.

References to papers accepted for publication, but not yet published, should be cited as such in the reference list e.g. Mohammad Kazem Gharib Naseri M, Mohammadian M, Gharib Naseri Z. Antispasmodic effect of *Physalis alkekengi* fruit extract on rat uterus, *IJRM* 2008, in press.

The author is responsible for the accuracy and completeness of the references and for their correct textual citation.

### **Tables**

In limited numbers should be submitted with the captions placed above. Each table should be numbered consecutively with Roman numerals and typed double-spaced, including all headings. Verify tabular statistics to make sure they tally and match data cited in the text. Do not submit tables as photograph.

### **Figures**

Should be in limited numbers, with high quality art work and mounted on separate pages.

The captions should be placed below. The same data should not be presented in tables, figures and text, simultaneously.

### **Clinical Trial Registration**

From January 2010, all of the Clinical Trials must be registered in Iranian Registry of Clinical Trials ([www.IRCT.ir](http://www.IRCT.ir)), in order to be considered for publication. This includes all of the clinical trials performed inside Iran even if they register in other registration sites. The clinical trials performed abroad, could be considered for publication, if they register in a registration site approved by W.H.O.

According to the International Committee of Medical journal Editors (ICMJE) a Clinical Trial is any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes.

The registration number of the trial and the name of the trial registry must be mentioned at the end of the abstract.

#### **❖ Review articles should be prepared according to one of the following styles:**

- Systematic reviews should be in form of meta-analysis, meta synthesis or without statistical analysis. These articles contain original articles' parts.
- Non systematic reviews should be written by experts who have at least one published article in the related field in references. Different parts of such articles include abstract, introduction, discussion and conclusion. They should contain at least 20 references and maximum 5000 words.

❖ **Short communication** can be in form of research article, systematic review or ongoing research which reports its interesting findings. The parts in this type of articles are like those of original one but they are smaller and prepared in maximum 2000 words.

❖ **A letter to the editor** should be about criticism of previous articles, criticism or review over books, analysis of a related topic with reproductive medicine, expansion and explanation about an idea or a complicated problem. This should be prepared in maximum 1000 to 1500 words. These articles need no structure.

❖ **Editorial article** should be written by either the editor in chief or the editorial board. The editor in chief could also ask an expert to do such a thing. The context of such articles could involve a deep analysis about the up to date topics in reproductive medicine, challenging systems or proposing solutions in reproductive medicine field. They should be prepared in maximum 2000 words and have at least 5 references.

❖ **Case Reports and Brief Reports:** Both should include abstract, keywords, case presentation, discussion, acknowledgment, references, and 1 – 4 figures. Necessary documentations of the case(s) like pathology reports, laboratory test reports, and imaging should be included in the submission package. Brief reports should not have more than one figure and/or table.

### **Illustrations**

Three copies of all figures or photographs should be included with the submitted manuscript. Photographs must be high-contrast, glossy, black and white prints, unmounted and untrimmed, with preferred size of 10 x 15 cm. Color transparencies or photos will be accepted at the discretion of

Editorial Board. Figure number, and name of senior author, should be written on the back of each illustration. Written permission must accompany any photograph in which the subject can be identified or any illustration that has been previously published. All illustrations must be numbered as cited in the text in consecutive numeric order.

#### **Submission requirements**

- Submit only the **final version** of the manuscript.
- The file should be in Microsoft Word.
- Provide the printout of the manuscript that exactly matches the disk file. File names must be clearly indicating the contents of each file.
- Prepare art as camera-ready copy. Laser prints are accepted.

**Page charges:** There is no page charge for publication in the *IJRM*.

**Reprint:** Ten reprints will be provided free of charge.

The corresponding author will be supplied with 3 free issues.

#### **Ethics of studies involving humans and animals**

Ethical considerations must be addressed in the Materials and Methods section. 1) Please state that informed consent was obtained from all participants. 2) Include the name of the appropriate institutional review board that approved the project. 3) Indicate in the text that the maintenance and care of experimental animals complies with National Institutes of Health guidelines for the humane use of laboratory animals, or those of your Institute.

#### **Statistics**

Inadequate or incorrect statistical analyses frequently cause rejection or delays in the review of manuscripts. Where appropriate, authors should seek advice from a professional statistician before the manuscript is submitted.

#### **Ethics of scientific publishing**

Submission of a paper implies that it reports unpublished work and that it is not under consideration for publication elsewhere. If previously published tables, illustrations or text are to be included, then this should be clearly indicated in the manuscript and the copyright holder's permission must be obtained. Previously published material can be cited in a later review or commentary article, but it must be indicated using quotation marks if necessary.

Plagiarism of text from a previously published manuscript by the same or another author is a serious publication offence. Small amounts of text may be used, but only where the source of the material quoted is clearly acknowledged. Fraudulent data or data stolen from other authors is also unethical and will be treated accordingly. Any alleged offence is considered initially by the Editorial Team.

#### **Conflicts of interest**

Authors must acknowledge and declare any sources of funding and potential conflicting interest, such as receiving funds or fees by, or holding stocks and shares in, an organization that may profit or lose through publication of your paper.

#### **Copyright**

The entire contents of *IJRM* are protected under international copyrights. This Journal is for your personal noncommercial use. You may not modify copy, distribute, transmit, display, or publish any materials contained on the Journal without the prior written permission of it or the appropriate copyright owner.

#### **Review process**

The submitted manuscripts will be assessed from editorial points of view, at first. Should the manuscript meet the basic editorial requirements; it will enter the peer-review process. The manuscript will then be sent at least to one in-office and two out of office referees for review. The corresponding author will then be informed to the referee's remark to accept, reject or require modification.

**Revision:** Papers may be returned to authors for modification of the scientific content and/or for language corrections. Revised paper and a letter listing point-for-point response to the reviewers must be submitted to the Editor and must be accompanied by a copy of the original version. Suggestion by the Editor about resubmission does not imply that a revised version will necessarily be accepted. If a paper that is returned to the authors for modification is not resubmitted within two months it will be regarded as having been withdrawn and any revised version received subsequently will be treated as a new paper and the date of receipt will be altered accordingly. Authors who resubmit a paper that has previously been rejected must provide the original manuscript and a letter explaining in detail how the paper has been modified. Accepted manuscripts become the property of *IJRM*.

**Proofs:** A computer printout will be sent to the corresponding author to be checked for only typographical errors and other essential small changes before publication in order to avoid any mistakes. Major alternations to the text cannot be accepted at this stage. Proofs must be returned to the Editor within 2 days of receipt.

#### **Responsibilities of authors**

The authors are responsible for accuracy of all statements and data contained in the manuscript, accuracy of all references information, and for obtaining and submitting permission from the author and publisher of any previously published material included in the submitted manuscript. The corresponding author will receive an edited manuscript for "final author approval".

#### **Disposal of material**

Once published, all copies of the manuscript, correspondence and artwork will be held for 1 years before disposal.

#### **Submit manuscripts to:**

The Editor in Chief,

*Iranian Journal of Reproductive Medicine*, Research & Clinical Center for Infertility, Bouali Ave, Safayeh, Yazd, Iran. P.O. Box, 89195-999.

Telephone: +98 (351) 8247085.

Tel/Fax: +98 (351) 8248348.

E-mail: [ijrm@ssu.ac.ir](mailto:ijrm@ssu.ac.ir)

**URL:** <http://www.ijrm.ir>

**Abstracts of the  
19<sup>th</sup> National Congress on Infertility and  
Reproduction**

**Tehran, Iran  
22-24 May 2013**

**ISRM President:  
Parsanezhad ME, M.D.**

**Congress President:  
Hosseini A, M.D.**

**Scientific Secretary:  
Taheripanah R, M.D.**

## Executive Committee

1. Abdoli AM.
2. Anvari M.
3. Arman E.
4. Dehghani M.
5. Habibi V.
6. Khani P.
7. Mortazavifar ZS.
8. Nazemi N.
9. Omid M.
10. Safari R.
11. Sheikha MH.
12. Sohrabi H.

## Scientific Committee

### A-Gynecology, Infertility

1. Abdollahifard S.
2. Abedi Asl zh.
3. Abtahi SM.
4. Aflatoonian A.
5. Agha Hosseini M.
6. Aghsa MM.
7. Ahmadi SM.
8. Akbari Asbagh F.
9. Alborzi S.
10. Ale Yasin A.
11. Ali Akbarian A.
12. Arefi S.
13. Asefjah H.
14. Asgharnia M.
15. Ashrafi M.
16. Ashrafi Nia M.
17. Azargoon A.
18. Azhar H.
19. Basirat Z.
20. Choobsaz F.
21. Dabir Ashrafi H.
22. Dadras N.
23. Daneshmand F.
24. Davar R.
25. Dehghani Firouzabadi R.
26. Ebrahimi M.
27. Esmaeilzadeh S.
28. Falahi S.
29. Farazday L.
30. Farimani M.
31. Forouhan B.
32. Forozanfar F.
33. Ghadiri M.
34. Ghafoorzadeh Yazdi M.
35. Ghafourzadeh M.
36. Ghahiri A.
37. Ghalambor dezfouli F.
38. Ghasem Zadeh A.
39. Ghazizade SH.
40. Habib Zadeh V.
41. Hosseini Rashidi B.
42. Kalantari A.
43. Kandi Bidgoli T.
44. Karimzade Maibodi MA.
45. Keikha F.
46. Khalili A.
47. Khani B.
48. Madani T.
49. Mahrzad Sadghiyani M.
50. Mansouri Tarshizi M.
51. Mardanian S.
52. Mehdizadeh A.
53. Mehrabian F.
54. Mehrafza M.
55. Mesbahi M.
56. Mesbahi R.
57. Moayed Mohseni S.
58. Moeni A.
59. Mohamad Zadeh A.
60. Mohamadian F.
61. Mohammadbeigi R.
62. Mojibian J.
63. Moosavi Fard N.
64. Mosavi A.
65. Motazedian SH.
66. Namavar B.
67. Nazari T.
68. Pakniyat M.
69. Parsanezhad MA.
70. Pour Reza M.
71. Ramezan Zadeh F.
72. Raoufi Z.
73. Rasekh Jahromi A.
74. Rostami S.
75. Sadri S.
76. Safdarian L.
77. Sahand M.
78. Sahar Khiz N.
79. Saheb Kashaf H.
80. Salehpour S.
81. Samsami A.
82. Saremi AT.
83. Shahrokh Tehrani Nejad E.
84. Shahshahani Z.
85. Sharafi SA.
86. Taheripanah R.
87. Tajaramesh SH.
88. Taliyeh K.
89. Tizro GHR.
90. Vahid Roudsari F.
91. Yavangi M.
92. Younesi M.
93. Zadehmodares SH.
94. Zarei A.
95. Zeai S.
96. Zolghadri J.

### B- Embryology

1. Abed F.
2. Abolhasani F.
3. Absalan F.
4. Abutorabi R.
5. Akhoondi MM.
6. Aliabadi E.
7. Amanpour S.
8. Amir Arjmand MH.
9. Amiri I.
10. Amjadi SH.
11. Anjamrouz SH.
12. Anvari M.
13. Baharvand H.
14. Bahmanpour S.
15. Baigi borojeni N.
16. Beiki AA.
17. Davari M.
18. Ebrahimi B.
19. Ebrahimzadeh AR.
20. Eftekhari Yazdi P.
21. Eimani H.
22. Esmaeil Nejad Moghadam A.
23. Esmaeilpour T.
24. Ghaffari novin M.
25. Hashemi Tabar M.
26. Hassani H.
27. Hosseini A.
28. Hossein-Jada SH.
29. Imani H.
30. Jalali M.
31. Joursaraei SGhA.
32. Kabir Salmani M.
33. Kalantar SM.
34. Karimian L.
35. Karimpour A.
36. Kermani T.
37. Khalili MA.
38. Khazaei M.
39. Koruji M.
40. Koshesh L.
41. Makoulati Z.
42. Matloob N.
43. Mesbah SF.
44. Mirshekari T.
45. Movaghar B.
46. Movahedin M.
47. Nasr-Esfahani MH.
48. Nejad moghadam AE.
49. Nematollahi N.
50. Niknafs B.
51. Nikzad H.
52. Noori M.
53. Rezai A.
54. Rezazadeh M.
55. Sadeghi MR.
56. Sadr Khanloo R.
57. Saeidi H.
58. Salehnia M.
59. Salsabili N.
60. Shafeei M.
61. Shahverdi AH.
62. Sobhani A.
63. Soleymani M.
64. Soleymanirad J.
65. Talayee T.
66. Yazdani S.
67. Yousefi B.
68. Zarnani AH.

### **C- Genetics**

1. Ghafari SR.
2. Ghasemi N.
3. Gourabi H.
4. Modaresi MH.

5. Norozinia M.
6. Nowroozinia M.
7. Poursmaili F.
8. Rezapour S.

9. Sheikhha MH.
10. Taslimi H.

### **D- Urology**

1. Abbasi H.
2. Amirjanati N.
3. Amirzargar MA.
4. Fahimi R.
5. Farahi F.

6. Hosseini SJ.
7. Kazemeini M.
8. Moin MR.
9. Nowroozi MR.
10. Poormand GHR.

11. Pooyan O.
12. Safavi M.
13. Saheb Kashaf S.
14. Sedighi Gilani MA.
15. Vahidi S.

### **E- Midwifery**

1. Abad M.
2. Abdi M.
3. Alhani F.
4. Alimohammadi M.
5. Alizadeh S.
6. Amir Ali Akbari S.
7. Azima S.
8. Babai F.
9. Bahirai A.
10. Ebrahimitavani M.
11. Forohari S.
12. Golbahar Haghighi Z.
13. Goliyan SH.
14. Hadipoor L.
15. Hajizade Z.
16. Hakimi S.
17. Jafarzadeh A.

18. Jan Nesari SH.
19. Jannatiatai P.
20. Kalhori E.
21. Kaviyani M.
22. Kazemi A.
23. Keramat A.
24. Khodakarami N.
25. Khosravi SH.
26. Lamiyan M.
27. latifnejad R.
28. Malakouti J.
29. Malakouti M.
30. Maleki H.
31. Mir Mohammad Ali M.
32. Mir Mowlayee SH.
33. Mir-Ghavamedin N.
34. Moghaddam banaem L.

35. Nahidi F.
36. Pakgohar M.
37. Pournoroz N.
38. Rahimi kiyan F.
39. Roosta F.
40. Sadeghi M.
41. Sattarzadeh N.
42. Simbor M.
43. Taghizadeh Z.
44. Tavakol B.
45. Tehranian N.
46. Torkezahani SH.
47. Valiyati M.
48. Vojodi E.
49. Yazdan M.

### **F- Others**

1. Abbaszadeh M.
2. Dejkam L.

3. Emaniye MH.
4. Mahmodian F.

5. Nejabat.
6. Tabei SZ.

*In the name of God*



**ME. Parsanezhad M.D.**  
**ISRM President**



**A. Hosseini Ph.D.**  
**Congress President**



**R. Taheripanah M.D.**  
**Scientific Secretary**

**Dear Colleagues**

On behalf of the Iranian Society for Reproductive Medicine (ISRM), we would like to express our warmest welcome to the 19<sup>th</sup> national congress on Reproductive Medicine which is being held on 22-24 May 2013, in Tehran, Iran. Medicine is witnessing a significant progress and change, especially after Professor Robert G. Edwards won the 2010 Nobel Prize. The world's first in vitro fertilization (IVF) baby was born from natural cycle. Superovulation became a common practice in IVF later, which has been considered as 'standard' or 'conventional' procedure. Conventional IVF is widely used globally the field of Assisted Reproductive Technology (ART) and Reproductive.

However, concerns regarding cost, side-effects and risks of gonadotropin stimulation on women's health and embryo safety have initiated a scientific movement towards a more physiological and milder approach in ART. ISRM is dedicated to exchanging knowledge and ideas in this field. We hope our gatherings and exchange of experiences assist us to make ART more physiological and affordable and more accessible for all whom are in need of these services. It is our pleasure to welcome you to the 19<sup>th</sup> national congress of Iranian Society Reproductive for Reproductive Medicine (ISRM) 22-24 May 2013, Tehran, Iran.

Sincerely yours,



# **Abstracts of the 19<sup>th</sup> National Congress on Infertility and Reproduction**

## **Contents**

KEY LECTURES .....	1
ORAL PRESENTATIONS.....	4
POSTER PRESENTATIONS .....	35
AUTHORS' INDEX.....	124



## Key Lectures

### K-1

#### Epidemiology of infertility in Iran; A systematic review and meta-analysis

**Parsanezhad ME, Namavar Jahromi B, Khalil S.**

*Department of Obstetrics and Gynaecology, Shiraz University of Medical Sciences, Shiraz, Iran.*

**Email:** parsame@rogers.com

**Introduction:** Epidemiological study of infertility might let the related policy makers to make accurate decisions regarding the potential users' requirements for infertility workup or management. The objective is to find the incidence and etiological factors for infertility in Iranian population.

**Materials and Methods: Data Sources:** An internet-based search through PubMed, Google Scholar and Iran Medex was abdyears (1987-2012) in English or Persian.

**Study Selection:** This project included all of the studies that were designed by random cluster sampling with face to face interviews at home from the Iranian population. Life time infertility was defined as inability to conceive after 12 months of unprotected intercourse. For analyzing the causes of infertility we included the published articles that were designed by Iranian infertility clinics and evaluated the causes of infertility by appropriate diagnostic techniques.

**Data Extraction:** Independent data extraction was performed by two observers and meta-analysis was done. Random effects meta-analyses, a forest plot, publication bias and sensitivity analyses were performed.

**Results:** Twelve studies that were designed to evaluate the prevalence rate of infertility were identified and meta-analysis was performed to integrate the findings of the separate studies. The average rate of infertility was 10.9% (95% CI 7.4-14.4), primary infertility; 10.6% (95% CI 5.3-16.0), secondary infertility; 2.7% (95% CI 1.9-3.5) and current infertility; 3.3% (95% CI 2.7-3.8). Causes of infertility were picked up from seven qualified studies. Male factor was; 34.0% (95% CI 26.9-42.0), female factor; 43.5% (95% CI 35.5- 51.7), both male and female factors; 17.1% (95% CI 11.4-21.9) and unexplained cause; 8.1% (95% CI 5.6-11.5).

**Conclusion:** Prevalence rate of life time infertility was 10.9%. The most common cause was female factor.

**Key words:** Infertility, Iran, Epidemiology.

### K-2

#### The optimal final oocyte maturation triggering in OHSS patinets in IVF/ICSI cycles

**Karimzadeh-Meibidi MA.**

*Department of Obstetrica and Gynecology, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.*

**Email:** makarimzadeh@yahoo.com

For the last few decades urinary human chorionic gonadotrophin (hCG) has been used to induce final oocyte maturation triggering in in vitro fertilization (IVF) and intra-cytoplasmic sperm injection (ICSI) cycles. One of the most adverse effects of U-hCG is the triggering of OHSS. For this reason many researches has been done about the lowering dose use of R-hcg instead of U-hcg. It seem that R-hcg has the shorter half- life and the rate of OHSS is lower than U-hCG. Lower dose of hCG (ex.4000 IU) is related to BMI and both of the high dose an low dose of HCG has equal effect on the induction of final oocyte maturation but the lower dose could result the lower implantation and pregnancy outcome. The gonadotrophin-releasing hormone (GnRH) agonist could use for triggering final oocyte maturation and ovulation can reduce ovarian hyperstimulation syndrome (OHSS) in high-risk patients. Serum LH level at 12-h post-trigger with GnRHa may be lower than hCG and is associated with a dramatically lower oocyte number but not with the oocyte maturity and fertilization rate. The result of fresh embryo transfer and frozen thawed embryo from the GNRH- a triggering is compared and equal. So, It is one the first choice in the high risk patients for OHSS. But GnRH-a can be used in the antagonist cycles. Although serum LH levels post-trigger with GnRH agonist do not affect clinical outcomes but the adverse effect of GnRH-a on the luteal phase is very important and need intensive luteal phase support. So, new modalities has been explained for this intensive luteal phase support to prevent OHSS without the cost of cycle cancellation, ET deferral and reduced clinical pregnancy rates.

**Key words :** OHSS, GnRH agonist, GnRH antagonist.

### K-3

#### Endometrial Receptivity Assessment by 2D, 3D and 4D transvaginal Power Doppler ultrasound

**Behnia H.**

*Department of Obstetrics and Gynecology, Shahid Beheshti University of Medical Sciences, Tehran, Iran.*

**Email:** Hbehniamd@yahoo.com

Accurate timing of endometrial receptivity is a crucial parameter for Successful ART outcome. Receptivity of endometrium is the endpoint of physiologic and anatomic changes that take place in endometrium and adjacent myometrium before implantation. Anatomic changes can be depicted by transvaginal sonography (TVS), so currently TVS is the only, and the routine technic for assessment of endometrial receptivity. By TVS morphological changes of endometrium such as endometrial thickness and endometrial pattern (single or 3 layers) can be evaluated.

Physiologic aspects of endometrial maturation play a key role in successful implantation. Physiologic maturation consists of biochemical, metabolic and vascular changes that must be fulfilled synchronously to anatomic changes. Unfortunately the physiologic changes cannot be evaluated by gray scale TVS, so they

are omitted in traditional assessments of endometrial receptivity. Several investigators have found that asynchronous maturation of endometrium may be the cause of implantation failure. This may explain the low pregnancy rate following ART cycles and some of those couples marked as un-explained infertility.

In recent years advent of newer sophisticated modalities of medical ultrasound imaging technologies such as color Doppler, power Doppler and 3D, 4D volume scanning, have opened new windows to physiologic and functional properties of live organs. By these new modalities, the vascular characteristics of organs such as vascular density, branching pattern, the intensity and velocity of blood flow can be evaluated and measured, and it is possible to see multiplanar display which simultaneously shows three perpendicular planes (Axial, sagittal and coronal) of organs and also calculate the volume of organs by "Virtual Organ Computer-aided AnaLysis" (VOCAL) technology.

The vascular density and blood flow velocity are expressions of metabolic condition of tissues. Vascular Endothelial Growth Factor (VEGF) is a signal protein produced by cells that stimulates neovascularization and angiogenesis. It is a part of the system that restores the oxygen supply to tissues when more blood circulation is demanded. In non-pregnant women VEGF progressively increases during follicular phase reaching its highest levels at mid-luteal phase. Parallel to VEGF, the vascularity of subendometrial region and endometrium increase to prepare endometrium for implantation.

Currently Color Doppler, Power Doppler and 3D, 4D imaging modalities are available for clinical use and many papers have published using these technics to find more precise objective criteria for assessment of endometrial receptivity timing. Several of these studies have reported close correlation between some parameters of 2D, 3D, and 4D transvaginal power Doppler ultrasound and successful implantation and pregnancy rate, so it is suggested that these parameters may be powerful markers for receptivity assessment, and some quantitative cutoff and scoring system for this purpose are defined. Doppler parameters that can be used as markers of receptivity timing are:

- Myometrial vascularity pattern.
- Subendometrial vascularity pattern.
- Uterine artery flow waveform pattern.
- Endometrial volume (calculated by VOCAL technic of 3D ultrasonography).
- Subendometrial volume (calculated by "SHELL" option of VOCAL technic).
- Histogram indices (VI, FI and VFI) and scoring of subendometrium and endometrium (obtained by 3D and 4D transvaginal power Doppler).
- Spiral artery flow waveform pattern.

In this lecture the technical aspects of endometrial assessment by 2D, 3D and 4D transvaginal Power Doppler will be explained and the sensitivity, specificity, positive and negative predictive values of

each one of above parameters and also the problems that have prevented these new ultrasound technics to be routine in clinical application and controversies about them will be discussed.

**Key words:** Doppler, Endometrial Receptivity.

#### K-4

#### The progesterone effect on the luteal phase support: which route is better?

**Taheripanah R.**

*Infertility and Reproductive Health Research center (IRHRC), Iran, Tehran.*

**Email:** taheripanah@sbmu.ac.ir

Luteal support with progesterone is necessary for successful implantation of the embryo following egg collection and embryo transfer in an in-vitro fertilization (IVF) cycle. Progesterone has been used for as little as 2 weeks and for as long as 12 weeks of gestation. Progesterone can be administered by several routes. The oral, intramuscular (IM) and vaginal routes have been chosen frequently in the past. The oral route is ineffective, since progesterone has a low oral bioavailability (<10%), and is associated with a high rate of metabolites. Several randomized trials have shown oral progesterone to be associated with significantly lower implantation and pregnancy rates, and higher miscarriage rates, or both, compared with IM or vaginal administration. Vaginal administration of progesterone offers a number of advantages in terms of patient convenience and tolerability. Vaginal administration has shown to be at least as effective as IM administration, and significantly more effective than oral treatment (16-18). This is due to the first uterine pass effect, whereby progesterone reaches the uterus directly after vaginal administration without first passing through the liver.

The optimal route of treatment is unresolved at present and it remains unclear which route is better to treat women receiving luteal supplementation.

**Key words:** Progesterone, Luteal phase, Vaginal, Oral, Progesterone gel.

#### K-5

#### Cell free DNA: A novel prenatal screening test

**Azhar H.**

*Department of Obstetrics and Gynecology, Shahid Beheshti University of Medical Sciences, Tehran, Iran.*

**Email:** hazharmd@yahoo.com

**Introduction:** Cell free DNA testing is a new screening test that indicates if a woman is at increased risk of having a fetus with Down syndrome (trisomy 21), Edward syndrome (trisomy 18) and Patau syndrome (trisomy 13).

**Materials and Methods:** In this test a sample of the woman's blood is taken after 10 weeks of pregnancy.

The test measures the relative amount of free DNA in the mother's blood.

**Results:** The test determines the chance that the fetus has Down syndrome, Eddward syndrome or Patau syndrome based on the relative amount of DNA from chromosome 21, 18, 13. The results are usually available within two weeks of blood draw.

**Conclusion:** Now cell free fetal DNA testing is thought to detect greater than 99% of all Down syndrome pregnancies and greater than 98 percent of all trisomy 18 pregnancies. It detects 65% of all trisomy 13 pregnancies.

**Key words:** *Down syndrome, Screening test, Cell free DNA.*

## Oral presentations

### 1- Infertility, Gynecology

#### O-1

#### GnRH antagonist/Letrozole in poor responders for ICSI; versus microdose flare up GnRH agonist

Mansouri Torshizi M, Khalilifar H, Fadavi Islam M, Naghavizadeh M, Bazri Z, Joudi F, Mohammadi F, Mahboob S.

Novin Infertility Treatment Center, Mashhad, Iran.

Email: mahlafadavi@gmail.com

**Introduction:** To evaluate and compare the effect of GnRH antagonist/ Letrozole protocole with the Microdose GnRH agonist flare up protocole in poor ovarian responders for ICSI.

**Materials and Methods:** 65 patients with history of poor ovarian response were undergone ICSI randomized in ovarian stimulation with Microdose agonist (Group 1=32) and antagonist/letrozole (Group 2=33).

**Results:** There are no significant differences in mean age, duration of infertility, body mass index and basal serum anti mullerian hormone between two groups. The number of oocytes retrieved was significantly higher in group 1 (p=0.01). There were no significant differences between two groups in pregnancy rate, fertilization rate, quality of oocytes and embryos.

**Conclusion:** The impact of these two protocoles in ovarian stimulation of poor responders seems to be same. (Only the number of oocytes was lower in group 2). Larger sample size is required to establish these result but GnRH antagonist/ letrozole protocole appear to be patient-friendly and cost-effective.

**Key words:** GnRH antagonist, Letrozole, Poor responder, AMH, Microdose.

#### O-2

#### The impact of laparoscopic cystectomy on ovarian reserve in patients with endometriomas

Alborzi S, Keramati P.

Department of Obstetrics and Gynecology, Gynecologic Endoscopy Research Center, Infertility Research Center, Medical School, Shiraz University of Medical Sciences, Shiraz, Iran.

Email: pegah-keramati@hotmail.com

**Introduction:** We studied the impact of laparoscopic cystectomy, as the treatment of choice, on the ovarian reserve of endometrioma patients.

**Materials and Methods:** 151 endometrioma patients, 18-43 years old, referring to Shiraz medical school hospitals were followed with serum antimullerian hormone (AMH) level one cycle preoperatively, 1 week and 3 months postoperatively, and serum follicle-stimulating hormone (FSH), estradiol (E<sub>2</sub>) level, and

ultrasonographic antral follicle count (AFC) pre-and 3 months postoperatively. Age, cyst size, bilaterality, multiplicity, endometriosis stage, and histopathologic grade of follicular loss were also included in our analysis.

**Results:** AMH declined from baseline level (4.24±3.78 ng/ml, mean±SD) to 1 week (1.76±2.04, p<0.001) and 3 months postoperatively (2.13±2.67, p<0.001) with a significant rise from 1<sup>st</sup> week to 3<sup>rd</sup> month (p=0.004). Patients above 38 years old reach clinically significant lower levels at 3rd month (0.42±0.32) though not statistically significant. Patients with ≤3cm cysts and bilateral endometriomas showed no significant rise from 1 week to 3 months postoperatively. AMH decreased remarkably in multiple bilateral ones compared to single and multiple unilateral ones. FSH rose significantly from baseline to 3rd months (6.30±3.00 to 7.10±4.06 mIU/ml, p=0.027), it was clinically significant in older patients (5.87±3.13 to 11.72±6.05). Patients with >3 cm cysts and multiple bilateral endometriomas demonstrated a statistically significant increase in FSH. Baseline E<sub>2</sub> level was significantly lower in older patients and those with bilateral cysts. AFC increased from 8.40±3.22 to 11.86±3.47, p<0.001. No correlation was found between endometriosis stage and histopathologic grade of follicular loss.

**Conclusion:** Ovarian reserve is negatively affected by laparoscopic cystectomy of endometriomas demonstrated by decreased AMH and increased FSH especially in those above 38 years and with multiple bilateral cysts.

**Key words:** Laparoscopic cystectomy, Endometrioma, Ovarian reserve.

#### O-3

#### Obstetric and neonatal outcome in PCOS with gestational diabetes mellitus

Faroozanfard F<sup>1</sup>, Moosavi SGA<sup>2</sup>, Ghattan N<sup>3</sup>, Bazarganipour F<sup>4</sup>.

1. Department of Obstetrics and Gynecology, Kashan University of Medical Sciences, Kashan, Iran.
2. Department of Biostatistics, Kashan University of Medical Sciences, Kashan, Iran.
3. Faculty of Medicine, Kashan University of Medical Sciences, Kashan, Iran.
4. Department of Midwifery and Reproductive Health, Faculty of Medical Sciences, Tarbiat Mdares University, Tehran, Iran.

Email: fatemehfaroozanfard@yahoo.com

**Introduction:** There are some metabolic similarities between women with gestational diabetes mellitus (GDM) and polycystic ovary syndrome (PCOS); it is still uncertain, however, to what extent coexistence GDM and PCOS affects pregnancy outcome. The present study was designed to determine the obstetric and neonatal outcome in PCOS with GDM.

**Materials and Methods:** A case-control study was conducted involving 261 GDM. Thirty hundred-one cases had PCOS based on Rotterdam criteria and the

other thirty hundred cases (control group) were women without PCOS. The subjects in each group were evaluated regarding obstetric and those women whose documentation's were complete entered the study.

**Results:** In the present study, women with PCOS and GDM had a more than twofold increased odds of preeclampsia ( $p=0.003$ ,  $CI=1.56-5.01$ , and  $OR=2.8$ ) and PIH ( $p=0.04$ ,  $CI=1.28-4.5$ , and  $OR=2.4$ ). Maternal PCOS and GDM were also associated with threefold increased odds of neonatal hypoglycemia ( $p=0.004$ ,  $CI=1.49-6.58$ , and  $OR=3.13$ ).

**Conclusion:** Our finding emphasized that pregnant PCOS patients should be followed carefully for the occurrence of various pregnancy and neonatal complications including hypertension, hypoglycemia and hypoglycemia. We suggested that these neonatal should be given more care hypoglycemia symptoms.

**Key words:** Gestational diabetes mellitus (GDM), Polycystic ovarian syndrome (PCOS), Preeclampsia, Hypoglycemia.

#### O-4

### The characteristics of PCOS patients in Jahrom city from 2010 to 2012

Rasekh Jahromi A<sup>1</sup>, Mehrabipour F<sup>1</sup>, Hosseinpoor M<sup>2</sup>, Poorshojai S<sup>3</sup>, Nasserli M<sup>4</sup>.

1. Department of Obstetrics and Gynecology, Jahrom University of Medical Sciences, Jahrom University of Medical Sciences, Jahrom, Iran.
2. Jahrom University of Medical Science, Jahrom, Iran.
3. Rasekh Clinic, Jahrom, Iran.
4. Islamic Azad University, Marvdast Branch, Marvdast, Iran.

Email: drrasekhjahromi@gmail.com

**Introduction:** Polycystic ovary syndrome is one of the most common endocrine disorders. Obesity is seen but not universal. Typically, these features are associated with hypersecretion of luteinizing hormone and androgens but with normal or low serum concentrations of follicle-stimulating hormone. The aim of this study is Comparison of the characteristics of PCOS patients with other researches.

**Materials and Methods:** This is a clinical trial study. The statistical population is 90 patients with PCOS in clinical appearance that referred to Rasekh clinic. Their history concentrate on menstrual cycle, hirsute, infertility, and their hormonal lab data such as FSH, LH.

**Results:** From the 90 cases, 22 person (23.6%) were single, 68 person (76.4 %) married. The age range were 17-40 (mean 25). Regular menstrual cycle is in 12 (14.3%) cases while 78 (85.7%) experienced irregular menstruation. Oligomenorrhea is in 41 (61.2%) cases, 59 (72%) hirsute and 40 (44%) LH/FSH>2. Among married cases, 7.5% were fertile, 67.5% primary infertility and 25% secondary infertility. BMI>24.9 is in 40 (44%) cases, 60 (66%) BMI 15-20. All of them were PCOS pattern in their ultrasound examination.

**Conclusion:** Although obesity was known as a prevalent factor in PCOS by the previous investigations. This study indicates that less than half of the cases were

obese. Accordingly in our region there are another factors affect in PCOS such as genetic, nutrition and geographic area. Using usual treatment for this cases accompanied by complication such as OHSS. Therefore the treatment of these patients should be administered cautiously for safety doses and duration because of irreparable effects.

**Key words:** Comparison, Characteristics, PCOS, OHSS, BMI.

#### O-5

### The value of negative chlamydia trachomatis antibody in prediction of at least one normal tube in infertile women

Raofi Z, Barchinegad M.

Department of Obstetric and Gynecology, Shahid Akbarabadi Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Email: z-raofi@sina.tums.ac.ir

**Introduction:** To evaluate the value of Chlamydia trachomatis Antibody testing in prediction of at least one normal tube in infertile women.

**Materials and Methods:** 80 infertile women without history of abdominal or pelvic surgery, pelvic inflammatory disease and endometriosis were recruited in this cross sectional study from 2009-2010. The patients were underwent histrosalpingography, laparoscopy and Anti Chlamydia Trachomatis immunoglobulin G antibody testing (CAT). We compared laparoscopy findings and CAT regarding sensitivity, specificity, accuracy and predicting value of tubal conditions.

**Results:** The CAT was positive in 50 patients (62.5%) and laparoscopy was in 32 patients (40%). The CAT was significantly higher in women with tubal disease ( $1.88\pm 0.34$ ) versus in normal tubes group ( $1.21\pm 0.28$ ) ( $p=0.003$ ). Five out of 30 seronegative women had unilateral tubal abnormality and none of them had bilateral tubal obstruction or severe pelvic adhesion. The sensitivity, specificity, positive and negative predictive value and accuracy of the CAT in prediction of one normal tube were 100%, 42.25%, 18%, 100% and 48.75% respectively.

**Conclusion:** The negative predictive value of CAT to predict at least one normal tube in infertile women without history of abdominal or pelvic surgery, pelvic inflammatory disease and endometriosis was 100%.

**Key words:** Chlamydia Trachomatis Antibody, Fallopian Tube evaluation, Female Infertility, Predictive value.

#### O-6

### A controlled randomized study to compare the IUI pregnancy outcome between Swim-up and the Upstream method

Abad F, Zademoares S.

Infertility and Health Research Center, Mahdih Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: abedfar@yahoo.com

**Introduction:** IUI is the first line treatment for unexplained infertility. However there is some sperm preparation method but none of them are ideal. Previously we introduce upstream as a simple sperm preparation method and in this study we compare the IUI pregnancy outcome between Swim-up and upstream method.

**Materials and Methods:** In Mahideh IVF center, a total of 51 patients who were candidate for IUI treatment divided in 2 groups randomly. Sperm preparation for the new method (N=25) and the standard Swim-up (N=26) sperm preparation did.

**Results:** The results showed that the pregnancy rate of the Upstream was 20% while in the case of the Swim-up method was 15.3%.

**Conclusion:** The upstream can be used as a simple, rapid, and effective treatment of infertility, especially in the IUI procedure.

**Key words:** IUI, Unexplained infertility, Swim-up, Upstream, Sperm preparation.

### O-7

#### Comparison of intraperitoneal meperidine-bupivacaine versus meperidine for postoperative analgesia after diagnostic gynecologic laparoscopy

Moslemi F<sup>1</sup>, Rasooli S<sup>1</sup>, Abdollahi Fard S<sup>2</sup>.

1. Department of Anesthesia, Faculty of Medicine, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Obstetrics and Gynecology, Faculty of Medicine, Alzahra Hospital, Tabriz university of medical sciences, Tabriz, Iran.

Email: moslemi\_fa@yahoo.com

**Introduction:** Patients undergoing laparoscopic surgery may experience postoperative pain. The intraperitoneal administration of drugs is controversial but has proven effective in some studies for the relief of postoperative pain. So the aim of this study is to compare the effect of intraperitoneal administration of combined meperidine-bupivacaine with meperidine for post laparoscopy analgesia.

**Materials and Methods:** Sixty patients were underwent diagnostic gynecologic laparoscopy and enrolled in two groups of 30. At the end of the procedure, one group received a mixture of 40 ml bupivacaine 0.25% and 50 mg meperidine intraperitoneally and another group received 50 mg Meperidine. Postoperative pain scores were measured postoperative at rest and with movement using VAS score. Other complications such as nausea and vomiting, agitation and etc. were controlled and recorded.

**Results:** Pain scores at rest and with movement were significantly lower in Meperidine-Bupivacaine group than Meperidine group ( $p < 0.05$ ). There was not any significant difference in other complications between groups ( $p > 0.05$ ).

**Conclusion:** Intraperitoneal combination of Bupivacaine-Meperidine was better than Meperidine for postoperative analgesia in patients undergoing diagnostic gynecologic laparoscopy.

**Key words:** Diagnostic laparoscopy, Postoperative analgesia, Meperidine, Bupivacaine, Intraperitoneal.

### O-8

#### Is infertility an important risk factor of ovarian cancer or drugs which used for ART are related to malignancies?

Karimi-Zarchi M<sup>1</sup>, Karimzadeh-Meibodi MA<sup>2</sup>, Aflatoonian A<sup>3</sup>, Dehghani Firouzabadi R<sup>4</sup>, Davar R<sup>4</sup>.

1. Department Gynecological Oncology, Shahid Sadoughi Hospital, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
2. Department of Obstetrics and Gynecology, Madar Hospital, Yazd, Iran.
3. Department of Obstetrics and Gynecology, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: drkarimi2001@yahoo.com

**Introduction:** The aim of this work is a challenging on the association of infertility himself and infertility drugs on gynecological malignancies.

**Materials and Methods:** We evaluated all of patients with breast, ovarian and endometrial cancer who were referred to Gynecological Oncology Clinic in Shahid Sadoughi Hospital, Yazd within 2007-2012 for treatment and follow-up. Their risk factors such as BMI, the history of Infertility, the history of ART, were registered in the questionnaires. The risk factors analyzed by SPSS 11. Also the literature review within 2000-2013 on evaluation of infertility and drug of ART methods on gynecological cancers has been done.

**Results:** 142 patients were registered in Shahid Sadoughi Gynecological Oncology Clinic that are including: 64 patients with ovarian cancer, 56 with endometrial cancer and uterine sarcoma, and 22 patients with breast cancer. Infertility was registered as a risk factor in 38% of endometrial cancer, 51.7% of ovarian cancer and 28.6% of breast cancers. The history of ART was registered in 11.2% of endometrial cancer, 18.4% of ovarian cancer and 8.4% of breast cancers. We found the particular important within infertility and ovarian cancer that they discussed on association of infertility due to PCO disease and an-ovulations to ovarian and endometrial cancers and just some case series showed ovarian and endometrial cancers after ART in infertility.

**Conclusion:** The association of infertility to gynecological cancer is important and approving relation between ART drugs and malignancies need more and long studies on women with infertility who get ART and following them for a long time.

**Key words:** Infertility, Infertility drugs, ART, Ovarian cancer, Endometrial cancer, Breast cancer, Prevention, Survival, Quality of life.



## O-9

### Evaluation of intrauterine injection of rhCG before embryo transfer in improvement of implantation and pregnancy rates in IVF/ICSI: a prospective randomised controlled trial

Zarei A, Parsanezhad ME, Younesi M, Alborzi S, Zolghadri J, Samsami A, Amooee S, Aramesh S, Asadi N.  
Infertility Research Center, Mother and Child Hospital, Shiraz University of Medical Sciences, Shiraz, Iran.  
Email: younesi.dr@gmail.com

**Introduction:** Evidence has accumulated that Interleukin-1  $\alpha$  (IL-1 $\alpha$ ) and IL-1 $\beta$  as well as HCG is secreted by the blastocyst and that these agents can have positive effect on the endometrium and endometrial receptivity. The aim of this study is to evaluate the complementary effects of HCG on endometrial receptivity.

**Materials and Methods:** We evaluated 555 patients who referred for IVF/ICSI at the reproductive medicine center of Mother and Child Hospital. All patients were assigned to ART for the first time. One-hundred eighty two patients fulfilled the study. The study group (n=182) received 250  $\mu$ g of rhCG (n=85) intrauterine administration 12 minutes before ET. The control group (n=97) underwent ET without rhCG.

**Result(s):** The IR and PR were statistically significantly higher in the 250  $\mu$ g rhCG groups (39.0% and 35.4%, respectively) as compared with the control group (23.7% and 20.6%, respectively).

**Conclusion:** Intrauterine injection of 250  $\mu$ g of rhCG before ET statistically significantly improved the implantation and pregnancy rates in IVF/ICSI.

**Key words:** ICSI, Implantation rate, Intrauterine rhCG, IVF, Pregnancy rate.

## O-10

### Effect of age on oocyte quality and quantity after ART in polycystic ovarian syndrome patients

Erfanian Ahmadpoor M<sup>1</sup>, Mansouri Torshizi M<sup>2</sup>, Fazelnasab N<sup>1</sup>, Naghavizadeh M<sup>2</sup>.

1. Department of Anatomy and Embryology, Islamic Azad University, Shahinfar School of Medicine, Mashhad Branch, Mashhad, Iran.
2. Novin Infertility Treatment Center, Mashhad, Iran.

Email: mary.naqavi@gmail.com

**Introduction:** Polycystic ovarian syndrome (PCOS) is probably the most prevalent endocrinological disorder affecting women during the reproductive age. It is estimated to affect 5-10% of women characterized by increased circulating androgen levels, an ovulatory infertility, frequently gonadotropin dysregulation and hyperinsulinemia. Women with PCOS, often have menstrual disturbance that is because of their gonadotropin dysregulation. Studies show that advancing age in PCOS patients leads to improve their

menstrual disturbance. To evaluate the effective of female age on oocyte quality and quantity in PCOS patients that is undergoing ART methods.

**Materials and Methods:** A group of 15 female with polycystic ovarian syndrome and infertility who came to Novin infertility center for ART between 2010-2011, were recruited for this study. Female age, quality and quantity of oocytes, number of embryos transferred and pregnancy rate were measured, then we identified effects of age on quality and quantity of oocytes and number of embryos transferred. The statistical analysis was performed by using SPSS soft ware, version 16.0. All tests were two-tailed with a confidence level of 95% (p<0.05).

**Results:** There were reverse and significant association between female age and number of oocytes (p=0.028), eggs (p=0.046), metaphase II oocytes (p=0.034) and the number of oocytes type A (p=0.027). However increasing age of pcos patients was near to associated significantly with reduced pregnancy rate with ART methods. But there were no significant differences between female and number of embryo transferred and oocytes type b, c.

**Conclusion:** advancing age in PCOS patients, lead to decrease the number of oocytes, eggs, oocytes type A and metaphase II oocytes.

**Key words:** PCOS, Age, Oocyte.

## O-11

### A comparison of pregnancy rate before and after the administration of HCG in intrauterine insemination

Mojtahedi M<sup>1</sup>, Dehghani Firouzabadi R<sup>2</sup>, Aflatoonian A<sup>2</sup>, Davar R<sup>2</sup>.

1. Department of Obstetrics and Gynecology, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
2. Department of Obstetrics and Gynecology, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: drmojtahedi@ssu.ac.ir

**Introduction:** Intrauterine insemination (IUI) is one of the first treatments of infertility. In natural cycles, women conceive when an intercourse takes place during a six-day period ending on the day of ovulation. The current practice in IUI cycles is to perform IUI 24-36 hours after the HCG administration, when the ovulation already took place. In this study, HCG was administered after IUI, which more closely resembles the fertilization process in natural cycles. The aim of the present study is to compare the fertility rates in an IUI protocol in women who took an HCG injection before and after the IUI.

**Materials and Methods:** This study was conducted on 100 infertile couples who referred to the Clinical and Research Center for Infertility, Shahid Sadoughi University of Medical Sciences. They were divided into two groups: HCG injection before IUI and HCG injection after IUI. The outcome measure was the result of a  $\beta$ HCG test that was done two weeks after the IUI; if

it was positive, transvaginal sonography would be performed in the seventh week for clinical confirmation of pregnancy.

**Results:** The analysis included 50 cycles with HCG administered before and 50 cycles with HCG administered after the IUI. The pregnancy rates were 10% and 12% ( $p=0.85$ ), respectively. Independent factor affected the cycle outcome was the time of infertility.

**Conclusion:** HCG administration after IUI brought about no improvement in the pregnancy rate. Therefore, HCG can be administered either before or after IUI.

**Key words:** HCG, IUI, Pregnancy rate.

## O-12

### Adenomyosis, determinants of diagnosis in a referral laparoscopic clinic in Iran

Akbari E<sup>1</sup>, Aminlou M<sup>1</sup>, Mohazzab A<sup>2</sup>, Ghoojani A<sup>2</sup>, Shadjoo K<sup>1</sup>, Padmehr R<sup>1</sup>, Zarnani A<sup>3</sup>, Akhondi MM<sup>2</sup>, Shervin A<sup>1</sup>.

1. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

**Email:** ADS1947@yahoo.com

**Introduction:** Adenomyosis results from the invasion of basal endometrial gland and stroma into the underlying endometrium. Until now the only certain diagnoses have been made by histopathologists on uteri removed at surgery, but recently various sufficiently accurate techniques have been suggested which allow diagnosis on the uterus in situ. Furthermore, resectoscopic treatment has been proposed in some mild forms of adenomyosis to avoid hysterectomy.

**Materials and Methods:** In this retrospective study medical records of 57 patients with confirmed histopathologic endometriosis and adenomyosis were evaluated. SPSS 13 software was used for statistical analysis.

**Results:** These patients were 29-50 years old (mean:  $39.1 \pm 5.78$ ). The mean age of only endometriosis patients was  $32.41 \pm 6.73$ . There were 53 married cases (93%). 37 out of 57 (65%) were multiparous. The mean BMI of patients with endometriosis and adenomyosis was  $26.34 \pm 4.79$  versus this data for endometriosis only patients was  $22.5 \pm 3.34$  ( $p < 0.001$ ). The chief complaints were as following: chronic pelvic pain in 52 cases (91.2%), abnormal uterine bleeding in 21 cases (36.8%), pre and post menstrual spotting in 37 (64.9%) and 31 (54.4%) cases respectively and infertility in 8 (15.1%) and dyspareunia in 20 (37.7%) of married patients.

**Conclusion:** this study shows that the mean age of adenomyotic patients is higher than endometriosis only patients. Also their BMI was higher. Multiparity could be a risk factor for adenomyosis. This finding was compatible with other studies. It seems that the definitive diagnosis should be interpreted after surgery.

**Key words:** Adenomyosis, Laparoscopy, Chief complaint, Multiparity, BMI.

## O-13

### Does seasonality affect intrauterine insemination success rate: A 10-years study

Yousefi B<sup>1</sup>, Moradan S<sup>2</sup>, Azargoon A<sup>3</sup>.

1. Department of Anatomical Sciences, School of Medicine, Amir-almomenin Hospital, Semnan University of Medical Sciences, Semnan, Iran.
2. Department of Obstetric and Gynecology, Semnan University of Medical Sciences, Amir Hospital, Semnan, Iran.
3. Department of Infertility, Semnan University of Medical Sciences, Semnan, Iran.

**Email:** yousefi.m13@gmail.com

**Introduction:** Several prognostic factors for intrauterine insemination (IUI) outcome have been proposed. The objective of this study was to identify seasonal effects on pregnancy rates in a large population of patients undergoing IUI.

**Materials and Methods:** We performed a descriptive-cross sectional study among of infertile women (no=892) who were treated with IUI. The data was collected between 2000 and 2009 in the fertility ward of Semnan University of Medical Sciences. Patients underwent a basic fertility workup and the ovarian hyperstimulation. Information was also categorized into four groups on based on differences of seasons. The comparison between groups was performed by using SPSS software, version 10.0 for windows.

**Results:** Our analysis considered 892 patients; pregnancy rate was 15.9% (no=142) and majority of these pregnancies were achieved in the first cycle. Overall pregnancy rates were 17% (no=38) for spring, 17% (no=37) for summer, 16% (no=37) for autumn and 14% (no=30) for winter. Pregnancy rate was similar on different seasons (except of winter). While, IUI outcomes during different months were unlike. Our favorite results were achieved in August (22%), April (19%), June (19%), September (18.5%) and February (18%), respectively. Whereas the rate of success significantly was below in March (0.8%) and July (0.9%).

**Conclusion:** The result of this study suggests that the suitable success of pregnancy may be received after IUI treatment in some months such as August as well as April and June; although future studies are needed to be seen seasonal effects on pregnancy rates.

**Key words:** Fertilization, Intrauterine insemination success rate, Season, Month.

## O-14

### Is there any difference between ART outcome of too young patients and adult patients?

Etebary S<sup>1</sup>, Yari N<sup>1</sup>, Khalili MA<sup>2</sup>.

1. Department of Obstetrics and Gynecology, Research and Clinical Centre for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
2. Department of Anatomy, Research and Clinical Centre for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: sahab\_ete@yahoo.com

**Introduction:** It is well known that the pregnancy rate is inversely related to the age of the female partner. Since, some of the patients who undergo ART treatment are very young patients or young donors, fecundity investigation seem necessary in this group.

**Materials and Methods:** Data from patients who underwent IVF/ICSI over 20 years from 1992-2012 that referred to Yazd infertility treatment Center were analyzed retrospectively. The records of 407 infertility patients aged 17-25 (as study group) years and 407 infertility patients aged 26-35 years (as control group) were collected and reviewed. Patient demographics, cycle characteristics and cycle outcome were compared among the two groups.

**Results:** Chemical pregnancy rate (Positive  $\beta$ HCG) was 25.8% and 29.02% in study and control group respectively. Number of follicles  $\geq 14$  mm ( $p < 0.001$ ), retrieved oocytes ( $p < 0.001$ ), MII oocytes ( $p < 0.001$ ), grade of embryos ( $p < 0.001$ ) and number of cleaved embryos ( $p < 0.001$ ) were significantly higher in study group. While, number of transferred embryos and chemical pregnancy weren't significantly different between two groups.

**Conclusion:** Results show that pregnancy rate in adult patients was higher than too young patients although pregnancy outcome wasn't significantly different between two groups, so it seems that very young age has no effect in ART outcome.

**Key words:** In vitro fertilization, Young patients, Pregnancy, Reproductive outcome.

## O-15

### Cryobanking of human ovarian tissue by vitrification as an alternative method for fertility preservation

Abdollahi M<sup>1</sup>, Salehnia M<sup>1</sup>, Salehpour S<sup>2</sup>.

1. Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.
2. Infertility and Reproductive Health Research Center (IRHRC), Ayatollah Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: m.abdollahi@modares.ac.ir

**Introduction:** Ovarian tissue cryobanking for cancer patients is now offered in many reproductive centers. The ovarian tissue is mainly intended for future transplantation for fertility preservation purposes. This is of highest importance in cancer patients who are planned to receive gonadotoxic treatment. Vitrification is now being anticipated to be routine method for ovarian tissue cryopreservation. In this study we aimed to evaluate the efficiency of vitrification technique to cryopreserve the ovarian tissue in this patient.

**Materials and Methods:** Ovarian cortical biopsies were collected after informed consent from 14 women aged 23-36 years undergoing elective caesarean sections. Tissues were vitrified in cryotube, using EGF 40% as cryoprotectants. Non-vitrified and warmed-vitrified tissue was compared by light and electron microscopic morphology of the follicles within the tissues.

**Results:** It was detected that  $93.75 \pm 0.5121\%$  and  $90.88 \pm 0.4802\%$  of follicles were morphologically normal in non-verified and vertofoed groups respectively. There were no significant differences between non-vitrified and vitrified groups. There weren't any differences at the light or electron microscopic characteristics of follicular cells, oocyte and stromal cells between non-vitrified and vitrified tissues. No increase in apoptosis was observed by TUNEL assay in vitrified groups. Also using DNA Laddering technique no laddering pattern of DNA was observed in vitrified and non- vitrified groups.

**Conclusion:** The data suggest that the vitrification technique could well preserve human ovarian tissue and it is an alternative method to preserve the fertility potential of cancer patients before clinical treatment and it could serve in ovarian tissue cryobanking.

**Key words:** Cryobanking, Vitrification, Human ovarian tissue, Apoptosis.

## O-16

### Predicted success rate of fertility in patients treated with assisted reproductive techniques using neuro fuzzy

Anvari SM<sup>1</sup>, Jazayeri H<sup>2</sup>, Harounabadi A<sup>3</sup>, Khafri S<sup>4</sup>.

1. Department of Computer, Dezful Branch, Islamic Azad University, Dezful, Iran.
2. Department of Computer, Noshirvani University, Babol, Iran.
3. Department of Computer, Islamic Azad University, Central Tehran Branch, Tehran, Iran.
4. Department of Social Medicine, Babol University of Medical Sciences, Babol, Iran.

Email: ghaem.anvari@gmail.com

**Introduction:** Infertility is one of the major problems involving 15% of young couples. Some couples solve their problem with regular clinical treatments. However, it is untreatable in 48% of them and they need special laboratory techniques called ART. There have been interests in cognitive sciences, neuronal networks, fuzzy theory and statistical neuronal models as the most effective tools in prediction problems. The purpose of this study was to evaluate the efficacy of Neuro fuzzy method in predicting the success rate of ART methods in treatment of infertile patients.

**Materials and Methods:** 300 infertile women aged between 20-38 years old, who underwent ICSI surgery and were in oocyte retrieval and embryo transfer stage entered in this retrospective study. After data collection and initial analysis using univariate statistical tests, logistic regression model was performed for synchronic

modeling of obtained variants from previous steps and important clinical variants. Besides, to practice neural fuzzy model, data were divided into training and testing groups. Then, appropriate model was resulted from training data and was tested against testing group to assess its accuracy. Finally, we used ROC curve to evaluate the prediction power of various models.

**Results:** Logistic regression model showed that of entered variables into model, wife's age, kind of infertility (primary or secondary), and duration of infertility can predict success of infertility treatment. Prediction value was 52.4% for logistic regression model and 84% for fuzzy neuronal networks.

**Conclusion:** Although both models had low reliability, fuzzy neuronal model was more reliable. Moreover, fuzzy neuronal network model presented more effective variables as effective factors.

**Key words:** Infertility, Fuzzy neural networks, Prediction, ART.

### O-17

#### The association between sub clinical hypothyroidism with insulin resistance and lipid profiles in women with polycystic ovarian syndrome

Aghahosseini M<sup>1</sup>, Aleyasin A<sup>1</sup>, Sarvi F<sup>1</sup>, Safdarian L<sup>1</sup>, Rahmanpour H<sup>2</sup>.

1. Infertility Center, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Gynecology, Aiatollah Moosavi Hospital, Zanjan University of Medical Sciences, Zanjan, Iran.

Email: haleh509@gmail.com

**Introduction:** PCOS and thyroid dysfunction are two endocrine disorders that have communication with insulin resistance (IR), but there is confliction about association between subclinical hypothyroidism (SCH) and insulin sensitivity in women with PCOS. The aim of this study was the evaluation of association between SCH and insulin resistance and dislipidemia in women with PCOS.

**Materials and Methods:** A total of 373 patients with PCOS in according to the Rotterdam criteria were included. After physical examination, serum evaluation of fasting Insulin, glucose, F T3, F T4, TSH, serum lipid concentration and endocrine parameters were done. Patients with normal F T3 and F T4 according to TSH level <5 or ≥5 were divided to normal (group A) and SCH (group B). The level of Insulin resistance was estimated by Homeostasis model assessment (HOMA-IR) and oral glucose tolerance test (OGTT).

**Results:** Group A (n=335) and group B (n=38) were comparable about age, BMI and hirsutism score. There were not any differences between two groups, regard to hormonal assessment and Lipid profiles. About glucose metabolism there was no difference in fasting glucose and insulin and OGTT results between two groups. Mean of HOMA-IR in both group were higher than IR cutoff and were similar in two groups (3.01±2.02 in group A and 3.71±2.93 in group B) (p=0.159).

**Conclusion:** Women with PCOS have IR independently to SCH and subclinical hypothyroidism is not associated with Insulin resistance and hyperlipidemia in women with PCOS.

**Key words:** Polycystic ovary syndrome, Subclinical hypothyroidism, Insulin resistance.

### O-18

#### Association between luteal phase serum progesteron and pregnancy rate in ICSI cycles

Aghsa M<sup>1</sup>, Rahmanpour H<sup>2</sup>, Bagheri M<sup>1</sup>, Davari Tanha F<sup>3</sup>.

1. Infertility Research Center, Vali-Asr Hospital, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Gynecology and Infertility, Ayatollah Moosavi Hospital, Zanjan University of Medical Sciences, Zanjan, Iran.
3. Department of Infertility, Mirza Koochak Khan Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Email: haleh509@gmail.com

**Intruduction:** Many factors have important role in outcomes of intra-cytoplasmic sperm injection (ICSI) and one of them is the luteal function that is required to promote the endometrial maturation and preparation for implantation. The aim of this study was the evaluation of serum progesteron in luteal phase and its association with pregnancy rate in ICSI cycles.

**Materials and Methods:** 150 women who underwent ICSI with GnRH antagonist protocol were included. Their average age was 32 years old with body mass index (BMI) <25 and had maximum of two prior ICSI and minimum of three oocytes in aspiration. The luteal phase support were done with 800 mg Cyclogest vaginally. Serum progesterone concentration was measured on day 6 after embryo transfer and its association with outcomes of ICSI was evaluated.

**Results:** The biochemical pregnancy rate was 44%. Mean serum progesteron of luteal phase in group who had biochemical pregnancy was 34.10±4.79 ng/ml vs. 15.01±2.08 ng/ml in noun preganants (p>0.0001). There was a positive correlation between the mean luteal phase progesteron levels and clinical pregnancy rates.

**Conclusion:** The luteal phase progesterone affect the ICSI outcomes and its level is varying between patients who receive the same progesterone supplementation in luteal phase. The events of luteal phases have important role in ICSI outcomes and need the more study.

**Key words:** Luteal phase, Serum progesterone, ICSI.

### O-19

#### Does dietary fat intake influence oocyte competence by inducing oxidative stress in follicular fluid?

Kazemi A<sup>1</sup>, Ramezanzadeh F<sup>2</sup>, Nasr-Esfahani MH<sup>3</sup>.

1. Nursing and Midwifery Care Research Center, Faculty of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

2. Department of Reproductive Health, Vali-Asr Reproductive Research Center, Tehran University of Medical Sciences, Tehran, Iran.
3. Department of Reproduction and Development, Reproductive Biomedicine Center, Royan Institute for Animal Biotechnology (ACECR), Tehran, Iran.

Email: kazemi@nm.mui.ac.ir

**Introduction:** This study was conducted to investigate the relationship between fat intake and oxidative stress in follicular fluid with oocyte competence and embryo quality.

**Materials and Methods:** A follow up study was carried out on 236 women undergoing assisted reproduction program. Malondialdehyde levels and total antioxidant capacity levels of follicular fluid were assessed as oxidative stress biomarkers. The percentage of metaphase II stage oocytes, fertilization rate, no fragmented embryo rate, mean of blastomers and good cleavage rate were considered as markers of oocyte competence.

**Results:** The malondialdehyde level in follicular fluid was positively related to polyunsaturated fatty acids intake level ( $p=0.02$ ) and negatively associated with good cleavage rate ( $p<0.05$ ). Also good cleavage rate ( $p<0.01$ ) and mean of blastomers ( $p<0.01$ ) was negatively associated with polyunsaturated fatty acids intake levels. The percentage of metaphase II stage oocyte was positively related to the total antioxidant capacity levels in follicular fluid ( $p<0.05$ ). Significant relations were also observed between some of oocyte competence markers and type of calorie intake in form of fat.

**Conclusion:** These findings revealed that fat rich diet may induce the oxidative stress in oocyte environment and negatively influence oocyte competence. This effect can partially be accounted by polyunsaturated fatty acids uptake while oocyte maturation is related to total antioxidant capacity and oocytes with low total antioxidant capacity have lower chance for fertilization and further development.

**Key words:** Fat intake, Oxidative stress, Follicular fluid, Oocyte, Embryo fragmentation, Cleavage.

## O-20

### Predictive factors of moderate/ severe ovarian hyperstimulation syndrome in non-polycystic ovarian syndrome patients: a statistical model

Ashrafi M, Arabipoor A.

Department of Endocrinology and Female Infertility at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

Email: arezoo.arabipoor@gmail.com

**Introduction:** To compare patient characteristics and clinical and laboratory parameters in non-polycystic ovarian syndrome (NPCOS) patients who encountered with moderate to severe ovarian hyperstimulation syndrome (OHSS) occurrence with those who did not.

**Materials and Methods:** Among 7073 in vitro fertilization and/or intracytoplasmic sperm injection cycles in NPCOS patients performed from January 2008

to December 2010 in Royan Institute, a total of 86 NPCOS patients encountered with moderate to severe OHSS were evaluated retrospectively. To review the OHSS risk factors, 172 NPCOS patients treated in the same period of time, without developing OHSS were selected randomly by computer as control group. We used multiple logistic regressions in a backward manner to build a prediction model.

**Results:** The analysis revealed that the variables including age (OR:0.9, CI:0.8-1.0), antral follicles count (OR:4.3, CI:2.7-6.9), infertility cause (tubal factor: OR:11.5, CI:1.1-51.3), hypothyroidism (OR:3.8, CI:1.5-9.4) and positive history of ovarian surgery (OR:0.2, CI:0.05-0.9) were the most important predictors of OHSS. The regression model had an area under curve of 0.94, presenting an allowable discriminative performance that was equal with two strong predictive variables including the number of follicles and serum estradiol levels on human chorionic gonadotropin (hCG) day.

**Conclusion:** The predictive regression model based on demographic characteristics of NPCOS patients had equal specificity in comparison with two mentioned strong predictive variables; it can be applicable to use this model before the beginning of ovarian stimulation cycle to prevent early OHSS.

**Key words:** OHSS, Non polycystic ovarian syndrome, Risk factors, Statistical model.

## O-21

### Regression of endometrial hyperplasia after medical therapy and its beneficial effect on recurrent spontaneous abortion, a case series study

Zolghadri J, Younesi M, Zarei A, Sarikhani L, Behdin S, Aramesh S, Dadras N.

Infertility Research Center, Mother and Child Hospital, Shiraz University of Medical Sciences, Shiraz, Iran.

Email: younesi.dr@gmail.com

**Introduction:** Endometrial hyperplasia is thought to be caused by the prolonged, unopposed oestrogenic stimulation of the endometrium either endogenously or exogenously. The regression of hyperplastic back to normal endometrium is the main purpose of any conservative treatment in order to prevent development of adenocarcinoma and early abortion.

**Materials and Methods:** Nineteen patients with recurrent abortion were enrolled in this trial at Mother and Child hospital. In the primary visit, transvaginal ultrasound in post menstrual period performed for all the patients. If endometrial thickness was more than 12 mm, endometrial biopsy was done before initiating of treatment. Then, the patients were divided into 4 groups: I took OCP, II took 400 mg danazol in 2 divided doses, III took medroxyprogesterone, 10 mg/day lasting 10 days each cycle and IV underwent expectant management. All groups were treated for 3 months. Then endometrial biopsy was repeated to reevaluate the

endometrial thickness. The patients thereafter were recommended to become pregnant.

**Results:** Six out of 7 patients with expectant management and 2 out of 12 patients on drug treatment groups had abortion. One out of 7 patients with expectant management and 10 of 12 patients with drug treatment had clinical pregnancy more than 12 weeks. The result of ongoing pregnancy beyond first trimester were statistically significant between expectant (14.3%) and drug treatment (83.3%) groups ( $p=0.006$ ).

**Conclusion:** Medical therapy to reduce the endometrial thickness comparing to expectant management in patients with recurrent abortion and endometrial hyperplasia significantly improved the ongoing pregnancy rate and decrease early pregnancy loss.

**Key words:** Endometrial hyperplasia, Early abortion, Drug treatment, Expectant treatment, Ongoing pregnancy.

## O-22

### Assessment of symptom distribution in patients with endometriosis

Mohazzab A<sup>1</sup>, Aminlou M<sup>2</sup>, Akbari E<sup>2</sup>, Akhondi MM<sup>1</sup>, Zarnani A<sup>3</sup>, Shirzad M<sup>1</sup>, Shervin A<sup>2</sup>.

1. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
2. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: ADS1947@yahoo.com

**Introduction:** Endometriosis is one of the most common gynecologic diseases of female population. Due to lack of accurate report of symptom patterns in Iran, this study has tried to illustrate endometriosis outlines in this country.

**Materials and Methods:** Among 1054 patients admitted to a referral laparoscopy clinic in Tehran (2002-2012), records of 643 patients with histopathologically confirmed endometriosis were evaluated.  $\chi^2$  test was used to analyze the data of symptoms.

**Results:** The chief complaints were chronic pelvic pain in 49.6% of patients, abnormal uterine bleeding in 20% of patients and infertility in 30.5% of married patients. Pre and post menstrual spotting was seen in 61.5% and 64.5% of patients which was significantly different with none endometriotic patients ( $p<0.001$ ). Prevalence of dyspareunia in endometriotic and none endometriotic patients was 45.1% and 28.6% respectively ( $p<0.001$ ). The comparison of gastrointestinal symptoms in patients with intestinal involvement was as following: bloating in 49.5% ( $p=0.028$ ), loose stool in 48.2% ( $p=0.66$ ), constipation in 12.5% ( $p=0.166$ ), dyschezia in 45.15% ( $p<0.001$ ) and bloody stool in 12.7% ( $p=0.007$ ). Urinary symptoms in patients with bladder and anterior cul-de-sac involvement were so: dysuria in 2.35 ( $p=0.49$ ), urgency in 12.5% ( $p=0.052$ ), frequency in 24.1% ( $p=0.169$ ) and hematuria in 5.7% ( $p=0.007$ ).

**Conclusion:** This study shows that pain, AUB and infertility are the major complaints of endometriotic patients and Spotting is common. So these symptoms

are the remarkable manifestations of endometriosis. Symptoms such as dyschezia and bloody stool suggest intestinal endometriosis. Hematuria and urgency are two indicators for endometriosis with bladder and anterior cul-de-sac involvement.

**Key words:** Endometriosis, Laparoscopy, Chief complaint, Gastrointestinal endometriosis, Urinary endometriosis.

## O-23

### A new intervention for reducing blood loss during abdominal myomectomy.

Pourmatroud E.

Department of Obstetrics and Gynecology, Infertility Ward, Emam Khomini Hospital, Jundishapur University of Medical Sciences, Ahvaz, Iran.

Email: e.pourmatroud@yahoo.com

**Introduction:** To assess the usefulness of using ascorbic acid (vitamin C) administration in abdominal myomectomy.

**Materials and Methods:** A total of 102 patients were divided two groups in this prospective, clinical trial. Group A had received 2 gr of ascorbic acid during a myomectomy, and group B had a myomectomy without any interventions. The operative time, blood loss, days of hospitalization, post-operative complications and rate of blood transfusions were compared between the two groups.

**Results:** The blood loss ( $521.44\pm199.24$  vs.  $932.9\pm264.38$  ml,  $p<0.001$ ), duration of the operation time ( $42\pm13.9$  vs.  $68\pm21.7$  min,  $p<0.001$ ), days of hospitalization ( $2.7\pm0.69$  vs.  $3.1\pm0.59$  days,  $p=0.002$ ) in group A were significantly less than in group B). The risk ration of a blood transfusion in group A was 0.4 (7.7% vs. 18% 95% CI:0.1-1,  $p=0.07$ ). There was a significant correlation between the volume of bleeding and post-operative complications in both groups ( $p$ -value in group A=0.03 and in group B=0.004).

**Conclusion:** The administration of ascorbic acid (Vitamin C) in abdominal myomectomy could reduce the blood loss during procedure, operation time and days of hospitalization.

**Key words:** Myomectomy, Ascorbic acid, Plattel.

## O-24

### Assessment of demographic data in endometriotic patients of a referral laparoscopic state in Iran between 1385-1390

Aminlou M<sup>1</sup>, Mohazzab A<sup>2</sup>, Kamali K<sup>2</sup>, Akhondi MM<sup>2</sup>, Zarnani A<sup>3</sup>, Jaberipour P<sup>1</sup>, Momeniha M<sup>2</sup>, Shervin A<sup>1</sup>.

1. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: ADS1947@yahoo.com

**Introduction:** Endometriosis is one the most prevalent gynecologic diseases all over the world. There is no exact data for endometriotic patients because of the lack

of a definitive diagnostic tool for this condition in Iran. This study is performed to demonstrate a demographic and historical background of these patients in a referral state in Iran.

**Materials and Methods:** Data of 343 patients with laparoscopic and histopathologically confirmed endometriosis were evaluated retrospectively. Their BMI, ASRM staging and age were statistically analyzed.

**Results:** The mean age of patients was 32.41 with STDEV of 6.73. According to ASRM staging system, 22 patients (10.5%) were in stage 1, 19 patients (9%) were in stage 2, 32 patients (15.2%) were in stage 3 and 137 patients (65.2%) were in stage 4. 69.6% of patients were married, 26.8% were single and 3.4% were divorced. Family history of endometriosis in them was as following: 38 cases (11.5%) in first degree relatives (Mother: 7, sister: 30 and daughter: 1) and 16 patients (4.6%) in their second degree relatives. Comparisons between endometriotic patients mean BMI=23.1 and its STDEV=3.71 with women in reproductive age in Iran which was respectively 26.5 and 4.21 was statistically significant ( $p < 0.001$ ).

**Conclusion:** Considering the higher percentage of endometriosis among sisters comparing to mothers in shows that the diagnosis of endometriosis had an increment in Iran in recent years. Endometriotic patients have lower BMI than female normal population in the same age.

**Key words:** Endometriosis, Laparoscopy, Demographic data, ASRM, BMI, Familial history.

## O-25

### The relation between basal anti mullerian hormone and embryo quality in assisted reproduction technology cycles

Mehrafza M, Raoufi A, Rahimian T, Abdollahian P, Nikpouri Z, Porseif R, Hosseini A.

Infertility Research Center, Mehr Medical Institute, Rasht, Iran.

Email: dr\_mehrafza@yahoo.com; dr\_mehrafza@mehrhealthcare.com

**Introduction:** Recently it has been considered that serum anti mullerian hormone level is a suitable marker of ovarian response in stimulated cycles. This study was setup to identify if there is relationship between basal anti mullerian hormone and embryo quality in ART cycles.

**Materials and Methods:** A total of 177 patients who had their basal AMH level were included in this retrospective study. They were subdivided into four groups based on 25<sup>th</sup>, 50<sup>th</sup> and 75<sup>th</sup> of the AMH level. On cycle day 3, serum AMH, FSH and LH levels were measured and the numbers of retrieved oocytes and metaphase II oocytes and embryo quality were also evaluated.

**Results:** Patients in Group 1 ( $< 0.7$  ng/ml) had significantly higher age and need of gonadotropin ampoules ( $p = 0.000$ ) and also non-significantly higher

FSH level ( $p = 0.433$ ) than other 3 groups (0.71-1.72 ng/ml and 1.73-3.5 ng/ml,  $> 3.5$  ng/ml respectively as group 2, 3 and 4). Group 4 showed significant increase in LH/FSH ratio ( $p = 0.028$ ), serum estradiol level on day HCG, the numbers of retrieved oocytes and metaphase II oocytes ( $p = 0.000$ ). Embryo quality scored marginally significantly higher in Group 1 ( $p = 0.057$ ). Significant differences were found between AMH level and embryo scores ( $p = 0.031$ ). The median levels of AMH were 1.24 ng/ml, 2.17 ng/ml and 2.48 ng/ml in top, medium and low quality embryos.

**Conclusion:** AMH is a superior marker for predicting oocyte quality and quantity than embryo quality.

**Key words:** Anti mullerian hormone, Embryo quality, Assisted reproduction technology.

## 2- Embryology, Genetics, Stem Cell

### O-26

#### Therapeutic effects of Artemisia herba alba extract on testis and spermatogenesis in diabetic rats (stereological and histopathological study)

Parkami M<sup>1</sup>, Zahiri Sh<sup>2</sup>, Yazdanpanah S<sup>3</sup>, Parkami S<sup>4</sup>.

1. Azad University, Jahrom Branch, Shiraz, Iran.

2. Shiraz University of Medical Sciences, Shiraz, Iran.

3. Young Club Research, Azad University of Jahrom, Shiraz, Iran.

4. Young Club Research, Azad University of Guilan, Rasht, Iran.

Email: r.parkami@gmail.com

**Introduction:** Artemisia is one of the important traditional herbal plants that have therapeutic effects in some diseases include diabetes type II. One of the side effects of diabetes is disorder in testis tissue and spermatogenesis. In this work we studied the effects of this herbal drug on male reproductive system in diabetic rats.

**Materials and Methods:** 40 adult male Wistar rat classified in 5 groups as follows: control and 4 experimental groups that include: streptozocin (55 mg/kg: IP) metformin (250 mg/kg: PO) and two diabetic groups were treated with extract doses of (200 and 300 mg/kg PO). Duration time of treatment was 56 days. Assessing parameters were blood sugar, testosterone, FSH, LH, weight (animals and testis), testis volume and histological indexes. Data analyzed by SPSS 15 software and ANOVA and Duncan Tests.

**Results:** Findings indicate that artemisia extract (300 mg/kg) causes reduction in glucose level and increases in testosterone, LH, FSH, spermatogenic indexes (TDI, SI, RI) and wellness in testis volume and histological damages due to diabetes.

**Conclusion:** Hypoglycemic effect of artemisia extract can be effective in reduction of many adverse effects due to diabetes injury in male reproductive system such as infertility problem probably.

**Key words:** *Artemisia, Infertility, Spermatogenesis, Testis, Rat.*

## O-27

### **Testicular germ cell apoptosis induced by different anticancer drugs**

**Soleimani Rad J<sup>1</sup>, Roshangar L<sup>1</sup>, Mohammadnejad D<sup>1</sup>, Ghasemi F<sup>2</sup>, Soleimani Rad S<sup>1</sup>, Nikzad B<sup>1</sup>.**

1. *Department of Anatomical Sciences, Faculty of Medicine, Tabriz University, Tabriz, Iran.*
2. *Department of Anatomical Sciences, Faculty of Medicine, Guilan University, Rasht, Iran.*

**Email:** lroshangar@yahoo.com

**Introduction:** Spermatogenesis disorder count for 20-30% of infertility occurring among the young couples in different societies. One of the known causes of spermatogenesis disorder is chemotherapy in patients with cancer. The aim of the present study is to investigate, apoptosis inducing effect of different anticancer drugs using electron microscopy and histochemical methods.

**Materials and Methods:** In the present study 60 adult male mice were used. The mice were divided into 3 groups: busulfan, cyclophosphamide and thiotepa, half of the mice in each group were used as control, receiving the solvent of the drug. Busulfan was injected as a single dose of 40 mg/kg. cyclophosphamide was dissolved in saline and injected as 0.9 mg/day for 15 days. Thiotepa was injected for 5 days as 2.5 mg/kg. Mice in all groups were sacrificed 35 days after injection and testicular specimen were stained with TUNEL technique for apoptosis detection. For electron microscopy, the specimens were fixed in 2% glutaraldehyde.

**Results:** The result from histochemical study showed that TUNEL positive cells appeared as yellowish brown. There were 4 fold of increase in the number of TUNEL positive cells, in all experimental groups, in comparison to control group. Transmission electron microscopy revealed that apoptotic cells could easily be distinguished from normal and necrotic cells by having condensed nuclei and its separation from neighboring cells. Heterochromatic nuclei were some times had a crescent like appearance and altered mitochondria, characteristics of apoptotic cells.

**Conclusion:** The results of the present study indicate that anticancer drugs induce apoptosis in spermatogenic epithelium and apoptotic cells co.

**Key words:** *Apoptosis, Busulfan, Cyclophosphamide, Thiotepa, Spermatogenesis.*

## O-28

### **The effect of Alpha Lipoic Acid on total oxidative status of vitrified pre-antral follicles in comparison to those derived from vitrified ovaries**

**Hatami S<sup>1</sup>, Zavareh S<sup>1</sup>, Salehnia M<sup>2</sup>, Lashkarboluki M<sup>1</sup>, Ghorbanian MT<sup>1</sup>.**

1. *Institute of Biological Sciences, School Of Biology, Damghan University, Damghan, Iran.*
2. *Department of Anatomy, Faculty of Medical Sciences, Tarbiat Modares, Tehran, Iran.*

**Email:** Zavareh.s@gmail.com

**Introduction:** The aims of the present study was to compare the developmental competence, reactive oxygen species (ROS) production and total antioxidant capacity (TAC) of mouse vitrified pre-antral follicles and isolated pre-antral follicles derived from vitrified ovaries during culture period in the presence or absence of alpha lipoic acid (ALA).

**Materials and Methods:** Pre-antral follicles derived from fresh, vitrified-warmed ovarian tissues and vitrified-warmed pre-antral follicles were cultured individually with or without ALA for 12 days followed by adding HCG in culture medium to induce ovulation. The maturational parameters were assessed. The amount of ROS and TAC were assessed by 2', 7'-dichlorofluorescein (DCFH) assay and ferric reducing/antioxidant power (FRAP) assay, respectively.

**Results:** The rates of survival, antrum formation and MII oocytes, were significantly higher in ALA supplemented groups compared to respective groups without ALA. These rates were significantly higher in vitrified-warmed follicles in comparison to those follicles derived from vitrified-warmed ovaries. After 24h of culture with pre-treatment of ALA, TAC levels increased significantly and remained constant without any significant difference up to 96 h later in the both vitrified-warmed pre-antral follicles and follicles derived from vitrified-warmed ovaries. However, ROS levels in the both vitrified-warmed pre-antral follicles and follicles derived from vitrified-warmed ovaries with pre-treatment of ALA completely returned to the levels of starting point after 96 h of culture.

**Conclusion:** Vitrification of pre-antral follicles is more promising than that of whole ovary for preservation of female fertility. Moreover, ALA improved the in vitro maturation of pre-antral follicles in vitrified and non-vitrified samples.

**Key words:** *Vitrification, Ovary, Pre-antral follicle, Lipoic acid, ROS, TAC.*

## O-29

### **Vitrification and in vitro culture of mouse preantral follicles in presence of growth factors**

**Oryan Abkenar Z<sup>1</sup>, Ganji R<sup>2</sup>, Bahadori MH<sup>3</sup>.**

1. *Department of Biology, Damghan Branch, Islamic Azad University, Damghan, Iran.*
2. *Department of Cell and Molecular Biology, Faculty of Biological Sciences, Kharazmi University, Tehran, Iran.*
3. *Cellular and Molecular Research Center, Faculty of Medicine, Guilan University of Medical Sciences, Rasht, Iran.*

**Email:** oryan.abkenar@gmail.com

**Introduction:** Cryopreservation of oocytes is an effective technology in assisted reproductive technology



although successful vitrification of gametes has been reported in several mammalian species, the survival is generally low. The aim of this study was to investigate the effects of fibroblast growth factor (FGF) and epidermal growth factor (EGF) on preantral follicle development after vitrification in vitro.

**Materials and Methods:** Preantral follicles with diameter of 150-180  $\mu\text{m}$  were mechanically isolated from 18-21 day old NMRI mouse ovaries. Follicles were vitrified and warmed with cryolock method and then cultured in  $\alpha$ - minimal essential medium supplemented with 0, 20 ng/ml FGF, 20 ng/ml EGF, 20 ng/ml from each of FGF and EGF. After 10 days hCG/EGF was added to culture medium and after 16-18 h the presence of cumulus oocyte complexes (COC) and oocyte maturation state assessed.

**Results:** The results of this study showed that the rate of MII oocytes in FGF group increased in comparison with other groups ( $p < 0.05$ ) There was significant increase in survival rate of follicles in EGF-FGE group in comparison with other groups ( $p < 0.05$ ). After in vitro ovulation induction the follicles in EGF group showed a higher ovulation rate ( $p < 0.05$ ) than those cultured in other groups.

**Conclusion:** Inclusion of FGF in mouse vitrified follicle culture system increases oocyte maturation rate and EGF increases COCs number. Addition of EGF and FGF simultaneously to the culture medium increase follicle survival.

**Key words:** Vitrification, Mouse preantral follicle, Cryolock, EGF, FGF.

### O-30

#### Evaluation of cytokine release from invitro generated regulatory T cells by 17- $\beta$ oesteradiol

Fatemi R<sup>1</sup>, Vahedian Z<sup>2</sup>, Mirzadegan E<sup>1</sup>, Mahdavi pour M<sup>1</sup>, Zarnani A<sup>3</sup>, Jeddi Tehrani M<sup>2</sup>, Idali F<sup>1</sup>.

1. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
2. Monoclonal Antibody Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.
3. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

**Email:** F.Ideali@avicenna.ac.ir

**Introduction:** The role of maternal hormones in successful pregnancy is well known. Maternal hormones through re-engineering of the maternal immune response provide protection for the semi-allogeneic fetus; while any changes in maternal tolerance may lead to abortion. During pregnancy the elevated number of regulatory T cells (Tregs) correlates with 17- $\beta$  oesteradiol ( $E_2$ ) level. Treg activity, through production of cytokines, may then affect the pregnancy outcome. The aim of this study was to investigate the level of cytokine expression by  $E_2$ -generated Tregs.

**Materials and Methods:** We treated the peripheral blood naïve T cells ( $n=4$ ) with anti-CD28 antibody in anti-CD3 coated plates for 96h in the presence or absence of pregnancy or pre-ovulatory concentration of

$E_2$ . Naïve T cells with no treatment were termed as control cells. The phenotype of induced Tregs was investigated through analysis of CD25 and Foxp3 expression. ELISA technique was applied for measurement of cytokines: IL-10, TNF-g and IFN-a in cell supernatants of a secondary culture.

**Results:** The induction of CD25 and Foxp3 was detected by flow cytometry.  $E_2$ -treated cells showed significantly higher potential to release IL-10 than control cells. Production of TNF-a by  $E_2$ -preovulatory treated cells was significantly lower than that by  $E_2$ -pregnancy in the presence or absence of PHA and decreased IFN-g/IL-10 ratio was noted especially in cultures with preovulatory concentration of  $E_2$ .

**Conclusion:** Our results may suggest oestrogen as a good candidate for invitro generation of Tregs along with the development of new therapeutic methods for treatment of autoimmune diseases and pregnancy complications.

**Key words:** Regulatory T cells, 17- $\beta$  oesteradiol, Preovulatory, Pregnancy.

### O-31

#### A comparison of the multiple gene expression patterns between the newborn and adult mouse ovary

Bahmanpour S<sup>1</sup>, Talaei Khozani T<sup>1</sup>, Zarei Fard N<sup>1</sup>, Jaberipour M<sup>2</sup>, Hosseini A<sup>2</sup>, Esmailpour T<sup>1</sup>.

1. Department of Anatomy, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Institute Cancer Research, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.

**Email:** ehlehz@gmail.com

**Introduction:** The interaction between follicular cells and oocyte lead to change in gene expression involved in oocyte maturation processes. The objectives of this study was to quantified the expression of more common genes specified oocytes and involved in germ cell development, colonizing in genital ridge as well as meiosis and developmental competence.

**Materials and Methods:** Expression of genes was evaluated with qRT-PCR assay in female BALB/c mice pups at 3-day of pre-pubertal and 8 weeks old virgin adult. The tissue prepared by H&E staining for normal morphological appearance. The data were calculated with the 2- $\Delta\text{Ct}$  formula and assessed using non-parametric two-tailed Mann-Whitney test. The significant differences was considered as  $p < 0.05$ .

**Results:** The data showed significant increase in the level of Stra8 and GDF9 in adult compared with newborn ovaries. In contrast, significant decreased in the level of Mvh, Rec8, SCP1, SCP3 and ZP2 were observed in adult ovaries compared with those in newborn ovaries. There was no significant difference in the level of Oct4 and Con37 expression between adult and newborn ovaries.

**Conclusion:** The modification in gene expression pattern coordinate to follicular development processes

Furthermore, the findings showed higher expression level of pre-meiotic gene (Stra8) and lower level of meiotic entry markers (SCP1, SCP3 and REC8) in juvenile than newborn mouse ovaries.

**Key words:** Ovarian Follicle, Ovary, Gene Expression.

### O-32

#### The effects of PLLA nanofiber scaffold on proliferation of frozen-thawed neonate mouse spermatogonial stem cells

Eslahi Darehgorgi N<sup>1</sup>, Hadjighassem M<sup>1</sup>, Joghataei M<sup>2</sup>, Bakhtiyari M<sup>1</sup>, Ayyoubiyani M<sup>1</sup>, Asadi M<sup>1</sup>, Koruji M<sup>2</sup>.

1. Department of Anatomy, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Anatomy, Cellular and Molecular Research Center, Tehran, University of Medical Sciences, Tehran, Iran.

**Email:** neslahi.2@gmail.com

**Introduction:** To investigate of the effects of a poly L-lactic acid (PLLA) nanofiber scaffold on proliferation of frozen-thawed neonate mouse spermatogonial stem cells.

**Materials and Methods:** Spermatogonial cells (SCs) were isolated from neonatal 3-6-day-old NMRI mice testes by two steps enzymatic digestion and differential plating. SCs were divided into four groups: 1) fresh SCs, 2) fresh SCs seeded onto PLLA, 3) frozen-thawed SCs, 4) frozen-thawed SCs seeded onto PLLA. Cells were cultured in DMEM with 5% FCS and 10 ng/ml GDNF for 3 weeks. Diameter and number of clusters which were determined during the culture and semi-quantitative RT-PCR were carried out at the end of 3rd week. Presence of spermatogonia at the culture was determined by reverse transcription polymerase chain reaction (RT-PCR) for several important spermatogonial markers (*PLZF*, *Oct4*, *GFRα-1*, *VASA*, *ITGA6* and *ITGB1*). The significance of the data was analyzed using Repeated Measures and ANOVA tests.

**Results:** The findings indicated that the viability rate of the fresh cell and the frozen cells after thawing were 89.25±2.2 and 63±3.56, respectively (p<0.001). In vitro culturing of spermatogonial cells on PLLA significantly increased the formation of cell clusters in comparison with those of the control groups (p≤0.001). Culturing of frozen-thawed cells on PLLA significantly decreased their diameters (p≤0.01). There was a significant down-regulation of spermatogonial genes in the frozenthawed groups after three weeks of culture.

**Conclusion:** The spermatogonial cells seeding on PLLA can increase in vitro cluster formation of neonate fresh and frozen-thawed spermatogonial cells.

**Key words:** Spermatogonial stem cells, PLLA Nano fibers, Testis, Proliferation, Frozen-thaw.

### O-33

#### Endometriosis regression with levamisole: A randomized controlled trial in a rat model

Azimirad A<sup>1</sup>, Alborzi S<sup>2</sup>, Kumar P<sup>3</sup>, Zolghadri J<sup>4</sup>, Zarei A<sup>5</sup>, Ghaderi A<sup>6</sup>, Malekzadeh M<sup>6</sup>, Azimirad M<sup>7</sup>.

1. Department of Obstetrics and Gynecology, Student Research Committee, Infertility Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Obstetrics and Gynecology, Head of Endoscopy Division, Laparoscopy Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Department of Pathology, Shiraz University of Medical Sciences, Shiraz, Iran.
4. Department of Obstetrics and Gynecology, Infertility Research Center, Shiraz University of Medical Sciences, Shiraz, Iran.
5. Department of Obstetrics and Gynecology, Shiraz University of Medical Sciences, Shiraz, Iran.
6. Institute for Cancer Research, Shiraz University of Medical Sciences, Shiraz, Iran.
7. Shariati Hospital, Tehran University of Medical Science, Tehran, Iran.

**Email:** tafshina@gmail.com

**Introduction:** Endometriosis and its pharmacological treatment are among the most enigmatic subjects of gynecology. This study aims to assess the possible effects of levamisole, an immunomodulator drug, on experimental endometriosis in rats through histopathology (primary outcome) and leukocyte and lymphocyte counts at the healthy, endometriotic and post-treatment milestones.

**Materials and Methods:** A prospective, parallel-group, placebo-controlled, double-blind, stratified-randomized animal trial recruited on 28 two-month old SD rats with normal estrus cycles. Endometriosis induced experimentally; four implants were auto-transplanted on the peritoneum. After 6 weeks, laparotomy was performed to evaluate the liveliness of implants and to randomly excise one for pathology assessment. The rats were randomized (by software) to two groups of nine to receive levamisole (5mg/rat/day) or placebo. After 6 weeks, necropsy was done. Two days prior to each laparotomy, blood samples were taken for leukocyte and lymphocyte counts.

**Results:** The before- and after-treatment pathology scores in the control group were 2.55±0.88 and 2.00±1.50, and in the levamisole group were 2.55±0.88 and 0.66±1.32 respectively. The comparisons of the post-treatment leukocyte and lymphocyte counts between the two groups, alongside the comparisons of the post-treatment leukocyte and lymphocyte counts with the pre-treatment and healthy counts in the levamisole group, indicates the possible successful role for levamisole in treatment of endometriosis.

**Conclusion:** Due to the promising results about levamisole in treatment of endometriosis in this study, the authors would like to recommend the continuation of assessing high dose levamisole on endometriosis in future.

**Key words:** Endometriosis, Levamisole, Randomized Controlled trial, Rats.

### O-34

#### Is screening DAZ in blood leukocytes representative of DAZ status in sperms? Concerns for intracytoplasmic sperm injection

Mozdarani H.

Department of Medical Genetics, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

Email: mozdarah@modares.ac.ir

**Introduction:** Knowledge of the presence or absence of DAZ (Deleted in Azoospermia) gene in sperm nuclei is very important concern for those individuals subject to intracytoplasmic sperm injection (ICSI). Screening of the Y chromosome microdeletion in the diagnostic work-up of infertile men is mainly done using polymerase chain reaction (PCR) on blood leukocytes. However, there are evidences showing that presence of DAZ in somatic cells might not be indicative of its presence in germ cell lineage.

**Materials and Methods:** A combined Primed in situ labeling (PRINS) with primers specific for DAZ genes and fluorescent in situ hybridization (FISH) technique with direct labeled centromere probes for Y and X chromosomes to show the DAZ gene on sperm nuclei was used. This combined method allows simultaneous detection of DAZ genes and sex chromosome aneuploidy in sperm samples. This technique was applied on sperm samples previously checked for DAZ microdeletion. None of the samples showed DAZ microdeletion in blood leukocytes using polymerase chain reaction (PCR) technique.

**Results:** The combined technique showed DAZ gene on sperm nuclei clearly. Also in sperm samples from individuals with normal DAZ in leukocytes, a mosaic form of DAZ microdeletion was observed with variable degree of mosaics.

**Conclusion:** Screening for DAZ gene in blood leukocytes might not be representative of the status of DAZ gene in sperm nuclei. DAZ gene is vulnerable to damage by environmental genotoxic agents and spermatozoa are particularly susceptible to ROS-induced damage due to presence of low concentrations of scavenging enzymes in their plasma membranes.

**Key words:** DAZ microdeletion, Sperm nuclei, FISH, PRINS techniques.

### O-35

#### Positive association of apolipoprotein E4 polymorphism with recurrent pregnancy loss in Iranian patients

Asgari N<sup>1</sup>, Akbari M<sup>2</sup>, Zare S<sup>3</sup>, Babamohammadi G<sup>4</sup>.

1. Department of Biology, Tehran Medical Genetics Laboratory, Sciences and Researchs Branch, Islamic Azad University, Tehran, Iran.
2. Department of Medical Genetics, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
3. Department of Biology, Islamic Azad University, Varamin Pishva Branch, Tehran, Iran.
4. Tehran Medical Genetics Laboratory, Tehran, Iran.

Email: nooshin.asgari@gmail.com

**Introduction:** Numerous lines of evidence implicate apolipoprotein E (Apo E) in lipid metabolism during pregnancy. Hence, a role for its polymorphism has been envisaged in recurrent pregnancy loss (RPL) considering major structural and functional differences between different Apo E genotypes.

**Materials and Methods:** A case-control study of 81 women with two or more pregnancy losses that did not have any other known risk factors including anatomical anomalies of the reproductive system, infections, immunological factors, hormonal imbalances, chromosomal abnormalities and environmental factors were carried out. The control group consisted of 81 women with at least two healthy children and no RPL in their reproductive history. DNA was extracted from the peripheral blood following written consent and Apo E genotyping was carried out by amplifying exon 4 of the gene and subjecting it to digestion by HhaI restriction enzyme.

**Results:** Genotyping was concluded by analyzing different fragment sizes produced, which resulted in finding significantly higher frequency of combined E3/E4 and E4/E4 genotypes in the patients (about 20%) compared to the normal controls (2.4%). The genotypes were confirmed by DNA sequencing.

**Conclusion:** Allelic frequency E4 was 13.5% in the patients and only 1% in the non-RPL group. Our findings are in line with a number of similar studies carried out on other populations. Therefore, Apo E4 polymorphism seems to be contributing to the thrombophilic risk factors as a background to RPL.

**Key words:** Apo E4 polymorphism, Apolipoprotein E, Recurrent pregnancy loss.

### O-36

#### FTIR following of bone marrow stem cell differentiation to primordial germ cell

Javani Jouni F<sup>1</sup>, Zendehtdel R<sup>2</sup>, Zafari J<sup>3</sup>, Soodi M<sup>3</sup>, Abdolmaleki P<sup>1</sup>.

1. Department of Biophysics, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran.
2. Department of Occupational Health, School of Public Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Toxicology, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

Email: javani\_f@yahoo.com

**Introduction:** Bone marrow is the flexible tissue found in the interior of bones that can differentiate to every cell. Monitoring of the stem cell differentiation need careful and complex laboratory immune cytochemistry protocols. We propose an FTIR method to monitor the differentiation of bone marrow stem cells in their early development. In this study, Fourier transform infrared (FTIR) spectroscopy has been used to be a powerful tool to demonstrate changes in the macromolecular content of whole cells.

**Materials and Methods:** Bone marrow stem cells (BMSCs) extraction of some rat was passaged in  $\alpha$ MEM medium containing 20% fetal bovine serum (FBS) and 25 ng/ml BMP4. BMSCs were differentiating to Primordial Germ cells (PGCs) by Bone Morphogenic Protein (BMP). Differentiation period was four days where FT-IR spectroscopy was performed to the cells after 24, 48, 72 and 96 hours of differentiation

induction. Moreover, the differentiation of stem cells were characterized by CD90, CD29, CD11b and CD45 markers and osteo-adipogenic differentiation.

**Results:** CD90<sup>+</sup>, CD29<sup>+</sup>, CD11b<sup>-</sup> and CD45<sup>-</sup> of BMSCs were able to differentiate to osteo-adipogenic lineages. The FTIR normalized spectrum of BMSCs in stepwise differentiation showed alterations in different spectral areas. Results showed the alteration of conformation in amide I protein, phospholipids and nucleic acid bands region. This increase is detectable 2 days after treat with BMP4.

**Conclusion:** The results showed, FTIR spectroscopy is a suitable tool for evaluation of stem cell differentiation. However, FTIR spectrum of stem cell could be monitoring the changes of cellular nucleic acids and proteins in differentiation step to step.

**Key words:** Bone Marrow Stem Cell, Differentiation, FTIR spectroscopy, Primordial Germ Cell.

### O-37

#### Prenatal sequencing of Bovine fetal TSPY sequence from maternal plasma at 56-89 days of pregnancy

Davoudi A<sup>1</sup>, Tarang A<sup>2</sup>, Rafeie F<sup>3</sup>, Javadi Taklimi A<sup>2</sup>, Tahmoressi F<sup>2</sup>.

1. Research Deputy of Guilan Branch of the Academic Center for Education, Culture and Research (ACECR), Guilan, Iran.
2. Department of Genomics, Agricultural Biotechnology Research Institute of Iran (ABRII), North Region of Iran, Rasht, Iran.
3. Department of Animal Sciences, Islamic Azad University, Chalous Branch, Chalous, Iran.

Email: arash1983@gmail.com

**Introduction:** Nowadays, fetal gender determination is possible at first trimesters of pregnancy, by maternal blood testing. The Sequencing technique's great sensitivity allows detection of small amounts of fetal DNA present on maternal plasma. The aim of this research was prenatal sequencing of bovine fetal TSPY sequence from maternal plasma at 56-89 days of pregnancy.

**Materials and Methods:** Maternal blood samples were collected from 98 pregnant cows during the 56-89 days of gestation. Plasma was obtained by centrifugation and DNA was extracted by phenol chloroform method from maternal plasma. The Y-chromosome-specific repeated sequence (TSPY Sequence), in male fetuses was used as a fetal marker. The PCR has been optimized for fragment amplification. The PCR product were sequencing by DNA analyzer for identify TSPY Sequence in male bovine fetus.

**Results:** Fetal gender was determined according to the presence or absence of the TSPY sequence in maternal circulation. The TSPY sequence was detected in 59 of 98 maternal circulations of cows with male fetuses.

**Conclusion:** The results showed that prenatal sequencing of bovine fetal TSPY sequence from maternal plasma at 56 to 89 days of pregnancy is a sensitive method for bovine fetal gender determination.

**Key words:** Sequencing, Bovine fetal, Pregnancy, Maternal plasma, TSPY sequence.

### O-38

#### Contributing factors on oocyte dysmorphisms: is there any affect on fertilization rate and embryo quality?

Ashrafi M<sup>1</sup>, Hasani F<sup>2</sup>, Arabipour A<sup>1</sup>, Karimian L<sup>2</sup>, Rezazadeh Valojerdi M<sup>2</sup>, Eftekhari Yazdi P<sup>2</sup>, Akhond M<sup>3</sup>.

1. Department of Endocrinology and Female Infertility at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.
2. Department of Embryology and Reproductive Health at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.
3. Department of Epidemiology and Reproductive Health at Reproductive Epidemiology Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

Email: fatimal737@yahoo.com

**Introduction:** To study the influence of cycle characteristics on oocyte morphology and also investigated the influence of oocyte dysmorphisms on normal fertilization and embryo quality.

**Materials and Methods:** A prospective study of oocyte morphology was undertaken in 1,197 metaphase II oocytes retrieved from 189 intracytoplasmic sperm injection cycles from March 2010 to October 2011 at Royan institute. We included all couples with tubal factor or mild and moderate male infertility cause. Controlled ovarian stimulation for all the patients was achieved by long standard protocol. Oocyte morphology was assessed just before sperm injection (3-4 hours after retrieval) by one embryologist.

**Results:** From all of retrieved oocytes, 1028 (85.9%) showed at least one morphologic abnormality. Cytoplasmic and extracytoplasmic abnormalities were observed in 957 (79.9%) and 614 (51.3%) of these oocytes, respectively. All of intracytoplasmic vacuoles sizes (4.3%) were less than 14 microm. We observed that maternal age positively influenced the presence of some cytoplasmic dysmorphisms (refractile bodies, p=0.002; without perivitelline space (PVS), p=0.025). The total dose of gonadotropins correlated positively with the presence of some extracytoplasmic dysmorphisms (large PVS, p=0.014; thick zona pellucida (ZP), p=0.048; dark ZP, p<0.001). No effect of any morphologic oocyte features on normal fertilization or embryo quality was observed.

**Conclusion:** To obtain the proper number of oocytes with good developmental potential, maternal age and dose of gonadotropins should be considered. In present study with this sample size, abnormal oocyte morphology is not associated with decreased fertilization rate or unfavourable embryo quality. For decisive conclusion, further studies are warranted.

**Key words:** Oocyte dysmorphisms, Fertilization rate, Embryo quality.

**O-39****Down-regulation of CatSper genes family by Kerack used in Iran**

Amini M<sup>1</sup>, Roghani M<sup>2</sup>, Shirinbayan P<sup>3</sup>, Hadjighassem M<sup>4</sup>, Farhoudian A<sup>3</sup>, Joghataei M<sup>5</sup>, Koruji M<sup>5</sup>.

1. Department of Animal Biology, Islamic Azad University, Kazeroun Branch, Kazerun, Iran.
2. Department of Physiology, School of Medicine, Shahed University, Tehran, Iran.
3. Research Center for Substance Use and Dependence (DARIUS Institute), University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.
4. Department of Neurosciences, Cellular and Molecular Research Center, Iran University of Medical Sciences, Tehran, Iran.
5. Department of Anatomical Sciences, Cellular and Molecular Research Center, School of Medicine, Tehran University of Medical Science, Tehran, Iran.

Email: koruji@iums.ac.ir

**Introduction:** Drug abuse is a serious problem in male adolescence. Kerack is emerging as an illicit substance which its use is rising up in Iran and some neighboring countries. The aim of this study was to investigate the effect of Iranian Kerack on expression of *CatSper1-4* genes family of mice.

**Materials and Methods:** In this study, 25 male mice (Balb/c) were divided into five groups, i.e. control, sham and three experimental. Experimental groups of Kerack-dependent mice (which received incremental dose of Kerack for seven days twice daily) were divided into three subgroups: Experimental I was given Kerack at a dose of 5 mg/kg, experimental II 35 mg/kg and experimental III 70 mg/kg, intraperitoneally twice a day for a period of 35 days. The sham group received normal saline and lemon juice, whilst the control group just received water and food. Mice were then sacrificed and left testis removed for using in real-time PCR. In this study beta-2-microglobin was as an internal control. The results were analyzed by performing ANOVA and Tukey's tests, with  $p \leq 0.05$  considered as statistically significant.

**Results:** Real-time PCR results showed that *CatSper2-4* genes expressions were significantly reduced with 35 and 70 mg/kg Kerack injected compared with control testes ( $p \leq 0.05$ ). But, *CatSper1* gene expression was significantly reduced with high dose Kerack (70 mg/kg) injected in comparison with control testes ( $p \leq 0.05$ ).

**Conclusion:** Kerack used in Iran in mice could down-regulate the expression of *CatSper1-4* genes, and therefore results in depression of sperm motility.

**Key words:** Kerack, Illicit substance, *CatSper* genes, Testis.

**O-40****Expression profiles of the pluripotency marker genes in mouse endometrium tissue in different stage of estrous cycle**

Choobineh K<sup>1</sup>, Zavareh S<sup>1,2</sup>, Salehnia M<sup>3</sup>, Ghorbanian MT<sup>1,2</sup>, Paylakhi SH<sup>1</sup>, Choobineh<sup>4</sup>.

1. School of Biology, Damghan University, Damghan, Iran.
2. Institute of Biology Sciences, Damghan University, Damghan, Iran.
3. Department of Anatomy, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
4. Department of Anatomy, Tehran University of Medical Sciences, Tehran, Iran.

Email: k.choobineh@gmail.com

**Introduction:** The pluripotency markers; SOX-2, OCT-4, KLF-4 and NANOG are expressed in mouse endometrium. Estrous cycle dependency of those expressions has not been investigated to date.

**Materials and Methods:** The estrous cycle was characterized as: proestrus, estrus, metestrus and diestrus, according to the cell types observed in the vaginal smear. Quantitative real time PCR method was used to evaluate SOX-2, OCT-4, KLF-4, NANOG genes.

**Results:** SOX-2, OCT-4, KLF-4 and NANOG mRNA was detected in all tested samples of endometrium at all stage of estrous cycles, although the levels of expression varied, there were no significant differences among them at each stage of estrous cycle. Furthermore each of pluripotency marker genes was not differentially expressed during the estrous cycles.

**Conclusion:** This study showed expression of stemness-related genes in endometrium at all stage of estrous cycle. Furthermore on the mRNA levels, SOX-2, OCT-4, KLF-4 and NANOG is not differentially expressed during the estrous cycle.

**Key words:** Pluripotency Marker, Endometrium, Estrous Cycle, Mouse.

**O-41****Relationship between protamine deficiency and DNA fragments release from incubated sperm in Ham's F10 medium**

Salehi M<sup>1</sup>, Hosseini A<sup>2</sup>, Bandehpour M<sup>1</sup>, Kazemi Damaneh B<sup>1</sup>, Nematollahi S<sup>3</sup>, Gholizadeh M<sup>4</sup>.

1. Cellular and Molecular Biology Research Center, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
2. Cellular and Molecular Biology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Transgenic Animal Sciences, Stem Cell Technology Research Center, Tehran, Iran.
4. Department of Biology, Faculty of Basic Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran.

Email: msalehi78@gmail.com

**Introduction:** Protamine deficiency and DNA fragmentation have a profound effect on embryo gene expression. Incubation of sperm in culture medium leads to morphological changes of nucleus and DNA release. However, the relationship between protamine deficiency and DNA fragments released from incubated sperm and the presence of DNMT1 gene is not known.

**Materials and Methods:** Semen analysis was performed according to WHO criteria. CMA3 staining

was used to determine protamine deficiency. Twenty million sperm per sample was incubated in Ham's F10 medium for 24 h at 37°C. After centrifugation, DNA was extracted from supernatant phase. DNA concentration was measured by biophotometer. The presence of DNMT1 gene was confirmed by performing PCR with specific primers and agarose gel electrophoresis.

**Results:** Significant correlation was observed between DNA fragments released from sperm in culture media and CMA3 staining. The presence of DNMT1 gene was significantly correlated with DNA fragments released from the sperm. Protamine deficiency and the presence of DNMT1 gene were not significantly correlated.

**Conclusion:** This study demonstrates that incubation of protamine deficient sperm leads to the release of additional fragments of DNA that eventually, affect embryo health.

**Key words:** DNA fragments, Sperm chromatin, Protamine.

#### O-42

### Role of allopurinol on follicular survival, ischemia-reperfusion, re-establish estrous cycle after heterotopic autotransplant of mouse ovarian tissue

Abedi R<sup>1,2</sup>, Eimani H<sup>1,3</sup>, Pashae Rad S<sup>2</sup>, Eftekhari Yazdi P<sup>1</sup>, Shahverdi A<sup>1</sup>, Mokhber Maleki E<sup>1,2</sup>.

1. Department of Embryology at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.
2. Department of Biology, Faculty of Sciences, Shahid Beheshti University, Tehran, Iran.
3. Department of Anatomy, Faculty of Medicine, Baqiyatallah University of Medical Sciences, Tehran, Iran.

**Email:** eimanih@royaninstitute.org; Hussein.eimani@yahoo.com

**Introduction:** One of the important options for fertility preservation is ovarian cryopreservation and subsequently graft of frozen-thawed ovarian tissue. But ischemia-reperfusion injury can decrease follicular density in the grafted ovarian. Many sources of free radicals such as xanthine oxidase were generated during ischemia. In this study, we used allopurinol as xanthine oxidase inhibitor because XO has an important role in generation superoxide anions such as generates O<sub>2</sub><sup>-</sup> and H<sub>2</sub>O<sub>2</sub>.

**Materials and methods:** Ovarian tissues from 6-week-old mice (NMRI) were grafted into back muscle and then collected three weeks later. A total of two groups were included in this experiment: sham and allopurinol treatment group. We investigated number of follicles, vaginal cytology and plasma MDA concentration in grafted ovary. The protocols approved by Ethics Committee of Royan Institute (Tehran, Iran).

**Results:** Total follicles count significantly increased in allopurinol group compared with sham groups (P<0.05). MDA concentration significantly decreased in allopurinol group compared with sham group.

Allopurinol group showed estrus cycle earlier than sham group.

**Conclusion:** We demonstrated that allopurinol plays an important role in order to decrease ischemia-reperfusion injury and to increase survival of follicles. Reducing plasma MDA concentration can be due to decrease free radicals. It seems allopurinol increases blood supply to tissue and causes re-establishing hypothalamus-pituitary axis and finally can restore estrous cycle earlier than sham group, so it explains the increasing survival rate for follicles. We demonstrate follicles at the primordial stage or later had started growing and had started developing rather than remaining static since after transplantation.

**Key words:** Allopurinol, Follicle survival, FSH, Ischemia/reperfusion, Ovarian transplantation.

#### O-43

### Improvement of ovulation with aqueous fennel extract in PCOS female rats

Sadrefozalayi S<sup>1</sup>, Farokhi F<sup>1</sup>, Khaneshi F<sup>1</sup>.

Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.

**Email:** sfozala@gmail.com

**Introduction:** PCOS is found in around 70% of women who have ovulation difficulties leading to lack of corpus luteum and decrease of serum progesterone. The aim of this study was to investigate the effect of aqueous fennel extract on the rate of corpus luteum and serum progesterone in PCOS rats.

**Materials and Methods:** In this research, after preparing the aqueous fennel extract, thirty two female rats divided into five equal groups were categorized in: 1) Control group: rats received just food and water, 2) Rats were gavaged by high dose fennel extract, 3) Rats were injected by Estradiol-Valerate for induction of PCOS, 4) Rats were injected by Estradiol-Valerate and treated with fennel extract. After treatment period, rats were sacrificed and ovaries were removed and prepared for light microscopic studies. The ovaries were serially sectioned and the number of corpus luteum were measured, also serum level of progesterone was assayed.

**Results:** Number of corpus luteum and progesterone level showed a significant increase in PCOS group treated with fennel compared to PCOS group (p<0.05).

**Conclusion:** Fennel increase the number of corpus luteum and progesterone level and can improve ovulation and fertility difficulties in PCOS rats.

**Key words:** PCOS, Female rats, Fennel, Corpus luteum, Progesterone.

#### O-44

### Proliferation and differentiation of goat type A spermatogonia in different culture conditions

Heidari B<sup>1</sup>, Rahmati-Ahmadabadi M<sup>1</sup>, Behzadi B<sup>1</sup>, Akhondi MM<sup>1</sup>, Jeddi Tehrani M<sup>2</sup>, Zarnani AH<sup>3</sup>, Shirazi A<sup>1,3</sup>.

1. *Reproductive Biotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.*
2. *Nanobiotechnology Biotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran*
3. *Research Institute of Animal Embryo Technology, Shahrekord University, Shahrekord, Iran.*

**Email:** a.shirazi@avicenna.ac.ir

**Introduction:** Spermatogonial stem cells (SSCs) are unipotent adult stem cells responsible for the maintenance of the fertility throughout the entire life of the male. Respecting to the inadequate information about the effect of different growth factors on successful establishment of goat SSCs lines, the present study was aimed to investigate the effect of various growth factors on growth characteristics and purification of type A spermatogonia using polyclonal antibodies against PGP 9.5 and c-kit molecular markers.

**Materials and Methods:** After measurement of dimensions and testicular volume (TV) of one month goat testes, the cells were dispersed using the method of two-step enzymatic digestion. The isolated SSCs were cultured in DMEM plus 10%FCS with or without growth factors (LIF, GDNF, EGF, and FGF) in ten groups for 2 weeks. At the end of culture period the effects of growth factors, alone or in combinations, on morphological characteristics of colonies and SSCs propagation were evaluated.

**Results:** One week after cultivation, the different forms of type A spermatogonia were observed (single, paired, aligned or cluster form). Addition of growth factors to the culture medium increased the number and size of colonies compared to the control ( $p < 0.01$ ). After 2 weeks culture, the highest and lowest expression of c-Kit receptors were detected in control and LIF+GDNF+EGF+FGF groups, respectively. The proportion PGP9.5 positive cells was significantly ( $p < 0.001$ ) higher in LIF+GDNF+EGF+FGF group compared to the other groups.

**Conclusion:** The medium containing all four growth factors was superior in term of proliferation and maintenance of stemness properties of goat SSCs.

**Key words:** Goat, Type A spermatogonia, PGP9.5, c-kit.

## O-45

### Apoptosis analysis in cultured human ovarian tissue

**Abdollahi M<sup>1</sup>, Salehnia M<sup>1</sup>, Salehpour S<sup>2</sup>.**

1. *Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.*
2. *Infertility and Reproductive Health Research Center (IRHRC), Ayatollah Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.*

**Email:** m.abdollahi@modares.ac.ir

**Introduction:** The aim of this study was evaluation of apoptosis in cultured vitrified human ovarian tissue.

**Materials and Methods:** Human ovarian tissue was cut into small pieces. Some pieces were vitrified and then warmed. Non-vitrified and vitrified samples were

cultured for 14 days. Apoptosis assessments were done by morphological evaluation, DNA Laddering and TUNEL (Terminal deoxynucleotidyl transferase dUTP nick end labeling) assay. Steroid hormones were measured days 2 and 14.

**Results:** The normality rates of follicles in non-vitrified and vitrified samples were  $93.75 \pm 0.5121\%$  and  $90.88 \pm 0.4802\%$  respectively. At the end of culture period  $76.11 \pm 0.5215\%$ ,  $75.4 \pm 0.4175\%$  of follicles remained morphologically normal. There were no significant differences between non-vitrified and vitrified groups. The estradiol concentrations were increased from day 2 until 14 day of culture period ( $p < 0.05$ ). No patterns of DNA laddering were seen in first day in vitro culture of both non-vitrified and vitrified samples. But after 14 days in vitro culture there were a little laddering in vitrified group. Some TUNEL positive cells were seen in vitrified samples after 14 days culture in comparison with control group.

**Conclusion:** In spite of some TUNEL positive cells in vitrified samples the results showed no significant increase in incidence of apoptosis in vitrified groups.

**Key words:** Vitrification, Human ovarian tissue, Apoptosis, TUNEL Assay.

## O-46

### Mater and Zar1 expression in cultured preantral follicles derived from vitrified mouse ovarian tissue

**Fatehi R<sup>1</sup>, Ebrahimi B<sup>2</sup>, Shahhosseini M<sup>3</sup>, Farrokhi A<sup>4</sup>.**

1. *Department of Developmental Biology, University of Sciences and Culture, ACECR, Tehran, Iran.*
2. *Department of Embryology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.*
3. *Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.*
4. *Department of Stem Cells and Developmental Biology, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology (ACECR), Tehran, Iran.*

**Email:** parto\_570@yahoo.com

**Introduction:** In vitro culture of cryopreserved ovarian tissue derived preantral follicles could be a practical method to preserve female fertility potential.

**Materials and Methods:** Ovaries of 13-day old NMRI mice were removed and randomly distributed in control, needle immersed (NIV) and solid surface vitrification (SSV) groups. In vitrification groups, ovaries were first transferred into equilibration [7.5% (EG and DMSO)] and vitrification [15% (EG and DMSO) and 0.5 M sucrose] medium, then they immersed in liquid nitrogen after loading by acupuncture needle in NIV group or cooling on a pre-cooled steel surface in SSV group. In all experimental groups, medium sized preantral follicles were isolated mechanically and cultured in vitro (IVC) for 12 days and afterwards follicle survival and the expression rate of early embryo development

genes (*Mater* and *Zar1*) were evaluated after 24 hour, 6, 10 and 12 days of culture.

**Results:** Follicle survival was significantly different between control and SSV group (94.09±1.42 vs. 63.14±11.51%) on 6<sup>th</sup>, and also between control and NIV with SSV group (93.16±1.78 and 85.27±3.7 vs. 62.67±9.27%) on 10<sup>th</sup> and (92.82±2.84 and 85.1±10.53 vs. 58.4±12.726%) 12<sup>th</sup> days of culture (p<0.05). No significant difference was observed in the expression of *Mater* and *Zar1* between control and both vitrification groups and also between NIV and SSV groups. Gene's expression pattern for mentioned genes was descending during 12 IVC days.

**Conclusion:** Both NIV and SSV methods are beneficial methods for ovarian tissue preservation. Although, delayed cooling rate in SSV technique led to significant follicle survival declination, did not cause considerable changes in the expression of early embryo development genes group.

**Key words:** *In vitro* culture, Preantral follicle, Cryopreservation, Gene expression, Ovarin tissue.

#### O-47

### Royal Jelly improved the Taxol-induced DNA damages in sperm and normalized the total thiol molecules in the testis of rats

Delkhosh-Kasmaie F<sup>1,2</sup>, Malekinejad H<sup>1</sup>, Sadrkhanlou RA<sup>2</sup>, Rezaei-Golmishah A<sup>2</sup>, Janbaz-Acyabar H<sup>1</sup>, Moradi A<sup>3</sup>.

1. Department of Pharmacology and Toxicology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.
2. Department of Comparative Histology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.
3. Department of Animal Sciences, Faculty of Agriculture, Urmia University, Urmia, Iran.

**Email:** fateme\_kasmaie@yahoo.com

**Introduction:** This study aimed to evaluate protective effects of Royal Jelly (RJ) on Taxol (TXL)-induced damages in testis and sperm quality.

**Materials and Methods:** Wistar rats were divided into six groups (n=6): control (C), Sham(S) and test groups. The test group subdivided into four subgroups, the first 3 groups (T1, T2 and T3) along with TXL, received various doses of RJ (50, 100 and 150 mg/kg, b.w.). The T4 received only RJ (100 mg/kg). Clinical alterations, histological and histomorphometrical changes, sperm maturity and DNA damages and antioxidant status were determined.

**Results:** RJ was able to recover the TXL-reduced body weight gain and normalize the testicular to body weight ratio in the animals which received 150 mg/kg RJ. Although RJ administration at the highest given dose (150 mg/kg) could remarkably reduce the TXL-induced histological alteration such as negative TDI, cellular vacuolation, and seminiferous tubules depletion, however the edema of connective tissue and vacuolated cells are still seen in the interstitial spaces. The TXL-induced sperm DNA damages (25.5±2.8 % in the TXL-

received animals vs. 99.0±6.6% in the control group) was recovered by RJ administration as 81.5±9.6% of the sperms were found without DNA damage in the group of animals which received 150 mg/kg RJ for 28 days. Additionally, RJ remarkably enhanced the TAX-reduced TTM concentration in the testis.

**Conclusion:** Our data suggest that the TXL-induced histopathological and biochemical alterations in the testis and sperm parameters could be protected by the RJ administration. The RJ protective effects might attribute to its antioxidant capacity.

**Key words:** Antioxidant status, Royal jelly, Sperm DNA damage, Taxol, Testis.

#### O-48

### The effects of Mentha Spicata Labiatae extract on reproductive tissues of adult male rats

Alaee Jahromi S<sup>1</sup>, Nozhat F<sup>2</sup>.

1. Reproductive Biology Group, School of Advanced Medical Sciences and Technologies, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Biology, Payame Noor University, Shiraz, Iran.

**Email:** s.alaee@sbm.ac.ir

**Introduction:** Mentha Spicata Labiatae, commonly known as spearmint, is a flowering plant which has a good flavor and fragrance. In Iran, in addition to food, confectionary and cosmetic industry, it is widely used in traditional and herbal medicine for various purposes. Spearmint oral drug is used for its antispasmodic, carminative, and sedative effects. This plant extract has anti-androgenic activity and has been proposed as an alternative to antiandrogenic treatment for mild hirsutism. Our previous study showed that spearmint can decrease semen parameters, so in this current study we investigated the effects of spearmint extract on reproductive tissues of adult male rats.

**Materials and Methods:** 40 Wistar adult male rats divided to four groups: control, group I, group II and group III, which received 0, 10, 20 and 40 mg/kg spearmint extract respectively. Animals received daily 1 ml of extract for 45 days. At the end of experiment testes, seminal vesicles, epididymes and prostate of each rat were removed and fixed in buffer formalin for histological studies.

**Results:** Histological studies showed no severe changes in the structure of reproductive tissues of treated rats compared to control group. Although in group III a reduced sperm density was observed in the lumen of some epididymal tubules of the treated rats but no histological changes was observed.

**Conclusion:** According to these results and our previous study, spearmint can decrease semen parameters without adverse effects on reproductive tissues and it might be used as a contraceptive, although more studies are needed.

**Key words:** Mentha spicata Labiatae, Reproductive tissues, Adult, Male rats.



### 3- Urology

#### O-49

#### The improving of sperm biochemical parameters after frozen-thawed process with supplemented antioxidants in bull semen freezing medium

Olfati Karaji R, Daghigh Kia H, Hossain Khani A, Bohlouli M.

Department of Animal Sciences, Faculty of Agriculture Tabriz University, Tabriz, Iran.

Email: eng\_rastegar2010@yahoo.com

**Introduction:** The presence of polyunsaturated fatty acids in sperm cells makes them susceptible to cascade of oxidative attack and fat oxidation which resulting reduction of sperm fertility. The purpose of the current study was to determine the supplementation effect of glutathione reductase (GSH) plus superoxide dismutase (SOD) antioxidants on the biochemical parameters of bull semen extender after freezing-thawing process.

**Materials and Methods:** A total 20 ejaculates (5 ejaculates per bull) were collected and pooled. The pool semen samples were diluted in the Tris-egg yolk based extender containing different GSH×SOD mM×IU/ml concentrations (5×100, 7.5×100, 5×150, and 7.5×150) and a control group, subsequently during 2 h cooled to 5°C and then frozen in 0.5 ml French straws. The MDA value, SOD activity and GPX activity assayed at the initial time after thawing samples.

**Results:** Our results showed that GSH×SOD from 5×100 mM×IU/ml concentration have positive effects in the pooled semen sample included reduce of lipid peroxidation rate (LPO) ( $p < 0.05$ ) and increasing of GPx activity ( $p < 0.05$ ) and 7.5×100 mM×IU/ml concentration improved the reduce LPO rate ( $p < 0.01$ ) and raising of GPx activity than control group. But, there were no significantly change in SOD activity between all treatments after thawing medium.

**Conclusion:** Our study revealed that a combination of antioxidants GSH×SOD, particularly 5×100 and 7.5×100 mM×IU/ml concentrations have positive effects on LPO rate and GPx activity after thawing of semen freezing medium.

**Key words:** Semen Cryopreservation, Reduced Glutathione, Superoxide Dismutase.

#### O-50

#### Combination of coated nanofiber matrix and cell sorting on purification of human spermatogonial stem cell

Zahiri M<sup>1</sup>, Movahedin M<sup>1</sup>, Mowla S<sup>2</sup>, Noruzinia M<sup>2</sup>, Nowroozi M<sup>3</sup>.

1. Department of Anatomical Sciences, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
2. Department of Genetics, School of Basic Sciences, Tarbiat Modares University, Tehran, Iran.

3. Department of Urology, Imam Khomeini General Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Email: maria\_zahiri@yahoo.com

**Introduction:** The propose was to achieve the purified population of spermatogonial cells from azoospermic patients in vitro.

**Materials and Methods:** Human testicular cells were isolated from the biopsy of testes by enzymatic digestion and pre-plating method, and then GFR $\alpha$ 1<sup>+</sup>Spermatogonial cells were sorted by MACS technique. Cells were cultured either on a laminin coated nanofiber surface or a non-nanofiber surface for 3 weeks. We used a synthetic matrix that its organization resembles to the basement membrane / ECM. During and after the period of culture, some experimental approaches such Immunocytochemistry, assessment of gene expression and evaluation of DNA methylation were considered.

**Results:** Human spermatogonial cell colonies were characterized by their ability to show some known specific fluorescent markers. After culture of cells on nanofibrillar surface for 2 weeks, the expression level of some germ cell specific genes ( $\alpha$ 6 and  $\beta$ 1 integrin, PLZF) were increased significantly while the expression level of c-myc, oct-4 and nanog as pluripotent markers significantly decreased ( $p < 0.05$ ). After spermatogonial cell sorting by MACS and a further week culture germ cell specific genes expressions were significantly increased and again pluripotent markers expressions were significantly decreased ( $p < 0.05$ ). Interestingly  $\alpha$ 6 and  $\beta$ 1 integrin and PLZF had unmethylation status, whereas c-myc and oct-4 had partial methylation status. The methods mentioned above didn't have any effect on gene specific methylation pattern.

**Conclusion:** These results have suggested that using laminin coated nanofiber as cultural microenvironment and cell sorting can provide a suitable method to in vitro purification of human SSCs.

**Key words:** Human spermatogonial cell, Nanofiber matrix, Culture, Isolation.

#### O-51

#### Human sperm incubation at 37°C: Effect of time intervals on sperm DNA fragmentation using TUNEL test

Nabi A, Halvaei I, Khalili MA.

Department of Embryology, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: ali.nabi67@yahoo.com

**Introduction:** Sperm incubation is necessary prior to use in ART and finding the optimum time would be worthwhile. There is positive correlation between long sperm incubation and sperm DNA fragmentation. The main goal was to evaluate the impact of different incubation time intervals on human sperm DNA status

using terminal deoxyribonucleotidyl transferase-mediated dUTP nick-end labeling (TUNEL) test.

**Materials and Methods:** This prospective study involved 21 normozoospermic specimens. After direct swim-up, sperm cells were incubated at 37°C and DNA damage was evaluated at different time intervals (0, 1, 2 and 3 h). After slide fixation with methanol 100% for 4 minutes and rinse in phosphate-buffered solution (PBS), TUNEL was added to each slide and incubated for 60 minute in dark. Eosin-Nigrosin and Papanicolaou staining protocols were applied in order to assess sperm viability and morphology, respectively.

**Results:** Sperm viability and normal morphology was improved after sperm processing (100%, 72.3% respectively,  $p=0.000$ ). The rate of DNA damage was significantly higher after 2h compared to 0h ( $9.19\pm 0.8\%$  vs.  $4.9\pm 0.9\%$ , respectively,  $p=0.008$ ). Also there was significant difference in abnormal sperm cells between 3h and 1h ( $10.95\pm 0.7\%$  vs.  $7.1\pm 1\%$ , respectively,  $p=0.02$ ).

**Conclusion:** Incubation of prepared normozoospermic samples at 37°C more than 2 h can be associated with sperm DNA fragmentation. Therefore, it seems that incubation of human spermatozoa at 37°C should be limited up to 2h prior to use in ART clinics.

**Key words:** Sperm incubation at 37°C, DNA fragmentation, TUNEL.

## O-52

### Comparison of serum testosterone level between infertile men with varicocele and fertile men without varicocele

Jangkhah M<sup>1</sup>, Farrahi F<sup>1</sup>, Shiravi A<sup>2</sup>, Sadighi Gilani MA<sup>1</sup>, Hosseini S<sup>1</sup>, Dadkhah F<sup>1</sup>, Salman Yazdi R<sup>1</sup>, Hosseinifar H<sup>1</sup>, Chehrazai M<sup>3</sup>, Sabbaghian M<sup>1</sup>.

1. Department of Andrology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.
2. Department of Developmental Biology, Islamic Azad University, Damghan Branch, Semnan, Iran.
3. Department of Epidemiology and Reproductive Health, Reproductive Epidemiology Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

**Email:** mjangkhah@yahoo.com

**Introduction:** Varicocele is recognized as the most common cause of male factor infertility and is found in 15% of the general population. This prevalence increases to 35% in men presenting with primary infertility and between 70 and 81% in men presenting with secondary infertility. There is accumulating evidence that varicocele may impair testosterone synthesis; however, results of studies addressing this topic are mixed, with some studies suggesting no effect. The aim of this study was to determine whether men with varicocele have lower testosterone levels than those without.

**Materials and Methods:** We measured preoperative testosterone levels in 40 infertile men with palpable varicocele (grade II, III) and in 50 fertile men without

varicocele who served as a control group. For assessment of the effect of age on testosterone profile, we divided the study population into two groups; younger and older than 35 years old.

**Results:** The mean of testosterone level in infertile men with varicocele and fertile men without varicocele were 6.1 and 5.9 ng/ml respectively. No statistically significant changes were noted in testosterone levels for any of the groups. Moreover, there was no correlation between age and testosterone level in two groups.

**Conclusion:** Although there are some reports showing that varicocele disturb the Leydig cell function, resulting in a decrease in T biosynthesis, in our study, T levels were not statistically different across the two groups of patients evaluated. However, this work is ongoing with more patients and we will assess the testosterone level after varicocelectomy.

**Key words:** Testosteron, Varicocele, Androgen, Infertility.

## O-53

### Combined mini incision microscopic varicocelectomy

Pouyan O, Pouyan N, Alyasin A, Aghahosseini M, Saeidi H  
Omid Clinic IVF Center, Laleh Hospital, Tehran, Iran.

**Email:** dr\_omid\_pouyan@hotmail.com

**Introduction:** Varicocele is by the most commonly performed operations for the treatment of male Infertility. Retroperitoneal, laparoscopic, Inguinal and Subinguinal varicocelectomy are currently popular approaches. We present data on 1500 patients undergoing microscopic Inguinal and combined (inguinal and retroperitoneal, for the first time) varicocelectomy.

**Materials and Methods:** we reviewed our varicocelectomy database in 1500 patients underwent microscopic inguinal and combined varicocelectomy between 2006 and 2013 with age 16-40 years old. Clinical perioperative and outcome data were collected operative time, length of hospital stay, complications including, hydrocele, testicular injury, varicocele recurrence.

**Results:** A total of 1500 patients were treated for Varicocele during a 7 years period at our centers by one experienced microscopic surgeon. Mean age was  $28\pm 12$  years (range from (16-40 years). 870 (58%) were Bilateral. 330 (22%) were high grade varicocele. (Grade III). 285 (19%) underwent combined (Inguinal & Retroperitoneal) mini incision (2-2.5 cm) microscopic varicocelectomy. Including criteria, complexity of veins at inguinal approach. Excluding criteria were prior surgery at inguinal level (Herniorrhaphy, Orchiopexy, etc). Hospital stay: 6h, operative times: 45-90 minutes without testes Atrophy, Hydrocele just two from 285 patients with recurrent Varicocele (0.7%).

**Conclusion:** Combined mini incision microscopic varicocelectomy is a minimal invasive procedure in the selected patients provides excellent success rate (more than 99%) in relief of symptoms and signs and improvement semen parameters and pregnancy rates. Goldstein and associates suggest that recurrent

varicoceles are due to venous collaterals and therefore deliver the testicle through the inguinal incision. This study showed no benefit and a possible determined testicular delivery, based on better improvement of semen parameters without the additional of this extra step.

**Key words:** Miniincision, Varicocelectomy.

## O-54

### Assessment of DFI in gonadotropin treated hypogonadotropic hypogonadism patients

Hosseinfar H<sup>1</sup>, Sadighi Gilani MA<sup>1</sup>, Sabbaghian M<sup>1</sup>, Chehraz M<sup>2</sup>, Modarresi T<sup>1</sup>, Jannat Alipour F<sup>1</sup>.

1. Department of Andrology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

2. Department of Epidemiology and Reproductive Health, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

**Email:** hani.hosseinfar@gmail.com

**Introduction:** Various factors play a role in male infertility. One of the factors is hypogonadotropic hypogonadism (HH). Spermatogenesis in men with HH can be induced by gonadotropin. Intact human sperm DNA is prerequisite for successful fertility and DNA damage may be resulted in abnormal reproduction. The aim of this study was assessment of sperm DNA fragmentation index (DFI) in gonadotropin treated hypogonadotropic hypogonadism patients with and without a child.

**Materials and Methods:** It is a cross sectional study. The study included 58 patients who were diagnosed with HH at the Infertility Unit of Royan Institute between 2010 and 2012 and after gonadotropin therapy had sperm count  $>1 \times 10^6$  sperm per ml. Patients were divided into two groups: 20 gonadotropin treated HH patients with a child (s) (group 1) and 38 gonadotropin treated HH patients without a child (group 2). Fragmented DNA in spermatozoa was visualized by TUNEL assay.

**Results:** Average of DFI (group 1:  $13.45 \pm 0.64$ , group 2:  $21.92 \pm 0.86$ ), age, body mass index, testis volume semen parameters and FSH, LH and testosterone levels in two groups was calculated.

**Conclusion:** It was shown that DFI in group 1 is significantly lower than DFI in group 2 ( $p < 0.001$ ). There are not any studies about DNA fragmentation index in patients with HH, yet. It can be concluded that despite of low sperm quality, especially sperm concentration in these patients, decreasing sperm DNA damage may be resulted in successful fertilization.

**Key words:** Male infertility, Hypogonadotropic hypogonadism, Gonadotropin, DNA damage.

## O-55

### Evaluation of relationship between DNA fragmentation and protamine deficiency in patients with total globozoospermia

Sabbaghian M<sup>1</sup>, Yazdanihah S<sup>1,2</sup>, Hosseinfar H<sup>1</sup>, Modarresi T<sup>1</sup>, Sadighi Gilani MA<sup>1</sup>.

1. Department of Andrology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

2. Department of Animal Biology, Faculty of Biological Sciences, Shahid Beheshti University, Tehran, Iran.

**Email:** marjan.sabbaghian@gmail.com

**Introduction:** Globozoospermia syndrome is a severe and rare (incidence  $<0.1\%$ ) form of teratozoospermia. Lack of acrosome and round sperm head are its main characteristics. The acrosomeless spermatozoon is unable to go through the zona pellucida. ICSI is sole treatment option for these patients. The aim of this study was to characterize, at the molecular level, the chromatin structure and DNA integrity of globozoospermic samples using SCSA and chromomycin A3 (CMA3) staining.

**Materials and Methods:** Sperm samples were obtained from 15 patients with total globozoospermia and 30 men with normozoospermia (normal morphology  $>4\%$  and motility  $>40\%$ ) referred to Royan institute, Tehran. Semen analysis was carried out according to WHO criteria. DNA fragmentation and protamine deficiency was assessed using with SCSA and CMA3 staining, respectively.

**Results:** Globozoospermic men had a significantly greater percentage of sperm with DNA fragmentation compared with that found in normozoospermic control ( $p < 0.001$ ). The percentage of CMA3-positive spermatozoa was also higher in globozoospermic patients compared with normozoospermic control ( $p < 0.001$ ).

**Conclusion:** Several studies have attempted to correlate DNA fragmentation rate with sperm characteristics. However, there is just some case reports about DNA fragmentation rate in globozoospermic men. We have found an association between globozoospermia and DNA fragmentation and protamine deficiency that because of remarkable patient's number can be reliable. Therefore, recurrent failures in ICSI treatment in these patients may be related to abnormality in chromatin structure and DNA integrity.

**Key words:** Male infertility, Globozoospermia, Sperm DNA fragmentation, Protamine deficiency.

## O-56

### Beneficial effects of ascorbic acid on teratozoospermic sperm specimens during processing for assisted reproductive techniques

Fanaei H<sup>1</sup>, Khayat S<sup>2</sup>, Azizi Y<sup>1</sup>, Rezaee F<sup>2</sup>, Kasaeian A<sup>3</sup>, Bakhshesh M<sup>1</sup>.

1. Department of Physiology, Medical School, Tehran University of Medical Sciences, Tehran, Iran.

2. Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.

3. Department of Epidemiology and Biostatistics, Public Health School, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** fanaeih@yahoo.com

**Introduction:** Main reasons for teratozoospermic sperm malfunctions are high generation of reactive oxygen species (ROS) and lower antioxidant capacity as compared to normozoospermia. We evaluated the effect

of an antioxidant, ascorbic acid, on teratozoosperm motility and viability.

**Materials and Methods:** Teratozoospermic semen samples were obtained from 15 volunteers 20-30 years old after 3-5 days of sexual abstinence. Samples were washed, centrifuged and incubated in 37°C and 5% CO<sub>2</sub> until sperms swimm-up. Sperms were counted in the supernatant and divided into two groups, each contained 2×10<sup>6</sup> sperm/ml. Groups 1 and 2, were incubated for 1 hour with Ham's F-10 solution as control group and 600µM ascorbic acid, respectively. Sperm motility assessed by light microscopy, sperm vitality determined by eosin staining.

**Results:** Our results indicated that ascorbic acid prevented the effect of the oxidative stress, protecting teratozoospermic sperm against reactive oxygen species, and enhancing sperm motility and viability during incubation.

**Conclusion:** In conclusion, ascorbic acid has a potency to improve the biological functions of teratozoospermic sperms during teratozoospermic semen processing for assisted reproductive techniques.

**Key words:** Teratozoospermic semen, Ascorbic acid, Motility, Viability.

## O-57

### Evaluation of homozygous and heterozygous DPY19L2 deletion in patients with total globozoospermia

Yazdanikhah S<sup>1, 3</sup>, Sabbaghian M<sup>1</sup>, Totonchi M<sup>2</sup>, Amiri Yekta A<sup>2</sup>, Hasan Zadeh Kiabi B<sup>3</sup>, Sadighi Gilani MA<sup>1</sup>.

1. Department of Andrology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Medicine (ACECR), Tehran, Iran.
2. Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Medicine (ACECR), Tehran, Iran.
3. Department of Animal Biology, Faculty of Biological Sciences, Shahid Beheshti University, Tehran, Iran.

**Email:** syazdanikhah@yahoo.com

**Introduction:** Disorder in acrosome formation and sperm head elongation is lead to display round-headed spermatozoa lacking an acrosome that is unable to cross the oocyte zona pellucida and achieve fertilization. This phenotype is defined as Globozoospermia syndrome. Globozoospermia is a rare form (incidence <0.1) but severe teratozoospermia that first was described by schirren et al. in 1971. Recent studies show that the deletion of the *DPY19L2* (dpy-19-like 2) gene is a major cause of globozoospermia. The aim of this study was to evaluate the rate of homozygous and heterozygous *DPY19L2* deletion in these patients.

**Materials and Methods:** we screened for deletions of *DPY19L2* in 15 patients with total globozoospermia and 30 normozoospermic controls referred to fertility and infertility centre of Royan, Tehran, by performing both a PCR of two exons and a long-range PCR across the deletion.

**Results:** 73.3% of the analyzed patients (n: 11) had *DPY19L2* deletion that all of them were homozygous for the deletion. The deletion of *DPY19L2* was not found in the control group.

**Conclusion:** Overall, the deletion of *DPY19L2* was identified in most of these patients. It was confirmed that the vast majority of type I globozoospermia is indeed caused by a homozygous deletion of *DPY19L2*. Further studies are necessary to identify possible point mutations in *DPY19L2* and other genes involved in acrosome biogenesis in patients without deletion in this gene.

**Key words:** Male infertility, Globozoospermia, Acrosome biogenesis, *DPY19L2*.

## O-58

### Correlation of human seminal clusterin with protamine deficiency and sperm DNA fragmentation

Salehi M<sup>1</sup>, Akbari H<sup>2</sup>, Nematollahi S<sup>3</sup>, Ghaffari Novin M<sup>4</sup>, Heidari M<sup>4</sup>.

1. Cellular and Molecular Biology Research Center, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
2. Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Animal Transgenic Sciences, Stem Cell Technology Research Center, Tehran, Iran.
4. Department of Biology and Anatomical Sciences, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

**Email:** msalehi78@gmail.com

**Introduction:** Seminal proteins can be considered as factors for control of fertilization. One of these proteins is clusterin which plays important role in cell survival and affect DNA repair in somatic cells and probably affect sperm chromatin and sperm DNA fragmentation. So, the aim of present study was evaluation of correlation of seminal clusterin with sperm chromatin anomalies.

**Materials and Methods:** Semen samples were collected from 63 cases according to WHO guideline and analyzed by CASA. CMA3 staining was used to determine protamine deficiency, and DNA fragmentation was assessed by sperm chromatin dispersion test (SCD). Seminal clusterin concentration was measured by ELIZA test.

**Results:** In infertile cases level of clusterin was 9.74±15.48 ng/ml and in fertile cases was 48.31±38.59 ng/ml that showed significant difference (p=0.001). The results showed a significant negative correlation between clusterin level, protamine deficiency and sperm DNA fragmentation (p<0.05). Clusterin concentration had significant negative correlation with sperm abnormal morphology.

**Conclusion:** Clusterin can be used as marker for sperm chromatin anomalies and can be considered in male infertility.

**Key words:** Clusterin, Protamine deficiency, DNA Fragmentation.

**O-59****Male sexual dysfunction and recommended foods in Iranian traditional medicine**

Nazem E<sup>1</sup>, Goushegir A<sup>2</sup>, Nejatbakhsh F<sup>1</sup>, Isfahani M<sup>1</sup>, Nikbakht Nasrabadi A<sup>3</sup>.

1. School of Iranian Traditional Medicine, Tehran University of Medical Sciences, Tehran, Iran.
2. Research Institute for Islamic and Complementary Medicine, Tehran University of Medical Science, Tehran, Iran.
3. Department of Medical-Surgical Nursing, Tehran University of Medical Science, Tehran, Iran.

Email: nejatbakhsh@tums.ac.ir

**Introduction:** Male sexual dysfunction is common. In America, a prevalence of impotence of 52% was estimated among men aged 40-70 years. Causes of sexual dysfunction and their treatments are expressed in classical medicine and Iranian Traditional Medicine (ITM). ITM physicians stressed the importance of nutrition in the prevention and treatment of diseases. Also in the problem recommended many foods for each causes. The aim of this study was to explore the causes of male sexual dysfunction and recommended foods for treating this problem addressed through ITM original resources.

**Materials and Methods:** Specific data related to the subject among all referral ITM texts was extracted firstly, and then the collected data were analyzed using inductive content analysis.

**Results:** The analysis of data revealed that male sexual dysfunction in ITM has two causes; physiologic and psychosomatic. Physiologic causes are low semen volume, brain weakness, heart weakness, stomach weakness, liver weakness, kidney weakness, sexual inactivity, semen intemperament, low vessels flatulent and penis weakness or palsy. Signs and symptoms and recommended drugs and foods for each causes are expressed, that in this study stressed the recommended foods.

**Conclusion:** Foods that can enhance sexual performance and the quality and quantity of semen can be recommended to male patients who suffer from sexual dysfunction in medical centers to aid in their treatment.

**Key words:** Male sexual dysfunction, Nutrition, Iranian traditional medicine.

**O-60****Studying the effects of thawing medium supplemented with vitamin E on human sperm parameters and functions**

Jafarbeik Irvani N<sup>1</sup>, Safarian S<sup>1</sup>, Lakpour N<sup>2</sup>, Sadeghi M<sup>3</sup>.

1. School of Biology, College of Science, University of Tehran, Tehran, Iran.
2. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Monoclonal Antibody Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: Sadeghi@avicenna.ac.ir

**Introduction:** Drastic changes in reactive oxygen species generation play an important role in quality of frozen-thawed sperm. The present study evaluated the influence of vitamin E supplementation, as an important antioxidant in thawing medium, on post-thawed sperm motility, sperm quality and expression of some apoptotic genes.

**Materials and Methods:** 20 pool human samples were studied. Semen analysis was performed according to WHO standards (2010). Motility pattern has been measured by CASA. Sperm viability was studied by trypan blue staining. DNA fragmentation was determined by sperm chromatin structure assay (SCSA) and toluidine blue staining. For assaying lipid peroxidation, malondialdehyde (MDA) levels were determined in accordance with the method described by Ohkawa *et al.* Sperm apoptosis was determined by Annexin V/PI flow cytometry assay and real-time PCR was done for determination of level of some apoptotic genes transcript.

**Results:** Sperm motility was significantly decreased compared to before of freezing. But, vitamin E improved the post-thawed sperm motility ( $p < 0.01$ ). We observed significant differences in viability and DNA integrity between before freezing as well as post-thawed sperm without supplementation and in vitamin E supplemented samples ( $p < 0.05$ ). In vitamin E supplemented frozen-thawed groups caspase-3 transcript was significantly down regulated compared to the fresh sperm ( $p < 0.05$ ). Vitamin E had beneficial effects on reduction of MDA levels ( $p < 0.05$ ).

**Conclusion:** In conclusion vitamin E had protective effects on frozen-thawed sperm parameters and quality against oxidative stress. Our results suggest that addition of vitamin E to the thawing media can improve storage of sperm in low temperatures.

**Key words:** Cryopreservation, Sperm, Vitamin E, Real-time PCR, Apoptosis.

**4- Nursing & Midwifery****O-61****Predictor chemical biomarkers of preterm labor (cervicovaginal BHCG and salivary estriol)**

Tehrani N, Mosavi S, Ranjbar M.

Email: tehranin@modares.ac.ir

**Introduction:** To evaluate the diagnostic accuracy of measuring cervicovaginal BHCG and salivary estriol levels to identify women undergoing preterm labor (PTL) who will deliver preterm.

**Materials and Methods:** A hospital-based prospective cohort study of 43 women undergoing spontaneous PTL between 24 and 33 weeks+6 days of pregnancy was conducted. Measurement of cervicovaginal BHCG and salivary estriol levels were performed to find the best

model to predict preterm delivery (PTD). Optimal cut-off values were calculated by receiver operating characteristic (ROC) curve analysis. Pearson correlation tests were also performed.

**Results:** The mean±SE salivary estriol levels and cervicovaginal BHCG in 31, 32, 33 and 34 weeks gestational in case group was higher than control group, respectively. ROC curve analysis showed, the level of BHCG  $\geq 22.5$  mIU/ml and salivary estriol  $\geq 0.18$  ng/ml levels were associated with occurrence of preterm delivery (97% sensitivity, 76% specificity, 81% positive predictive value, 96% negative predictive value), (68% sensitivity, 57% specificity, 62% positive predictive value, 63% negative predictive value).

**Conclusion:** Cervicovaginal BHCG value in compare to salivary estriol levels is more effective to identify women undergoing symptomatic PTL who are at increased risk of PTD.

**Key words:** Preterm Labor, Cervicovaginal BHCG, Salivary estriol.

## O-62

### Making childbirth “pleasant” and medical ethics

**Keramat A.**

*Department of Reproductive Health, Shahroud University of Medical Sciences, Shahroud, Iran.*

**Email:** keramt1@yahoo.com

**Introduction:** Efforts for making childbirth an enjoyable and pleasant experience for women may play an important role for increasing acceptance of vaginal delivery and decreasing caesarean section rate in the community. In the other hand, it seems that to achieving an enjoyable childbirth, it is necessary; to pay attention to pregnant women's right and medical ethics. Thus in this study we aimed to explain the enjoyable and non enjoyable experiences of women from childbirth.

**Materials and Methods:** The present study was carried out using Focus Group Discussion for interviewing women who were clients of urban and rural health centers from Shahroud area. The sample selection was done among women with experience of normal delivery who were interested to participation the study. Each group included 6-8 women that were similar in educational level. We continued interviewing in different groups using Focus Group Discussion until information saturation. Content analysis was used in this study.

**Results:** The enjoyable and non enjoyable experiences of women from childbirth in this study were categorised in two groups: A) factors that are related to nature of childbirth (physiological and/or pathological process of delivery), B) factors that are related to management and conduction of normal delivery. The factors that were depended to management of normal delivery were mostly related to ethical issues that were classified in following subcategories: the right to recognise and selection of health provider for conduction of delivery

and choosing the suitable position and situation (place) for normal childbirth, the right to have privacy, the right to have necessary information about normal delivery and the right to be respected.

**Conclusion:** in the based on the recent study results and also the previous reports, it is necessary to pay attention to making childbirth enjoyable and pleasant, not only for increasing acceptance of vaginal delivery but also for importance of pregnant women's right and medical ethics. Thus we suggest making more studies in this area and planning for improving the quality of normal delivery management.

**Key words:** Enjoyable Childbirth, Pleasant Childbirth, Medical ethics.

## O-63

### Midwife's rights and responsibilities

**Hadipour Jahromy L.**

**Email:** jahromyl1@yahoo.com

A midwife has a range of responsibilities, including the care of mother and baby, adhering to hospital policy and maintaining an awareness of issues such as health and safety. “A practising midwife is responsible for providing midwifery care in accordance with such standards as the Council may specify from time to time to a woman and baby during the antenatal, intranatal and postnatal periods.” Responsibility:

- Each caregiver is responsible for the quality of care she or he provides.
- Maternity care practice should be based not on the needs of the caregiver or provider, but solely on the needs of the mother and child.
- Each hospital and birth center is responsible for the periodic review and evaluation, according to current scientific evidence, of the effectiveness, risks, and rates of use of its medical procedures for mothers and babies.
- Society, through both its government and the public health establishment, is responsible for ensuring access to maternity services for all women, and for monitoring the quality of those services.
- Individuals are ultimately responsible for making informed choices about the health care they and their babies receive.

#### Statement of rights and responsibilities

The Midwife's Rights and Responsibilities:

1. The midwife has the right to clearly state her expectations of the client's responsibility concerning her prenatal care, in labor and postpartum.
2. The midwife has the right to decline to participate in activities she is morally opposed to.
3. The midwife has the right to refuse, transfer or discontinue care and to determine and define the conditions appropriate for doing so.
4. The midwife has the right and responsibility to gather information regarding client conditions and concerns for which a midwife may need to consult,

refer or transfer the client to another health care professional.

5. The midwife has the responsibility to clearly state and document when a woman's choices fall outside the midwife's practice guidelines.
6. The midwife has the right to honest financial information and appropriate compensation.
7. The midwife has the responsibility to assist the client in activities that promote the woman's well being.
8. The midwife respects the client's right to decline treatments or procedures.
9. The midwife has the right to a client signature on refusal of recommendation documents.
10. The midwife has the responsibility to document the client's refusal of the midwife's recommendations in writing and to retain the documents in the client's records.

The Client's Rights and Responsibilities:

1. The midwife recognizes, informs and supports the woman's right as primary decision maker regarding her health care and that of her infant.
2. The client has the responsibility to educate herself as primary decision maker regarding her health care and that of her infant.
3. The client has the responsibility of participating in her education concerning the potential benefits and risk of treatments and procedures.
4. The client has the right to informed consent prior to any procedure and/or prescribed medication to be given to her and her newborn, including risks, benefits, options and alternatives.
5. The client has the right to accept or refuse the midwife's recommended care.
6. The client accepts the responsibility for outcomes of refusing recommended care.
7. The client has the responsibility to truthfully and fully inform the midwife of all matters concerning her own health care history.

**Key words:** *Midwife's rights, Responsibility.*

#### O-64

### **Application of a collaborative reproductive healthcare model in counseling of infertile women: The role of Midwives**

**Latifnejad Roudsari R.**

*Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.*

**Email:** latifnejadr@mums.ac.ir, rlatifnejad@yahoo.com

**Introduction:** Infertility and its treatment are psychologically stressful with virtually hundreds of articles published on this issue. The goal of treatment is to accomplish a thorough investigation to treat any abnormalities that are uncovered, to educate the couple about reproductive system, to inform the couple about their fertility potential, to counsel for ART and alternative family forms, to provide emotional support

and in sum, to acquire a holistic perspective. But the question is who should do the counseling.

**Materials and Methods:** A conventional literature review was carried out using multiple databases (PubMed, PsychInfo, Scopus) to identify relevant literature from 2000-2010.

**Results:** counseling needs issues such as having a thorough working knowledge of the medical aspects of the infertility, familiarity with procedures, medications, and various treatment protocols, and having up-to-date information on the rapidly developing infertility treatment techniques and their psychological consequences. While there is no clear international agreement of who can or should provide infertility counseling services, Covington (2006) developing a collaborative reproductive healthcare model commented that all infertility healthcare providers, from physicians, midwives and nurses to laboratory technicians and administrative assistants, have the opportunity to counsel patients going through reproductive medical diagnosis and treatment. In this sense, psychosocial care is the responsibility of all members of the treatment team as it entails 'treating the patient, not the disease.'

**Conclusion:** I argue that midwives due to their holistic perspective towards women's life issues could do this responsibility meticulously; although increasing specialization and collaboration in all fields of healthcare practice have brought the need for psychological services to the reproductive medical practice.

**Key words:** *Reproductive healthcare model, Infertile women, Midwife's role.*

#### O-65

### **The complications of atmospheric pollution in pregnant women, fetus, family and suggestion to prevent them**

**Jahdi F.**

*Department of Midwifery, Tehran University of Medical Sciences, Tehran, Iran.*

**Email:** jahdi\_fr@yahoo.com

**Introduction:** Atmospheric pollution is a factor threatening the health of mothers and babies who are the most prevalent group in the society and form of the pollution in the world. The chemical factors produce by the pollution enter in the life such as water, Earth and food material can stay and change in the natural center and Enter body of mother and baby Through varies ways and cause long and short term complication.

**Materials and Methods:** The present data was gather to international web center from 1990 until 2012 year and other References.

**Results:** The results show that using addictive drug cause cardiac and Respiratory disease, cancer, abortion, Preterm labour in mother, Intra uterine death, Varies congenital abnormality, personality problem, Anemia, neonatal death, further more noise pollution can increase fetal heart beat, the lead and mercury in the

polluted air can cause lack of concentration, imbalance and instability. Reversible epilepsy and quick mutation can cause some of disease such as breast cancer, uterus, ovary other cancer and infertility in women.

**Conclusion:** The result of epidemiologic study about the chemical material cigarette, addict drug and air pollution show that these can cause complication in the fetus and mother. So that in the present it is Essential to ask for the help of every women in the society to offer suitable solution and planning to overcome, these financial health, cultural and social problem.

**Key words:** Atmospheric Pollution, Pregnant women, Fetus, family, Prevent complication.

## O-66

### The Effect of foot reflexology on anxiety during of labor on primiparous

Mehdizadeh Tourzani Z<sup>1</sup>, Moghimi Hanjani S<sup>1</sup>, Shoghi M<sup>2</sup>, Ahmadi G<sup>1</sup>.

1. Department of Midwifery, Nursing and Midwifery Faculty, Islamic Azad University, Karaj Branch, Alborz, Iran.
2. Department of Nursing, Nursing and Midwifery Faculty, Islamic Azad University, Karaj Branch, Alborz, Iran.

Email: z\_mehdizadeh\_t@yahoo.com

**Introduction:** Fear of labor pain is one of the problems that raise rate of caesarean section in Iran. Midwives can use one of the nonpharmacological pain relief methods such as reflexology and encourage mothers to use normal vaginal delivery. The aim of this study was to determine the effect of reflexology on anxiety during labor in primiparous.

**Materials and Methods:** This clinical trial (IRCT: 0022) was carried out on 80 primiparous women with low risk pregnancy that referring to Karaj hospitals. Patients were randomly assigned in two groups. Intervention group received reflexology for 40 minutes. Level of anxiety before and after intervention was measured with Spielberger's State-Trait Anxiety Questionnaire. The data was analyzed by t-test and Repeated measure ANOVA tests.

**Results:** There was no significant differences between two groups before the intervention ( $p=0.15$ ). After intervention the difference in anxiety score was significant between two groups ( $p<0.001$ ).

**Conclusion:** Reflexology can lead to decrease anxiety during of labor. Therefore, this noninvasive technique can be used for decrease of anxiety and encourage mothers to use normal vaginal delivery.

**Key words:** Reflexology, Anxiety, Primiparous.

## O-67

### Gender-based reproductive roles within Iranian families: A mixed methods study

Homami S<sup>1,2</sup>, Montazeri A<sup>3</sup>, Eftekhar H<sup>4</sup>, Nikbakht Nasrabadi A<sup>5</sup>, Nedjat S<sup>6</sup>, Karimi Y<sup>7</sup>, Moshki M<sup>8</sup>, Mansourian AA<sup>9</sup>.

1. Department of Reproductive Health, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.

2. Department of Public Health, School of Health, Semnan University of Medical Sciences, Semnan, Iran.
3. Iranian Institute for Health Sciences Research, Tehran, Iran.
4. Department of Health Education and Promotion, School of Health, Tehran University of Medical Sciences, Tehran, Iran.
5. Department of Medical Surgical Nursing, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
6. Department of Epidemiology and Biostatistics, School of Health, Knowledge Utilization Research Center, Tehran University of Medical Sciences, Tehran, Iran.
7. Department of Educational Psychology, School of Psychology, Science and Research Branch, Islamic Azad University, Tehran, Iran.
8. Department of Public Health, School of Health, Social Development and Health Promotion Research Center, Gonabad University of Medical Sciences, Khorasan Razavi, Iran.
9. Damghan Health Center, Semnan University of Medical Sciences, Semnan, Iran.

Email: homami\_set@yahoo.com

**Introduction:** According to some parts of reproductive rights definition, everyone is entitled to make decisions concerning the reproduction free of discrimination, coercion, and violence. In order to achieve this goal, there is a need to recognize the main domains of reproductive roles and determine their gender-based patterns of decision making. Thus, we conducted a mixed methods study to explore and measure the gender-based reproductive roles within Iranian families; Tehran, Iran.

**Materials and Methods:** In the present study, we used an exploratory mixed methods design to develop a culture-oriented instrument. In its first qualitative phase, a maximum variation sample of 21 adult men and women in 3 provinces of Iran was used to explore the main domains of reproductive roles within contemporary families. In the second qualitative and quantitative phase, items generation and items reduction were done for developing the instrument. At last, we examined the validity and reliability of our developed instrument.

**Results:** In the first qualitative phase, nine main reproductive roles emerged as follow: Marriage and divorce, sexual matters, conception and pregnancy, delivery, breastfeeding, family planning, gender preference, infertility, and gynecological surgeries. In the second qualitative and quantitative phase, 108 items were generated as the first draft of the instrument. After items reduction and examining its reliability and validity, 19 items were remained as the final version of our instrument.

**Conclusion:** Our findings led to develop a culture-oriented instrument to measure gender-based reproductive roles within Iranian families; which may be applicable to assess the reproductive rights challenges in contemporary families.

**Key words:** Gender Role, Reproductive Roles, Mixed Methods Design, Iran.



**O-68****What is the association between herbal regimes and OHSS?**

**Rasekh Jahromi A<sup>1</sup>, Hosseinpoor M<sup>1</sup>, Mehrabipour F<sup>1</sup>.**  
*Jahrom University of Medical Sciences, Jahrom, Iran.*  
**Email:** drrasekhjahromi@gmail.com

**Introduction:** Ovarian hyperstimulation syndrome (OHSS) is an iatrogenic complication that occurs in the luteal phase of an induced hormonal cycle. The aim of this study is to assess the association of herbal regimes and OHSS.

**Materials and Methods:** This is a clinical trial study. 110 married patients were referred to Dr.Rasekh clinic from Aug 2011 to NOV 2012. All patients had a vaginal ultrasound before and after the diagnosis of ovarian hyperstimulation syndrome (OHSS). Data was analyzed by SPSS 15 software.

**Results:** The mean age was 30.7. 52.7% of cases didn't have history of infertility, but 38.9 % primary infertility and 8.3 % with secondary infertility. The Herbal regimes include ;black pepper) 61%, (ginger)25.5 % , (Cinnamon) 27.3 % , (Thyme) 19.3 % , (cumin) 14.8 % , (Chamomile) 14.5 % ,(dill) 14/5%, (saffron) 14%. Consumption period was from third to eighth day of menstrual cycle for 1 to 4 months. 32 (37.2%) patients were normal BMI (18.5-24.09), BMI 34 (39.5%) patients <18.5, BMI >24.09 in 15 (17.4%) patients, BMI >30 in 5(5.8%) patients. Dosage of herbal regimes is One tablespoon (3g). 80 (93.02%) individuals' consumers of herbal regimes were mild OHSS, 5 (5.8%) Moderate OHSS, 1(1.1%) severe OHSS.

**Conclusion:** From this research, we concluded that the indiscriminate use of herbal regimens can lead to OHSS. Some of patients have been used herbal regimens in combination of chemical drugs. We hope to obtain the appropriate dosages of herbal regimes that are safe and could be replaced by synthetic drugs with high side effects.

**Key words:** Herbal, Regimes, OHSS.

**O-69****The impact of behavioural health sleep education on the quality of life in the pregnant women with sleep disorder: A randomized control trial**

**Rezaei E<sup>1</sup>, Behboodi Moghadam Z<sup>2</sup>, Hagani H<sup>3,4</sup>.**

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Reproductive Health, Tehran University of Medical Sciences, Tehran, Iran.
3. Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
4. Faculty of Management and Medical Information Sciences, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** bahar\_behboodi@yahoo.com

**Introduction:** 79% of the pregnant women suffer from sleep disorders. These disorders are the result of physiological, hormonal and physical changes and can affect disorders before, during and after childbirth. In addition this can affect the quality of life for pregnant women. This study aimed to evaluate the impact of behavioral health sleep education on the quality of life in the pregnant women with sleep disorder in the second trimester of pregnancy.

**Materials and Methods:** This study is a randomized clinical trial, on 112 pregnant women with sleep disorder (according to the Pittsburgh Sleep Quality questionnaire). Tools for data collection included demographic questionnaire and summarized in the World Health Organization Quality of Life (WHOQOL: BREF). Sampling was done in an easy and accessible sampling. They were randomly (simple) divided into control and case groups. In the case group, health behavior Sleep education were presented during a four-hour session in weeks 22, 23, 24 and 25 then followed up by filling the summarized form of the World Health Organization Quality of Life (WHOQOL: BREF) questionnaire in the first meeting on the month after intervention in week 29 of pregnancy and the second follow-up session was done two months later at 33 weeks.

**Results:** A statistically significant change was reported in the quality of life in the intervention group (Case) in comparison to the control group [29 week (p=0.000), in 33 week (p=0.001)].

**Conclusion:** Behavioral health sleep education improves the quality of life in pregnant women who are experiencing insomnia.

**Key words:** Quality of life, Pregnant women, Sleep disorder.

**O-70****The effect of an educational package on nutritional knowledge and dietary food intake of pregnant women: a randomized controlled trial**

**Omidi F<sup>1</sup>, Kamalifard M<sup>1</sup>, Mohammad-Alizadeh-Charandabi S<sup>1</sup>, Ebrahimi-Mameghani M<sup>2</sup>, Asghari-Jafarabadi M<sup>3</sup>.**

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Nutrition, Faculty of Health and Nutrition, Nutrition Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Department of Statistics and Epidemiology, Faculty of Health and Nutrition, Medical Education Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.

**Email:** omidi.f.90@gmail.com

**Introduction:** Nutrition education can play an important role in health promotion of the mother and her child. The aim of this study was to determine the effect of an educational package on nutritional knowledge and dietary food intake of pregnant women.

**Materials and Methods:** This randomized clinical trial was carried out on 88 women of 8-14 weeks of pregnancy who were selected using convenience sampling method in four public health centers in Karaj, Iran. They were randomly allocated into intervention (n=44) and control group (n=44). Participants completed a self-made questionnaire during 4 stages (before, four weeks after the intervention, 24-28 and 36-40 weeks of pregnancy). Data were analyzed with SPSS version 13.

**Results:** At 3 stages after intervention, the compare mean of adjusted scores in intervention group with control group showed that the means of nutritional knowledge (63.5, 64.7, 63.6 against 35.7, 39.0, 40.4 respectively) and behavior scores (61.3, 68.4, 71.0 against 36.5, 42.7, 45.3 respectively) were significantly higher in the intervention group compared with the control group (p<0.001). Optimal food intake of milk and milk products were significantly higher in the intervention group compared with the control group. Optimal food intake of meat in the 1&3 stages after intervention and bread and cereal in the 1 stage after intervention was significantly more frequent in the intervention group compared with the control group.

**Conclusion:** Content of educational package was evaluated as an appropriate policy in promoting nutritional knowledge and behavior of pregnant women. Therefore, is recommended for improving the quality of prenatal care, this educational package should also be provided for pregnant women.

**Key words:** Pregnancy, Education, Knowledge, Food group, Nutrition.

## O-71

### Association of maternal body mass index (BMI) with adverse prenatal outcomes

Sharifi F<sup>1</sup>, Sharifi N<sup>2</sup>, Nouraei S<sup>3</sup>.

1. Department of Midwifery, Kazerun Branch, Islamic Azad University, Kazerun, Iran.
2. Department of Health Education, Shahrekord Branch, Islamic Azad University, Shahrekord, Iran.
3. Department of Midwifery and Reproductive Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: f\_sharifi44@yahoo.com

**Introduction:** Maternal body mass index has an impact on maternal and fetal pregnancy outcome. An increased maternal BMI is known to be associated with admission of the newborn to a neonatal care unit. The present study aimed to determine association between abnormal maternal body mass index and adverse prenatal outcomes.

**Materials and Methods:** In this review article, A number of researches studied. Electronic searching of Medline, Sid, google scholar was performed during 2009-13.

**Results:** The results showed that Increased maternal BMI were at increased risk for fetal macrosomia, decreased clinical estimated fetal weight, accuracy risk of infant death, mainly neonatal death and admission of the newborn to a neonatal care unit. In the neonatal

ward children from obese mothers are characterized by hypoglycaemia fetal. Maternal weight was positively associated with larger head and abdominal circumference and longer femur in Sonography.

**Conclusion:** Considering high prevalence of abnormal maternal body mass index and associated adverse prenatal outcome; consultation before pregnancy is recommended in order to achieve normal body mass index and reduce the relevant complications.

**Key words:** Maternal body mass index, Pregnancy, Prenatal outcomes.

## O-72

### Cesarean section following infertility

Jamali S.

Jahrom University of Medical Sciences, Jahrom, Iran.

Email: safieh\_jamali@yahoo.com

**Introduction:** According to formal statistics in Iran, about 25-30% of deliveries are done by cesarean section; informal statistics, however, show a rate of five times higher all over the world. Many factors can lead to cesarean section but infertility has never been mentioned as a cause. We aimed to assess the prevalence of cesarean sections following infertility.

**Materials and Methods:** This is a cross-sectional study that was conducted on 162 infertile women referring to Peymanieh Clinic in Jahrom, who had received laparoscopy because of unsuccessful infertility managements. Data was collected by a questionnaire consisting of demographic data, the kind of infertility, the rate of pregnancy after laparoscopy and the method of terminating the pregnancy.

**Results:** The average range was 27.20±5.31. Most of them were housewives and 80.72% had primary infertility. The pregnancy rate following laparoscopy was 54.9%. Of these pregnancy cases 74 (83.15%) had termed delivery and 15 (16.85%) had ended in abortion. Among these termed delivery cases, 50 (67.56%) had cesarean section and 24 (32.44%) had normal vaginal delivery.

**Conclusion:** This high rate of cesarean leading to infertility can be the fault of both the patients and the physicians. Physicians suggest cesarean section because of patients' complaint, their own financial gains, the need for less time for termination as compared to normal delivery, etc. Still other causes are the women's tendency to suffer less pain and the concern for the safety of the mother and fetus. This problem exists because of the wrong culture in the society.

**Key words:** Cesarean section, Infertility, Laparoscopy, Normal vaginal delivery.

## O-73

### Educational role of midwives in reducing stress of infertile couples

Mollaahmadi F<sup>1</sup>, Ezabadi Z<sup>2</sup>.

1. Department of Endocrinology and Female Infertility, Reproductive Biomedicine Research Center, Royan

Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

2. Department of Epidemiology and Reproductive Health, Reproductive Epidemiology Research Center, Royan Institute for Reproductive Biomedicine (ACECR), Tehran, Iran.

Email: Mollaahmadi@royaninstitute.org

**Introduction:** Infertility management should be viewed holistically as fertility problems can negatively affect infertile patients life as well as encompasses both medical and emotional problems.

**Materials and Methods:** Assessing articles for Midwife's educational role in infertility units.

**Results:** Many similar studies have shown a significant relation between stress and the treatment results. When couples experience fear and panic related to uncertainty of childlessness, Midwife should assist the couples with cognitive coping strategies such as goal-setting, rational thinking, and plans about how to achieve those goals. Appropriate reassurance and support from healthcare professionals can provide a more positive experience for couples. Midwives may therefore, with the aid of an increased knowledge base, contribute to improving outcomes for infertile patient. Most infertile clients at different times during their treatment also need emotional and social support, which midwives can provide. The continuous midwifery presence has been reported as "holding together multiple components of ART process, including the clients' emotional and physical experiences, the different roles of the different specialist team members and also the midwives' emotions". Emotional and educational support from midwife would complement all other interventions for infertile clients undergoing treatment. Midwives' educational interventions will reinforce the specialist doctors' educational interventions.

**Conclusion:** There is therefore an implication for the Midwife profession to develop fertility Midwifery as a sub-specialty with input from psychology to enable Midwives in these settings to provide more structured psychological care. Interventions which had emphasized education and skills training were significantly more effective in producing positive change across a range of outcomes.

**Key words:** Midwife, Infertility, Stress, Education, Psychology.

## O-74

### Self-efficacy of infertile women and related factors

Alimanesh N, Jamshidimanesh M, Behboodi Moghadam Z.

Department of Reproductive Health, Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.

Email: jamshidimanesh@yahoo.com

**Introduction:** In 1994, the International Conference on Population and Development in Cairo, infertility was considered as a factor of serious injury to body of health

and it was appointed for all nations to consider the category of infertility in reproductive health programs.

**Materials and Methods:** Participants including 104 infertile women undergoing in vitro fertilization who visited in Vali e asr Reproductive Health Center Tehran. Sampling method was continuous. Data was collected by demographic and infertility self-efficacy scale who was developed and validated by Cousineau and colleagues in 2006.

**Results:** The study findings showed the age was correlated with infertile self-efficacy scores ( $0.35/0 = p$ ) and women aged 34 to 45 years had a greater self-efficacy score. Female employment rate was correlated with theirself- efficacy ( $0.046=p$ ) and a greater self-efficacy score was observed among women were not statistically significant in demographic variables between women and their self-efficacy scores. There was not significant difference between the groups of case and control in demographic information and self-efficacy but there was a significant difference between the two groups after intervention in self-efficacy ( $p=0.000$ ) scores.

**Conclusion:** According to our findings in the present research, for increasing the self- efficacy of infertile women in reproductive ages of 20- 30 years, try to be a priority in planning.

**Key words:** Self-efficacy, Infertile women, Related factors.

## O-75

### Perspective of Malaysian health providers on adolescent reproductive health education

Akbari Kamrani M.

Department of Midwifery, Faculty of Nursing and Midwifery, Alborz University of Medical Sciences, Alborz, Iran.

Email: akbarikamrani21@gmail.com

**Introduction:** In Malaysia, while there is no legal compulsion for the school system to include sexual and reproductive health education (SRHE), the Ministry of Education faces several challenges in achieving the desirable outcome and objectives of SRHE. It is obvious that the success of the SRHE program that is part of the school curriculum does not live up to its expectations, as evidenced by the increasing incidences of social ills and misbehaviors involving youths in recent times.

**Materials and Methods:** This generic qualitative study explored the perspective of Malaysian health providers regarding the adolescent reproductive health education in schools of Klang-Valley Malaysia. For this study, in-depth interviews were conducted with thirty health provider.

**Results:** The majority of participants named the limited resources in teaching and lack of co-operation as some of the challenges. The reproductive health course was not really carried out to its fullest. They stated that emphasis was only given to presenting anatomical facts, while other issues are dealt with in a rapid and cursory manner, if at all.

**Conclusion:** Though important, such information alone rarely equips young people with skills to lead a healthy

sexual life and adopt behaviors that prevent reproductive health problems. In the reproductive health sessions, information should impart to enhance the critical thinking skills of students and to enable them to make rational decisions and to negotiate to avoid peer and media pressure. Local adaptation to culture, language, religion, and so forth is often necessary.

**Key words:** Malaysia, Qualitative study, School-based education, Sexual health, Reproductive health.

## O-76

### Developing the professional codes of ethics for Reproductive Health care providers

Farajkhoda T<sup>1</sup>, Latifnejad Roudsari R<sup>2</sup>, Abbasi M<sup>3</sup>

1. Department of Midwifery, School of Nursing and Midwifery, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
2. Research Center for Patient Safety and Health Quality, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.
3. Shahid Beheshti Medical Law and Ethics Research Centre, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: farajkhoda\_t@yahoo.com

**Introduction:** Advancements in screening, diagnostic and therapeutic procedures in Reproductive Health (RH) have created ethical issues for the clients and health care professionals to deal with in RH. Ethical codes are systematic guidelines for providing services ethically. Considering the lack of code of ethics in medical disciplines including RH services, this study aimed to develop and assess professional code of ethics for RH care providers in Iran.

**Materials and Methods:** The study was a sequential exploratory mixed method study, which was carried out

in two phases between March 2010 and August 2012. In the first phase of the study through a modified three rounds Delphi study the professional code of ethics was developed.

In the Round 1 Delphi, 45 Iranian academics and clinicians were purposively selected from four universities of medical sciences. Data were collected through sending a questionnaire including *open-ended questions by E-mail* and responses were analyzed using conventional content analysis. In the Round 2 Delphi, the draft of code of ethics developed in Round 1, delivered electronically to the participants who had taken part in the first Round. After data collection face and content validity were calculated. The results of the Round 3 was accepted as professional code of ethics for RH providers.

**Results:** Analysis of the data collected in the first Round of Delphi resulted in one theme (ethical-oriented professionalism) and three categories (professional competency, ethical-oriented training and ethical-oriented research). The subcategories of professional competency were included professional relationships (with client, relative, organization and community), obligation, and meeting professional regulations.

**Conclusion:** This study has tried to set up an ethical, legal and cultural guideline based on Iranian values. It will allow providers, managers and policy makers to have a better realization of their professional responsibilities to advocate clients' rights. Furthermore, it is believed to be useful to all health workers involved in RH care. The results of the study could be used in education, research and management of RH care services. It may be useful to all health workers in Iran and EMRO countries with the same religious and socio-cultural backgrounds.

**Key words:** Reproductive Health, Codes of ethics, Reproductive health care providers, Health care centers.

## Poster Presentation

### 1-Infertility, Gynecology

#### P-1

#### In Vitro Maturation (IVM)

**Moradan. S.**

*Department of Obstetric and Gynecology, Semnan University of Medical Sciences, Amir Hospital, Semnan, Iran.*

**Email:** sm42595@yahoo.com

**Introduction:** In mid 1990s a group at Monash University, reported the world's first baby born from an embryo derived from an immature egg that had been matured in the embryology laboratory. The process has come to be known as in vitro maturation (IVM) of eggs. These researchers in fact opened the door to retrieving numerous eggs from women who had not received fertility drugs for IVF. More recently, Sean Ling Tan from Mc Gill University reported on impressive results using IVM, claiming success rates comparable to conventional IVF. Few other centers are reporting similar experience.

**Materials and Methods:** Within 6-8 days of menstruation, ultrasound is done to see how many follicles have developed, few days later, 10,000 units HCG is administered, 36 hours after that, egg retrievals is performed. These eggs are allowed to mature in special media and under special conditions. The eggs can then be fertilized in the embryology lab and transferred to the uterus or vitrified.

**Results:** Immediate benefits of IVM would be seen in the fertility preservation where women who for medical or personal reasons would bank their frozen eggs for future. IVM could also be used to access large numbers of donor eggs for dispensation to women who require egg donor-IVF. It would definitely simplify the entire process.

**Conclusion:** The ability to generate viable eggs without using fertility drugs would constitute a major breakthrough in the field of IVF. It would reduce cost, eliminate side effects, and all risk associated with use of fertility drugs.

**Key words:** *In vitro fertilization, In vitro maturation.*

#### P-2

#### Appropriate method for the isolation and purification of human granulosa cells from follicular fluid

**Zare M, Nouri M.**

*Tabriz University of Medical Sciences, Tabriz, Iran.*

**Email:** minaazare@gmail.com

**Introduction:** Several protocols for the isolation and purification of human granulosa cells (GCs) from follicular fluid have been described but until now no published study has compared the relative efficiency of

these protocols. The aim of this study was to compare two methods of isolating these cells by ficoll and percoll and to obtain the appropriate method for the isolation of cells.

**Materials and Methods:** Different purification methods for GCs based on the recognition of cell aggregates, adhesion and GCs sizes were evaluated. We compared the levels of white blood cell contamination, cell viability and cell attaching derived from the follicular fluid obtained from women who were undergoing IVF.

**Results:** The highest percent yield of live purified granulosa cells obtained by using 50% percoll gradient centrifugation for 20 minutes.

**Conclusion:** This new method for isolation of human granulosa cells can help research and treatment of infertility.

**Key words:** *Granulosa cells, Percoll, Ficoll, Purification.*

#### P-3

#### COH and IUI in mild endometriosis

**Akbari Asbagh F, Ebrahimi M.**

*Department of Obstetrics and Gynecology, Faculty of Medicine, Tehran Women's General Hospital, Tehran University of Medical Sciences, Tehran, Iran.*

**Email:** maeb214@yahoo.com

**Introduction:** Sever endometriosis is one of cause of female infertility. Association of between minimal or mild endometriosis and infertility has not been completely established. The purpose of this study was to evaluate and compare the result of COH-IUI cycles in minimal or mild endometriosis and unexplained infertility.

**Materials and Methods:** A prospective study, between October 2008 and October 2011 in academic reproductive endocrinology and infertility center. Two groups of patients undergoing stimulated IUI cycles were compared, 34 infertile couples with mild endometriosis as the sole cause of infertility in the group (I), and 34 couples with unexplained infertility in the group (II). The patients underwent 3 consecutive ovarian hyperstimulation (Clomiphene citrate and human Menopausal Gonadotropin) and IUI cycles. The main outcome measures were cumulative pregnancy rates (CPR) per patient for 3 consecutive stimulated IUI cycles. For statistical analysis Fisher exact test, Chi-squared test and independent T-test were used.

**Results:** Cycle characteristics were found to be homogenous between the both groups. CPRs were similar in the group I (7/34, 23.5%) and the group II (8/34, 20.6%) (p=0.7).

**Conclusion:** Both groups with minimal or mild endometriosis and unexplained infertility did not have any difference in response to COH-IUI. So, performing laparoscopy and other invasive procedures, in order to differentiate between minimal or mild endometriosis and unexplained infertility, is not recommended.

**Key words:** *Endometriosis, Intrauterine insemination, Ovarian Stimulation, Unexplained infertility.*

#### P-4

### The effects of melatonin on maturation, glutathione level and the expression of HMGB1 gene in BCB stained immature oocyte

Salehi M, Salimi M

Cellular and Molecular Biology Research Center, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: m.salimi1@yahoo.com

**Introduction:** Nutrients and antioxidants in the media of immature oocyte have a profound effect on maturation, fertilization and the development of resulting embryos. In this study the effects of melatonin as an antioxidant agent was evaluated on maturation, glutathione levels and the expression of HMGB1 gene in immature oocytes of mice stained with Brilliant Cresyl Blue (BCB).

**Materials and Methods:** Immature oocytes were harvested from ovaries of NMRI mice. Oocytes were stained with BCB and transferred to in vitro maturation media containing varying doses of melatonin ( $10^{-12}$ ,  $10^{-9}$ ,  $10^{-6}$ ,  $10^{-3}$  M), for 22-24 h. Maturation was monitored using an invert microscope. Glutathione was assessed by MCB staining and HMGB1 expression in mature oocyte was analyzed using real-time PCR.

**Results:** Melatonin in the concentration of  $10^{-6}$  M had the most effect on maturation and HMGB1 expression of BCB+oocytes ( $p<0.05$ ). Meanwhile melatonin had no effects on glutathione levels ( $p>0.05$ ). Additionally in immature BCB-oocytes, compared to control group, melatonin did not affect cytoplasm maturation ( $p>0.05$ ).

**Conclusion:** In vitro treatment with melatonin increases the maturation and HMGB1 expression in BCB+ immature oocytes and has no significant effect on glutathione levels.

**Key words:** Melatonin, Glutathione, Immature oocyte, BCB staining, HMGB1 gene.

#### P-5

### Sexual function in women with colpoperineorrhaphy

Jamali S.

Department of Psychiatry, Jahrom University of Medical Sciences, Jahrom, Iran.

Email: safieh\_jamali@yahoo.com

**Introduction:** One of the effective factors on the female sexual activity is surgeries. Even if female surgeries are small and non significant but they can be effective on patient's mood and her thought of herself. With regards to FSD and spread of elective colpoperineorrhaphy, the purpose of the study was to explore the prevalence of sexual problems in post- colpoperineorrhaphy.

**Materials and Methods:** This comparative descriptive-analytical study was conducted on the women who underwent colpoperineorrhaphy, and who did not undergo the surgery referred to Peymanieh Hospital

from March 2008 to February 2009. The participants were 145 of whom 46 patients underwent colpoperineorrhaphy, and 99 did not undergo surgery. Information gathering tool and method was a two parts questionnaire: 1) demographic variables 2) FSFI questionnaire.

**Results:** The average total FSFI score in surgical group was  $20.08\pm 7.33$ , and in control group it was  $23.12\pm 5.05$  ( $p=0.004$ ). According to our study, 87.3% of women who underwent the surgery had a sexual dysfunction. The most of the dysfunction was related to pain during intercourse. The results of this study show that 52.2% of women reported that they have very often pain during intercourse. Comparing the groups, desire ( $p=0.11$ ); Arousal ( $p=0.57$ ); lubrication ( $p=0.001$ ); orgasm ( $p=0.25$ ); pain ( $p=0.001$ ); satisfaction ( $p=0.34$ ).

**Conclusion:** The elective colpoperineorrhaphy doesn't have any positive effects on the female sexual functions. Therefore, it is recommended that the people and authorities in charge of health problems should pay more attention to female sexual problems, and a ward can be created at the health centres for sexual counselling before colpoperineorrhaphy.

**Key words:** Sexual Function, Colpoperineorrhaphy, FSF.

#### P-6

### Cerebral venous sinus thrombosis around the month of Ramadan: Case series

Behzadnia M, Javadzadeh H, Saboori F.

Department of Emergency Medicine, Baqyatallah Hospital, Baqyatallah Medical Sciences University, Tehran, Iran.

Email: Behzadnia@bmsu.ac.ir

**Introduction:** Cerebral venous sinus thrombosis (CVST) is a critical condition and identifying the underlying cause is an important part of the evaluation and risk stratification. Many cultural customs affect OCP consumption. Among females with short term OCP consumption, Ramadan and Hajj religious months were the reasons of using short term OCP.

**Materials and Methods:** Data of 30 consecutive women with the average age of 25 y/o (21-33 y/o) and acute CVST treated in the emergency department of two hospitals in Tehran as referral centers, during 4 years ago in Ramadan (2009-2012) were entered into this study. Diagnosis relied on a clinical presentation consistent with CVST and their neuroimaging.

**Results:** According to the history taking, 20% of the patient had a previous history of OCP consumption and surprisingly 57% of them had their first experience in Ramadan month ( $p<0.05$ ). Headache, vomiting and diplopia were the most clinical presentations. None of the patients died or had persisting neurological squeals during the follow up.

**Conclusion:** As 77% of our patients with cerebral venous sinus thrombosis (CVST) have had the history of recent OCP consumption before or around the holy month, Ramadan, it is recommended to be aware of its potential risk as a predisposing factor of CVST specially

in Iranian women who may increase their common dosage or start to take it suddenly in Ramadan. So, Knowledge will be a principle to prevention.

**Key words:** OCP, Cerebral venous sinus thrombosis (CVST), Ramadan.

## P-7

### Infertility: Causes, prevention and challenges

**Salehiniya H.**

Students' Scientific Research Center, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** alesaleh70@yahoo.com

**Introduction:** Infertility is defined as inability of a couple to conceive after one year of intercourse without contraception and 10-15% of couples who suffer from it. The causes of infertility can be male or female. This study aimed to investigate the causes of infertility and prevention this and the challenges.

**Materials and Methods:** This study is a systematic review. We use reference books and more than 21 articles through the review of computer: in Iran medex, Magiran, Google; Pubmed and Sid databases using key words infertility, prevention, risk factor and causes.

**Results:** About 40% of infertility problems are in men and 40% in women, while approximately 10% is related to both. About 10% of infertility is unknown. Major causes of infertility include abnormal sperm (35%) of the cases, failure egg and ovulation (25%), pelvic adhesions, endometriosis, Fallopian or uterine problems (25%), and in 10-15% of couples no specific cause can be identified as a cause of infertility.

**Conclusion:** Given that infertility may be associated with a man or woman. Both Infertile couples must be assessed. Some of couples using inaccurate information and improper procedures can cause problems and side damage in their .for confront it training should be done in this area to infertile couples, that infertile couple to go in medical centers.

**Key words:** Infertility, Prevention, Risk factor, Causes.

## P-8

### Evaluation of high-risk pregnancies and preterm delivery (Review of patients admitted to the Mashhad Maternity Center of Imam Reza

**Bonakdaran. Z**

Imam Reza Hospital, Mashhad Medical Sciences University, Mashhad, Iran.

**Email:** bonakdaranz1@mums.ac.ir

**Introduction:** Premature or preterm birth refers to babies who are born before completing 37 weeks of pregnancy. Preterm infants are classified as follows: Extremely preterm (less than 28 weeks), Very early (28 to <32 weeks), Moderate to late preterm (32 to <37 weeks). Premature birth can happen for various reasons. Common causes for premature birth are: multiple pregnancy, genetic factors, infections, and chronic

diseases such as diabetes and high blood pressure. And sometimes happen for no known reason. According to statistics, about a million babies a year die due to complications of preterm birth and many of the survivors suffer of disabilities, learning disabilities, visual and hearing problems. So Prevention of premature birth and infant health is an important item.

**Materials and Methods:** To understand the information related to high-risk pregnancies and preterm delivery, all pregnant women admitted to the Mashhad maternity center of Imam Reza in 3 months were considered (from April 2012). The data was analyzed by SPSS software system.

**Results:** 1) Total number of pregnant women admitted for delivery was 680 people. 2) 29% of mothers have high-risk pregnancies. 3) 58% of high-risk pregnancies have preeclampsia. 4) 26% of high-risk pregnancies have diabetes. 5) 38.5% of patients with high-risk pregnancies have a preterm labor. 6) 49.5% of patients with preeclampsia have a preterm birth. 7) 25% of diabetic patients have a preterm birth.

**Conclusion:** High-risk pregnancy (high blood pressure, diabetes, heart and blood disease, and the twin and etc.) they can lead to preterm delivery. Increase the possibility of preterm labor in high-risk pregnancies, du to infants requiring intensive care and hospitalization in the NICU. Therefore, maternal control during pregnancy is important to prevent of high-risk pregnancy& preterm delivery. And if there was a high-risk pregnancy, we must probability of preterm labor.

**Key words:** High risk pregnancy, Preterm infants, Preeclampsia Diabetes.

## P-9

### Treatment of hyperprolactinemia: meta-analysis

**Alamolhoda S<sup>1</sup>, Mirabi P<sup>2</sup>.**

1. Department of Midwifery, Faculty of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

2. Department of Reproductive Health and Midwifery, Faculty of Nursing and Midwifery, Islamic Azad University, Zanjan, Iran.

**Email:** alamolhoda.h@gmail.com

**Introduction:** Hyperprolactinemia is a common endocrine disorder that can be associated with significant morbidity. We conducted a systematic review and meta-analyses of outcomes of hyperprolactinemic patients, including microadenomas and macroadenomas, to provide evidence-based recommendations for practitioners. Through this review, we aimed to compare efficacy and adverse effects of medications, surgery and radiotherapy in the treatment of hyperprolactinemia.

**Materials and Methods:** We searched electronic databases, reviewed bibliographies of included articles, and contacted experts in the field. Eligible studies provided longitudinal follow-up of patients with hyperprolactinemia and evaluated outcomes of interest.

We collected descriptive, quality and outcome data (tumor growth, visual field defects, infertility, sexual dysfunction, amenorrhea/ oligomenorrhea and prolactin levels).

**Results:** After review, 8 randomized and 178 nonrandomized studies (over 3,000 patients) met inclusion criteria. Compared to no treatment, dopamine agonists significantly reduced prolactin level (weighted mean difference, -45; 95% confidence interval, -77 to -11) and the likelihood of persistent hyperprolactinemia (relative risk, 0.90; 95% confidence interval, 0.81-0.99). Cabergoline was more effective than bromocriptine in reducing persistent hyperprolactinemia, amenorrhea/ oligomenorrhea, and galactorrhea. A large body of noncomparative literature showed dopamine agonists improved other patient-important outcomes. Low-to-moderate quality evidence supports improved outcomes with surgery and radiotherapy compared to no treatment in patients who were resistant to or intolerant of dopamine agonists.

**Conclusion:** Our results provide evidence to support the use of dopamine agonists in reducing prolactin levels and persistent hyperprolactinemia, with cabergoline proving more efficacious than bromocriptine. Radiotherapy and surgery are useful in patients with resistance or intolerance to dopamine agonists.

**Key words:** Treatment, Hyperprolactinemia, Macroprolactinoma, Microprolactinoma.

#### P-10

### Metformin and/or Clomiphene do not adversely affect liver or renal function in women with polycystic ovary syndrome

Alamolhoda S<sup>1</sup>, Mirabi P<sup>2</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
2. Department of Reproductive Health and Midwifery, Faculty of Nursing and Midwifery, Islamic Azad University, Zanjan, Iran.

**Email:** alamolhoda.h@gmail.com

**Introduction:** Nonalcoholic fatty liver disease is common to insulin-resistant states such as polycystic ovary syndrome (PCOS). Metformin (MET) is often used to treat PCOS but information is limited as to its effects on liver function.

**Materials and Methods:** We sought to determine the effects of MET on serum hepatic parameters in PCOS patients. This was a secondary analysis of a randomized, double-blind trial from 2002-2004. This multi-center clinical trial was conducted in academic centers. Six hundred twenty-six infertile women with PCOS with serum liver function parameters less than twice the upper limit of normal were included. Clomiphene citrate (n=209), MET (n=208), or combined (n=209) were given for up to 6 months. The percent change from baseline in renal and liver function between- and within-treatment arms was assessed.

**Results:** Renal function improved in all treatment arms with significant decreases in serum blood urea nitrogen levels (range, -14.7 to -21.3%) as well as creatinine

(-4.2 to -6.9%). There were similar decreases in liver transaminase levels in the clomiphene citrate and combined arms (-10% in bilirubin, -9 to -11% in transaminases) without significant changes in the MET arm. When categorizing baseline bilirubin, aspartate aminotransferase, and alanine aminotransferase into tertiles, there were significant within-treatment arm differences between the tertiles with the highest tertile having the largest decrease from baseline regardless of treatment arm.

**Conclusion:** Women with PCOS can safely use metformin and clomiphene even in the setting of mildly abnormal liver function parameters, and both result in improved renal function.

**Key words:** Metformin, Clomiphene, Polycystic Ovary Syndrome.

#### P-11

### Impact of Dexamethasone on ovulation response in PCOS women candidate for IVF/ICSI

Zeinalzadeh M, Basirat Z, Mahouti T, Golsorkhtabar-Amiri M.

Fateme-Zahra Infertility and Reproductive Health Research Center, Babol University of Medical Sciences, Babol, Iran.

**Email:** zahra\_basirat@yahoo.com

**Introduction:** Infertile women with polycystic ovarian syndrome (PCOS) involve with unovulatory cycles. Various adjuvant treatments have been suggested to improve ovarian response. In this study, we aimed to evaluate the role of Dexamethasone in infertile women with PCOS in IVF/ICSI.

**Materials and Methods:** This double blind clinical trial study was done in PCOS infertile women undergone IVF/ICSI in 2011. 40 patients received Dexamethasone in the treatment group and 70 patients considered in the placebo group. Number of dominant follicle, oocyte, embryo, Gonadotropines and pregnancy rate were compared between the two groups.

**Results:** The mean number of oocytes in the group received Dexamethasone were 11.8±8 and in the placebo group 9.6±5.8 respectively which was not significant. The mean number of embryos in the patients received Dexamethasone group was 6.7±4.3 significantly greater than placebo which was 4.9±4.9 (p<0.05). Also, the mean number of Gonadotropin ampoules used in the group received Dexamethasone was 3.5±1.6 significantly lower than the placebo 5.3±2.5 (p<0.05). The pregnancy rate in the group receiving Dexamethasone were 17.5% significantly higher than 4.3% in the placebo group (p<0.05).

**Conclusion:** Dexamethasone enhances the embryos and pregnancy rate, besides it reduces Gonadotropines ampoules, Hence, We recommend the use of Dexamethasone in women with PCOS who treat with IVF/ICSI.

**Key words:** Polycystic ovary syndrome, Dexamethasone, IVF, ICSI.



**P-12****Naloxone in favour of fertility**

Lakzaei F<sup>1</sup>, Karami M<sup>1</sup>, Jalali Nadoushan MR<sup>2</sup>, Hassani F<sup>1</sup>.

1. Department of Biology, Faculty of Basic Sciences, Shahed University, Tehran, Iran.
2. Department of Pathology, School of Medicine, Shahed University, Tehran, Iran.

Email: lakzaei.fateme@yahoo.com

**Introduction:** Different studies report occurrence of polycystic ovarian syndrome (PCOS) in a high percentage of infertility in women during reproductive age. This study discussed the naloxone interference with the PCOS in rats.

**Materials and Methods:** 58 Female Wistar rats (weighing 200-250 g) kept at animal lab at Shahed University as virgin diestrous under standard conditions. To induce the PCOS they were intra-peritoneally (i.p.) injected L-arginine (50 mg/kg) through a period lasting nine days/ once a day. For drug intervention naloxone (0.4 mg/kg) was 30 min pre-injected (i.p.) during the experimental phase (9 days /once a day). A group received single naloxone (0.4 mg/kg, i.p.) during the experiments to provide comparison. The control group solely received saline (1 ml/kg, i.p.) throughout the treatment period. After the completion of the injections the rats were coupled with the intact males. The females were graded 0 of gestation by observation of vaginal plaques. They were surgically examined in days 19-20 of gestation to provide the necessary data.

**Results:** The number of fetuses was significantly changed in L-arginine treated group. They valued low in breeding capacity. This value, however, was adjusted by prior injection of naloxone. Moreover, the single naloxone group showed no significant change in the value compared with the control.

**Conclusion:** This research likely represents the case of infertility in the animal PCOS model. The study furthermore proposes the fertility effect of naloxone on the syndrome.

**Key words:** Fertility, Polycystic Ovarian Syndrome, L-arginine, Naloxone, Fetus.

**P-13****Effects of letrozole versus clomiphene citrate in combination with recombinant follicle-stimulating-hormone on intrauterine insemination outcome**

Alborzi S, Dadras N, Zarei A, Samsami A.

Department of Obstetrics and Gynecology, Ghadir Hospital, Shiraz University of Medical Sciences, Shiraz, Iran.

Email: Dadras.nasrin@gmail.com

**Introduction:** To compare the effects of letrozole and clomiphene citrate (CC) in combination with recombinant follicle-stimulating hormone (rFSH) for controlled ovarian hyperstimulation before intrauterine insemination (IUI) in infertile women.

**Materials and Methods:** This randomized controlled study was conducted in Shiraz IVF center from October 2009 to October 2011 on 144 women with unexplained infertility, mild male factor, PCOS and mild endometriosis randomly divided to two groups, receive 5 mg/day letrozole at days 5-9 menstrual cycle before IUI (n=72, IUI cycle=119) or 100mg daily CC in the same period (n=72, IUI cycle=107). All patients received 150 IU rFSH from day 8 until day of HCG administration. 10000 IU of HCG was injected when there were one or two mature follicles with diameter of more than 18 mm.

**Results:** The pregnancy rate per patient was (11.1%), (19.4%) in letrozole and CC groups respectively (p=0.123). The abortion rate was significantly lower in letrozole group (0.8% vs. 6.5%; p=0.031). The ongoing pregnancy rate found to be comparable between two study groups (9.7% vs. 9.7%; p=0.996). The number of administered rFSH was significantly higher in letrozole group compared to CC groups (8.9±1.9 vs. 8.2±2.2; p=0.018). Number of mature follicles (p=0.239) and endometrial thickness (p=0.270) was comparable between groups.

**Conclusion:** Administration of letrozole for ovulation induction prior to IUI cycles is not associated with increased pregnancy rate per patient and cycle, mature follicles and endometrial thickness compared to CC. However letrozole administration was associated with increased rFSH required dosage and decreased abortion rate following IUI cycles.

**Key words:** Letrozole, Clomiphene citrate (CC), Recombinant follicle stimulating hormone (rFSH), Intrauterine Insemination (IUI), Pregnancy rate.

**P-14****Effects of localized endometrial injury on intrauterine insemination outcome**

Zarei A<sup>1</sup>, Parsanezhad ME<sup>1</sup>, Alborzi S<sup>1</sup>, Dadras N<sup>2</sup>, Samsami A<sup>1</sup>, Zolghadri J<sup>1</sup>.

1. Department of Obstetrics and Gynecology, Shiraz University of Medical Sciences, Shiraz, Iran.

2. Ghadir Hospital, Shiraz University of Medical Sciences, Shiraz, Iran.

Email: Dadras.nasrin@gmail.com

**Introduction:** This study aimed to investigate the effect of local endometrial injury on outcome of intrauterine insemination (IUI) cycles.

**Materials and Methods:** This prospective, randomized, controlled study was conducted in University and private infertility clinics of Shiraz from January 2011 to May 2012. 144 women with unexplained infertility, mild male factor and mild endometriosis randomly divided into two study groups. Patients were randomly assigned to undergo endometrial biopsy between days 6-8 of previous menstrual cycle before IUI (n=72, IUI cycles=126) or nothing (n=72, IUI cycles=105). Pregnancy rate as main Outcome Measures was investigated.

**Results:** The pregnancy rate per patient was 17 (23.6%) and 14 (19.4%) in endometrial biopsy and control groups respectively ( $p=0.686$ ). Pregnancy rate per cycle was 17/126 (13.5%) and 14/105 (13.3%) in endometrial biopsy and control groups respectively ( $p=0.389$ ). The abortion rate was comparable between groups (6.9% vs. 9.7%;  $p=0.764$ ). The ongoing pregnancy rate found to be comparable between two study groups (16.7% vs. 9.7%;  $p=0.325$ ). Endometrial thickness ( $p=0.609$ ) was comparable between groups; however  $E_2$  was significantly lower in endometrial biopsy group ( $p<0.001$ ).

**Conclusion:** Application of local endometrial injury in the cycle before the IUI cycles is not associated with increased pregnancy rate per patient, increased pregnancy rate per cycle, decreased abortion and increased endometrial thickness.

**Key words:** Endometrial injury, Intrauterine Insemination (IUI), Pregnancy rate, Abortion rate, Ongoing pregnancy rate.

## P-15

### Sperm and zygote two pronuclear morphology in intracytoplasmic sperm injection cycles

Ghasemian F<sup>1</sup>, Bahadori M<sup>2</sup>, Faraji R<sup>1</sup>, Zahiri Z<sup>1</sup>, Asgharnia M<sup>1</sup>.

1. Infertility Therapy Center, Al-Zahra Educational and Remedial Center, Guilan University of Medical Sciences, Rasht, Iran.
2. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University of Medical Sciences, Rasht, Iran.

Email: ghasemian.21@gmail.com

**Introduction:** Embryo selection based on morphological criteria in pronucleous stage can decrease multiple pregnancy risk. This study evaluates the effect of human sperm type used for intracytoplasmic sperm injection for pronuclear zygote morphology.

**Materials and Methods:** Sperms were processed via gradient method and evaluated and divided as oligozoospermia, normozoospermia, asthenozoospermia and oligoasthenoteratozoospermia. A total of 1021 metaphase II (MII) oocytes were randomly selected from the cohort of oocytes obtained from each patient and evaluated for morphologic appearance. Oocytes were subjected to ICSI and the pattern of resulted pronucleous were recorded and studied. The outcomes were analyzed using of SPSS version 16 and chi-squared test.

**Results:** The results indicated that oocytes injected with normal sperms showed significantly difference in rate of Z1 and Z2 two pronuclear grades ( $p<0.01$ ). In oocytes injected with oligospermia, asthenospermia and oligoasthenoteratozoospermia were shown significantly increase in pronuclear grades of Z1 and Z2 (31.46% and 30.76% respectively), Z2 (63.68%) and Z3 (68.75%) respectively ( $p<0.05$ ).

**Conclusion:** The sperm type used for ICSI can influence morphology and grade of pronuclear zygote.

**Key words:** Sperm, Two pronucleous, ICSI, Fertility.

## P-16

### Chronic pelvic pain in women; What can we do in pain control?

Abolahrar N<sup>1</sup>, Khosravi S<sup>2</sup>.

1. ASA Pain Clinic, Tehran University of Medical Science, Tehran, Iran.
2. Department of Sport Medicine, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: navidahrar@yahoo.com

**Introduction:** Chronic Pelvic Pain (CPP) is defined as pain that occurs in the lower abdomen or below the umbilicus, lasts for at least 6 months' duration and has resulted in functional or psychological disability or required intervention and treatment. Studies have quoted the range to be anywhere from 4-40%. Many CPPs are diagnosed of having no specific origin or specific cause, needing only palliative therapy. There are so many pain management interventions available that causes pain relief, or decreases the pain to a tolerable level where patient can live normally.

**Materials and Methods:** We searched the 2005-2012 Pub med articles for "Pain Management" and "Female Chronic Pelvic Pain".

**Results:** There were 412 articles regarding different pain management issues for CPP management. Of these, 136 articles were relevant to the issue we were working on. The interventions were planned according to the primary diagnosis and the severity of the pain problem; and classified as minimally to highly invasive.

**Conclusion:** Applications of heat and cold, stretching exercises, massage and other relaxation techniques, strength pelvic floor muscles, transcutaneous electrical nerve stimulation (TENS), Trigger point injections and medication may improve chronic pelvic pain. There are many interventions suggested to relieve CPP according to the estimated origin and type of the pain. These include: 1) Superior and/or Inferior Hypogastric Plexus Block/Ablation, 2) Pudendal Nerve Block/Ablation, 3) Impar Ganglion Block/Ablation, 4) Epidural Catheterization and Analgesia, 5) Intrathecal Catheterization and Analgesia, 6) Intrathecal Phenolization.

**Key words:** Chronic Pelvic Pain, Female, Pain Management.

## P-17

### Serum magnesium in preeclampsia and normal pregnancy

Tavana Z, Hoseinmirzaei S.

Department of Obstetric and Gynecology, Shiraz University of Medical Sciences, Shiraz, Iran.

Email: samirzaei62@yahoo.com

**Introduction:** Preeclampsia is a significant cause of maternal and fetal morbidity and mortality. This study was conducted to measure level of magnesium in preeclamptic and control group since the beginning of the pregnancy.

**Materials and Methods:** We enrolled 500 pregnant women with gestational age of 18-22 weeks who referred to Hafez Hospital of Shiraz. Initial samples were taken. 26 cases with diagnosis of preeclampsia were detected. For each case, two normal pregnant women-at the same gestational age-were considered as the control group. The second samples were obtained. All of the samples were sent to check the level of magnesium. The data was analyzed with the SPSS and Student's t-test.

**Results:** Not only the initial level of magnesium in preeclamptic women was significantly less than control group ( $1.81 \pm 0.25$  mg/dl vs.  $2.3 \pm 0.44$  mg/dl,  $p < 0.001$ ), but also the secondary level was low -when the diagnosis was confirmed- ( $1.72 \pm 0.38$  mg/dl vs.  $2.2 \pm 0.63$  mg/dl,  $p < 0.05$ ). The serum magnesium decreased as the gestational period increased. It reveals that level of magnesium in preeclamptic was lower than control since the beginning of the pregnancy.

**Conclusion:** The method of our study is different from the previous studies. The magnesium of every pregnant woman that became preeclamptic was compared with the initial level, but in the other studies was compared only with the control group. According to our results, checking the level of magnesium should be considered as predicting factor of preeclampsia since the first evaluation of pregnancy.

**Key words:** Serum magnesium, Preeclampsia, Normal pregnancy.

### P-18 Predictive Factors for Success rate in Intracytoplasmic Sperm Injection (ICSI) cycles

Ashrafi M<sup>1</sup>, Jahanian Sadatmahalleh Sh<sup>1,2</sup>, Akhoond MR<sup>3</sup>.

1. Department of Endocrinology and Female Infertility at Reproductive Biomedicine Research Centre, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.
2. Department of Midwifery and Reproductive Health, Faculty of Medical Sciences, Tarbiat Modares University Tehran, Iran.
3. Department of Epidemiology and Reproductive Health at Reproductive Biomedicine Research Centre, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

**Email:** shahideh.jahanian@modares.ac.ir

**Introduction:** Different success rate of intracytoplasmic sperm injection (ICSI) has been observing in various cause of infertility. In this study we evaluated the relation between ICSI outcome and special causes of infertility. We also aimed to examine parameters that might predict success following ICSI.

**Materials and Methods:** In this cross sectional study, 1492 infertile women referred to infertility Institute between 2010 and 2011 were included. All of patients

underwent ICSI cycles. All statistics were performed by SPSS program. Statistical analysis was done using Chi-square and t-test. Logistic regression was done to build a prediction model in ICSI cycles.

**Results:** The overall clinical pregnancy rate in our study was 33.9% (n=1492). There was statistically significant difference in the Day 3 serum LH of the patients between the pregnant and the non pregnant groups ( $p < 0.05$ ). The mean day 3 serums FSH, TSH, PRL was no significant difference between groups ( $p > 0.05$ ). We did not find an association between cause of infertility and clinical outcomes ( $p > 0.05$ ). The number of metaphase II oocytes, embryo transfer, number of good embryo, total dose of gonadotropin, endometrial thickness, maternal age, the number of previous cycle was statistically significant between groups ( $p < 0.05$ ).

**Conclusion:** Our results indicate that ICSI in an effective option in couples with different cause of infertility. These variables were integrated into a statistical model to allow the prediction of the chance of pregnancy rate in subsequent ICSI cycles. We can provide necessary information to complete our plan advice on patients, enabling them to have a more complete understanding of their condition.

**Key words:** ICSI, Pregnancy rate, Cause of infertility.

### P-19 Abdominal obesity in patients with poly cystic ovary syndrome increases the systemic oxidative stress

Nasiri N<sup>1</sup>, Eftekhari Yazdi P<sup>1</sup>, Moini A<sup>2</sup>.

1. Department of Embryology at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

2. Department of Endocrinology and Female Infertility at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

**Email:** anahid.1333@yahoo.com

**Introduction:** The abdominal form of obesity is frequently present in women with poly cystic ovary syndrome (PCOS). Visceral fat accumulation seems to play an important role in etiology of PCOS.

**Materials and Methods:** In this cross sectional study we evaluated the association of oxidative stress (OS) induction with PCOS and abdominal obesity (AO) in serum and follicular fluid (FF) of infertile women. There was no significant difference in amount of body mass index (BMI) in included patients. Blood serum and follicular replaced aspirates with fluids obtained from 80 women undergoing IVF were evaluated for three OS markers which are related with endocrine disorders; lipid peroxide (LPO), conjugated diene (CD) and total antioxidant capacity (TAC), after puncture.

**Results:** Obese (AO) women with and without PCOS had significantly higher amounts of LPO in the serum and FF as compared with non-AO women. No statistical difference was found for the CD and TAC concentration in the serum and FF. LPO concentration in FF was significantly lower than serum and corroborates the

hypothesis that germinal cells have a potent antioxidant mechanism.

**Conclusion:** We conclude that abdominal obesity in women with and without PCOS can induce oxidative stress and exacerbate the symptoms of PCOS as a prevalent endocrine disorder.

**Key words:** Oxidative stress, Abdominal obesity, Poly cystic ovary syndrome, Lipid peroxidation, Total antioxidant capacity.

## P-20

### The role of mitochondria in quality oocyte of women with infertility

Allahveisi A<sup>1</sup>, Ghaffari Novin M<sup>1</sup>.

Department of Anatomy, Medical Faculty, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

Email: allavaisie@gmail.com

**Introduction:** Infertility is defined as the failure to conceive after a year of unprotected intercourse. This is a common problem affecting approximately 10-15% of couples. At least one in six couples refers to infertility clinic. A common cause of infertility in women is poor oocyte quality. The cellular and molecular quality oocyte has not been known. Mitochondria are the most organelles in the oocyte and early embryo. In the past decade, extensive research showed that the mitochondrion plays an important role in oocyte quality, because it provide adenosine triphosphate (ATP) for fertilization and preimplantation embryo development and also act as stores of intracellular calcium and proapoptotic factors, Therefore, mitochondria contribute to overall oocyte quality and embryo developmental competence. This review discusses recent findings concerning The Role of mitochondria in quality oocyte of women with infertility.

**Materials and Methods:** This article presents result of a systematic review about The Role of mitochondria in quality oocyte of infertility women.

**Results:** These Studies identified that the Mitochondrion plays a crucial role in oocyte quality. Mitochondrial dysfunctions in oocytes, [Ca<sup>2+</sup>] oscillations fail to trigger ATP production and instead induce to the activation of apoptosis have also been suggested to be a proximal cause of human oocyte wastage and early embryo demise Because the normalcy of critical nuclear and mitochondria determined cytoplasmic oocyte maturation.

**Conclusion:** The evaluation of Mitochondrial Function for infertility patients with poor quality oocyte have been reviewed and the Suggested methods for their treatment.

**Key words:** Mitochondria, Quality oocyte, Infertility.

## P-21

### Chinese herbal medicines for threatened miscarriage

Ghavami H<sup>1</sup>, Asem A<sup>2</sup>.

1. Department of Medical Surgical Nursing, Nursing and Midwifery Faculty, Urmia University of Medical Sciences, Urmia, Iran.

2. Pharmacy Faculty, Zanjan University of Medical Sciences, Zanjan, Iran.

Email: haleh\_ghavami@yahoo.co.uk

**Introduction:** Threatened miscarriage occurs in 10-15% of all pregnancies.

**Materials and Methods:** This study is a reviewing that examining the therapeutic effects of Chinese herbal medicines for the treatment of threatened miscarriage. The Cochrane Pregnancy and Childbirth Group's Trials Register (31 January 2012), Chinese Biomedical Database (1978 to 31 January 2012), China Journal Net (1915 to 31 January 2012), China National Knowledge Infrastructure (1915 to 31 January 2012), WanFang Database (1980 to 31 January 2012), Chinese Clinical Trial Registry (31 January 2012), EMBASE (1980 to 31 January 2012), CINAHL (31 January 2012), PubMed (1980 to 31 January 2012), Wiley InterScience (1966 to 31 January 2012), International Clinical Trials Registry Platform (31 January 2012) have been selected.

**Results:** 44 randomized clinical trials with 5100 participants in the review were selected. The rate of effectiveness (continuation of pregnancy after 28 weeks of gestation) was not significantly different between the Chinese herbal medicines alone group compared with the group of women receiving Western medicines alone (average RR:1.23; 95% CI:0.96-1.57; one trial, 60 women). Chinese herbal medicines combined with Western medicines were more effective than Western medicines alone to continue the pregnancy beyond 28 weeks of gestation (average RR:1.28; 95% CI:1.18-1.38; five trials, 550 women).

**Conclusion:** There was insufficient evidence to assess the effectiveness of Chinese herbal medicines alone for treating threatened miscarriage. A combination of Chinese herbal and Western medicines was more effective than Western medicines alone for treating threatened miscarriage.

**Key words:** Chinese herbal medicines, Miscarriage; Western medicines.

## P-22

### Cephalic version by moxibustion for breech presentation

Ghavami H<sup>1</sup>, Asem A<sup>2</sup>.

1. Department of Medical Surgical Nursing, Nursing and Midwifery Faculty, Urmia University of Medical Sciences, Urmia, Iran.

2. Pharmacy Faculty, Zanjan University of Medical Sciences, Zanjan, Iran.

Email: haleh\_ghavami@yahoo.co.uk

**Introduction:** Moxibustion (a type of Chinese medicine) to the acupuncture point Bladder 67 (BL67) (Chinese name Zhiyin), located at the tip of the fifth toe, has been proposed as a way of correcting breech presentation.

**Materials and Methods:** This is a review article to examine the effectiveness and safety of moxibustion. The Cochrane Pregnancy and Childbirth Group's Trials

Register (26 March 2012), MEDLINE (1966 to 1 August 2011), EMBASE (1980 to August 2011), CINAHL (1982 to 1 August 2011), MIDIRS (1982 to 1 August 2011) and AMED (1985 to 1 August 2011) have been searched.

**Results:** Moxibustion was not found to reduce the number of non-cephalic presentations at birth compared with no treatment ( $p=0.45$ ). Moxibustion was found to result in fewer non-cephalic presentations at birth compared with acupuncture (RR:0.25, 95% CI:0.09-0.72). When combined with acupuncture, moxibustion resulted in fewer non-cephalic presentations at birth (RR:0.73, 95% CI:0.57-0.94). When combined with a postural technique, moxibustion was found to result in fewer non-cephalic presentations at birth compared with the postural technique alone (RR:0.26, 95% CI:0.12-0.56).

**Conclusion:** This review found limited evidence to support the use of moxibustion for correcting breech presentation. There is some evidence to suggest that the use of moxibustion may reduce the need for oxytocin. When combined with acupuncture, moxibustion may result in fewer births by caesarean section; and when combined with postural management techniques may reduce the number of non-cephalic presentations at birth.

**Key words:** Cephalic version, Moxibustion, Breech presentation.

## P-23

### The role of oxidative stress in reproduction

**Mirabi P.**

Department of Midwifery, Islamic Azad University, Zanjan Branch, Zanjan, Iran.

Email: parvaneh\_mirabi@yahoo.com

**Introduction:** Oxidative stress is a state related to increased cellular damage caused by oxygen and oxygen-derived free radicals known as reactive oxygen species (ROS).

**Materials and Methods:** An extensive review of the literature on the role of oxidative stress in influencing assisted reproduction and its outcome is described in this article.

**Results:** Free radicals or reactive oxygen species mediate their action through many of the proinflammatory cytokines and this mechanism has been proposed as a common underlying factor for endometriosis, ovarian cancer, polycystic ovary disease, and various other pathologies affecting the female reproductive process, as highlighted in this review. Oxidative stress, sperm DNA damage, and apoptosis have been implicated in male infertility. Elevated reactive oxygen species levels correlate with the poor fertility outcomes seen in the assisted reproductive technology setting. Oxidative stress has been implicated in male and female infertility, including fetal dysmorphogenesis, abortions, and intrauterine growth restriction. Accurate evaluation of seminal oxidative

stress by standardized assays may help in the diagnosis and management of male infertility.

**Conclusion:** Current ongoing trials will provide answers on the safety and effectiveness of antioxidants in improving maternal and fetal outcomes. Further studies need to be conducted to determine if antioxidant supplementation will prevent fetal developmental defects in high-risk pregnancy with diabetes.

**Key words:** Oxidative stress, Infertility, Free radicals, Assisted reproduction.

## P-24

### Anxiety in women with polycystic ovary syndrome

**Mirabi P.**

Department of Midwifery, Islamic Azad University, Zanjan Branch, Zanjan, Iran.

Email: parvaneh\_mirabi@yahoo.com

**Introduction:** To perform a review of studies that compared the prevalence of anxiety symptoms in women with polycystic ovary syndrome (PCOS) and control women.

**Materials and Methods:** This article reviews the current literatures about anxiety in women with polycystic ovary syndrome. MEDLINE, EMBASE, Cochrane Library and CINAHL PUBMED were searched for relevant trials published from respective database inception dates to Jun 2011.

**Results:** The prevalence of generalized anxiety symptoms was available in four studies and was significantly greater in PCOS subjects compared to controls. The odds for anxiety symptoms were significantly greater in women with PCOS compared with control subjects. The mean anxiety score was significantly increased in three of the remaining five studies. Other anxiety disorders, such as social phobia, panic attacks, and obsessive compulsive disorders, were assessed infrequently.

**Conclusion:** Our review suggests increased odds of anxiety symptoms in women with PCOS, underscoring the importance of screening all women with PCOS for anxiety symptoms. Follow-up evaluation and treatment are essential, because generalized anxiety disorder is a chronic condition. Potential contributors for anxiety symptoms, such as hirsutism, obesity, and/or infertility may be specific to women with PCOS but need further investigation.

**Key words:** PCO, Anxiety, Phobia.

## P-25

### Developmental consequences of mouse cryotop-vitrified oocytes using ethylene glycol and dimethyl sulfoxide

**Safavi M<sup>1</sup>, Karimi H<sup>2</sup>, Ghasemi F<sup>3</sup>, Sadeghi M<sup>4</sup>.**

1. Department of Developmental Biology, Islamic Azad University, Jahrom Branch, Fars, Iran.

2. Department of Anatomy, Jahrom University of Medical Sciences, Fars, Iran.
3. Department of Biology, Islamic Azad University, Jahrom Branch, Fars, Iran.
4. Department of Biology, Islamic Azad University, Fars Science and Research Branch, Fars, Iran.

Email: safavim@ymail.com

**Introduction:** The ability of successful mammalian oocyte cryopreservation is an important part of ART to treat infertility, which is still very low, despite recent improvements. In this study, we investigated the effect of vitrification on in-vivo matured oocytes.

**Materials and Methods:** MII oocytes were collected from mouse oviducts and were released from the cumulus cells by treatment with 0.1% hyaluronidase. MII oocytes were derived into 2 groups: control and vitrified. Vitrification of oocytes performed with two solutions: ES (7.5% EG+7.5% DMSO+20% FBS) for 1.5 min and then VS (15% EG+15% DMSO+0.5 M sucrose+20% FBS) for 30s before being plunged into liquid nitrogen on Cryotops. Stored oocytes were warmed by a 4-step method, and then their survival, fertilization and 2-cell embryos formation rates were observed.

**Results:** The survival, fertilization and 2-cell embryos formation rate in vitrified group were 96.31%, 68.30%, 80.62% and in control group were 100%, 79.00%, 85.28% respectively) and showed no significant difference between the groups ( $p < 0.05$ ).

**Conclusion:** The results suggest that vitrification is using the Cryotop, EG and DMSO is the efficient method for mouse oocyte cryopreservation.

**Key words:** Mouse, Vitrification, Oocytes, Cryotop.

## P-26

### Evaluation of the effect of oral Ritodrin on implantation rate of invitro fertilization- ET cycles

Sadaghiani M, Hamdi K, Farzadi L, Ghasemzadeh A, Abdollahi Fard S, Danaii S, Sobhi G.

Gynecology IVF Center, Al-zahra IVF Center, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: mahzadms@yahoo.com

**Introduction:** Infertility is a prevalent problem among young couples and about 10-15% of them are suffering from this problem. Assisted reproductive technologies are popular methods of infertility treatment that are developing rapidly all over the world. One of the important factors in implantation failure is the stimulation of uterin contractions during embryo transfer that could be prevented by prescription of a  $\beta_2$  adrenergic agonist Ritodrin.

**Materials and Methods:** In a randomized clinical trial study 200 infertile women who had the inclusion criteria for study enrolled for IVF/ICSI program. The study population divided in to two study (100) and control (100) groups. In study group the effects of 10mg BID oral Ritodrin were evaluated on the rate of embryo

implantation. That started aday before embryo transfer and continued until six days.

**Results:** The mean age of patients was  $30.9 \pm 4.2$  (ranging from 20-35). There was no significant statistical difference between two groups in regards of oocyte number and embryo transfer ( $p=0.48$ ,  $p=0.51$  respectively). The pregnancy rate in the study group (Ritodrin) and control group was 27% and 19% respectively that was no significant statistical difference between two groups.

**Conclusion:** According to the results and lack of significant difference between two groups in pregnancy rate, we can express that the rate of implantation is not affected by Ritodrin in our study but it is needed to conduct further studies with larger statistical populations.

**Key words:** Ritodrin, Implantation, IVF-ET.

## P-27

### Assessment of correlation between homocysteine concentration in follicular fluid and oocyt and embryo quality in polycystic ovarian syndrome patients undergoing assisted reproductive technology

Amiri I<sup>1</sup>, Rabiee S<sup>1</sup>, Goodarzi MT<sup>2</sup>, Hemmat Pour Z<sup>1</sup>.

1. Research Center for Endometr and Endometriosis, Hamedan University of Medical Sciences, Hamedan, Iran.

2. Research Center for Molecular Medicine, Hamedan University of Medical Sciences, Hamedan, Iran.

Email: amiri44@yahoo.com

**Introduction:** Polycystic ovary syndrome (PCOS) is the most common endocrinopathy among women in their reproductive period. Impairment in oocyte maturity and embryo development has been reported in polycystic ovary syndrome patients undergoing assisted reproduction. The aim of this study was to find a correlation between follicular fluid homocysteine concentration and oocyte maturity and the rate of embryo development in ART cycles.

**Materials and Methods:** 30 PCOS patients as case group and 30 women with male factor infertility as control group were included in the study. The homocysteine levels of follicular fluid in randomly selected follicles at the time of puncture were measured by ELISA method. Oocytes were classified to three groups (GV, GVBD, MII) and embryos were graded to five groups (undivided embryo, grade and grades A, B, C, D). Also The levels of homocysteine in follicular fluid of two groups were compared.

**Results:** Although the mean of homocysteine concentration in follicular fluid of PCOS cases was higher than control group, But the differences wasn't statistically significant. Also there was not any significant correlation between oocyte and embryo quality and homocysteine concentration of follicular fluid of both groups.

**Conclusion:** The results indicate that there is not any significant correlation between oocyte and embryo quality and homocysteine concentration of follicular fluid of PCOS patients.

**Key words:** Homocysteine, Polycystic ovary syndrome, assisted Reproduction technology.

## P-28

### The accuracy of hysterosalpingography (HSG) versus laparoscopy in the evaluation of pelvic adhesions

Ahmadi F, Akhbari F.

Department of Reproductive Imaging, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

Email: dr.ahmadi1390@gmail.com

**Introduction:** Obstruction of the fallopian tube by pelvic adhesion is a frequent cause of infertility. Bands of scar tissue can bind organs after pelvic infection secondary to salpingitis, post abortal or postpartum pelvic infection, endometriosis, tubal pregnancy, pelvic operations and tuberculosis. Tubal patency may be present but tubal function may be impaired by prevention of approximation of the fimbria to the ovary at the time of ovulation.

**Materials and Methods:** A retrospective study was conducted in imaging center of Royan Institute in 47 infertile patients during 2010-2011. All participants were investigated with Laparoscopy and HSG for their treatment. Results were analyzed and compared their agreement in diagnosis of pelvic adhesion.

**Results:** Analysis shows 19 (40.4%) ladies had normal result in laparoscopy and HSG and 21 (44%) participants show abnormal finding in both method and 2 (4.2%) participants had normal finding in HSG and abnormal finding in laparoscopy. 5 (10.6%) participants had abnormal finding in HSG and normal result in laparoscopy. sensitivity and specificity were 80.7% and 90.4% respectively. Positive Predictive Value and negative predictive value were 91.3% and 79.1%. Agreement between two methods in diagnosis pelvic adhesion was 85.1%.

**Conclusion:** Although laparoscopy allows direct visualization of nature, extent, and distribution of the peritubal adhesions and consider as the gold standard for the assessment of tubal patency and peritubal adhesions, HSG is a safe and simple procedure with lower cost and less inconvenience to patients. Because of high sensitivity, Positive Predictive Value and reasonably good concordance rate of Hysterosalpingography (HSG) with laparoscopy in our study, HSG could consider as a first line investigation method for detecting pelvic adhesions in infertile women.

**Key words:** HSG, Hysterosalpingography, Pelvic adhesion, Laparoscopy.

## P-29

### Comparison of ovarian primordial follicle isolation techniques in animal model

Sadeghnia S<sup>1</sup>, Mobini S<sup>2</sup>, Shirazi A<sup>2</sup>, Hossein G<sup>1</sup>, Naderi MM<sup>2</sup>, Heidari B<sup>2</sup>, Borjjan S<sup>2</sup>, Sarvari A<sup>2</sup>, Akhondi MM<sup>2</sup>.

1. Developmental Biology Laboratory, Department of Physiology, School of Biology, University College of Science, Tehran University, Tehran, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: akhondi@avicenna.ac.ir

**Introduction:** In vitro follicle growth is a promising fertility preservation strategy in which ovarian follicles are cultured to produce mature and fertilization-competent oocytes. Due to morphological and physiological similarities between human and sheep ovaries and the ethical constraints of working with human ovaries, this study was designed to compare the different methods of primordial follicle isolation in sheep ovaries.

**Materials and Methods:** The sheep ovarian cortex was dissected from the medulla and sliced into 0.5×0.5×0.5 mm<sup>3</sup> pieces using a scalpel blade. For follicular isolation, the ovarian fragments were allocated into 4 groups: 1) mechanical isolation using vortex for 1 minute; 2) mechanical isolation using the fine bore sampler tip for 15 minutes; 3) enzymatic digestion with 0.5 mg/ml collagenase I for 60 minutes; 4) enzymatic digestion with 0.5 mg/ml collagenase I plus 0.2 mg/ml DNase for 30 minutes.

**Results:** The percentage of isolated primordial follicles in group 1 was significantly ( $p \leq 0.05$ ) higher than groups 2, 3, and 4, respectively (83.3% vs. 33.4%, 50.2% and 50.2%). Additionally, other indices such as: duration of isolation, damage to the follicle basement membrane, debris, and more typical rounded follicles, all were better in group 1 compared to the other groups. Furthermore, the vital staining with trypan blue was indicated that the live primordial follicles from both mechanical groups were significantly higher than groups 3 and 4 (96.6% vs. 80% and 83.2%;  $p \leq 0.05$ ).

**Conclusion:** Mechanical primordial follicle isolation using vortex had more advantages (the less follicular damage) over other methods.

**Key words:** Ovary, Follicle isolation, Animal model, Enzymatic, Mechanical.

## P-30

### Effect of hepatitis B surface antigen in seropositive infertile women on intra cytoplasmic sperm injection (ICSI) outcome

Mansouri Torshizi M<sup>1</sup>, Roostaei H<sup>2</sup>, Fadavi Islam M<sup>1</sup>, Naghavizadeh M<sup>1</sup>, Sabouri E<sup>1</sup>, Khalilifar H<sup>1</sup>, Bazri Z<sup>1</sup>, Joodi F<sup>1</sup>, Mohammadi F<sup>1</sup>.

1. Novin Infertility Treatment Center, Mashhad, Iran.
2. Mashhad University of Medical Sciences, Mashhad, Iran.

Email: mary.naqavi@gmail.com

**Introduction:** According to last statistic at least 2% of people in Iran are infected by hepatitis virus. So we decided to evaluate the effect of HBS on seropositive female with this Virus and have been in ICSI procedure. We evaluated the ICSI outcome in our program for HBS

couples with the female infected in comparison with control group.

**Materials and Methods:** This study was performed between 2007 and 2012 in Novin Infertility Treatment Center (Mashhad, Iran). We examined 60 ICSI cycles of HBS infected women in comparison with an age matched control group (n=120).

**Results:** ICSI outcome was compared regarding fertilization rate (FR), embryo quality parameters, implantation rate (IR), clinical pregnancy rate (PR) and abortion rate (AR). Fertilization, implantation and pregnancy rate were similar between the groups. No difference was found regarding the number of transferred embryos (on day 2 or 3) and cryopreserved embryos, multiple pregnancies, or abortion rates between the groups.

**Conclusion:** Our results suggest that the embryo quality and ICSI outcome are not affected by HBS infection in positive couples. The major finding of this study is that the outcome of ICSI in HBS infected patients and a negative control is similar.

**Key words:** Hbs, ICSI outcome, Fertilization rate.

### P-31

#### Comparison the results of Intra cytoplasmic sperm injection (ICSI) in non-motile ejaculated spermatozoa with immotile testicular spermatozoa

Mansouri Torshizi M<sup>1</sup>, Fadavi Islam M<sup>1</sup>, Naghvizadeh M<sup>1</sup>, Sabouri E<sup>1</sup>, Khalilifar H<sup>1</sup>, Bazri Z<sup>1</sup>, Roostaei H<sup>2</sup>, Joodi F<sup>1</sup>, Mohammadi F<sup>1</sup>.

1. Novin Infertility Treatment Center, Mashhad, Iran.
2. Mashhad University of Medical Sciences, Mashhad, Iran.

Email: mary.naqavi@gmail.com

**Introduction:** One of the challenges in IVF is immotile sperm. The aim of this study was Comparison the results of Intra cytoplasmic sperm injection (ICSI) in non-motile ejaculated spermatozoa with immotile testicular spermatozoa.

**Materials and Methods:** This retrospective study was carried out on infertile couples referred to Novin infertility treatment center that they have immotile ejaculated semen. At first we talked with these patients about testicular biopsy and according to this procedure, patients were divided into two groups: Group A, Patients with non-motile spermatozoa in their ejaculated semen and dissatisfaction for TESE (N=24). Group B, Patients with non-motile spermatozoa in their ejaculated semen with authorization for TESE (N=41). Both groups were under Injection. Good quality embryos were transferred. Therefore after two weeks BHCG titration was done and pregnant patients were recorded. The primary outcome measure was score of fertilization rate and pregnancy rate in immotile sperm. In this study there was no significant difference between age of female and male, duration of Infertility and the quality of embryo in two groups.

**Results:** There were a significant differences between fertilization rate and number of embryo in men with immotile sperm by TESE and men with immotile sperm without TESE (T=0.04 and T=0.05 respectively). Pregnancy rate have no statically significant difference between two groups.

**Conclusion:** Our result showed that fertilization rate and cleavage rate in non-motile testicular biopsy group was higher than non-motile ejaculated sperm group, therefore a better and safety method for these patients is testis biopsy. We conclude that in some condition non-motile ejaculated sperm, patients have authorized for TESE, they have more chance for pregnancy.

**Key words:** Immotile sperm, Pregnancy rate, ICSI, TESE.

### P-32

#### Influence of swim up on sperm count, morphology and motion

Erfanian Ahmadpoor M<sup>1</sup>, Mansouri Torshizi M<sup>2</sup>, Fazelnasab N<sup>1</sup>, Naghvizadeh M<sup>2</sup>.

1. Department of Anatomy and Embryology, Shahinfar School of Medicine, Islamic Azad University, Mashhad Branch, Mashhad, Iran.
2. Novin Infertility Treatment Center, Mashhad, Iran.

Email: mary.naqavi@gmail.com

**Introduction:** Infertility is estimated to affect about 10-15% of couples, who didn't have treat with medicine treatments, so we must use of ART methods. One of these methods that can improve Semen Parameters is swim up. We aimed to define the influence of swim up on sperm count, morphology and motion.

**Materials and Methods:** A group of 345 male who came to Novin infertility center for ART IUI between 2010-2011, were recruited for this study. Sperm count, morphology and motility of sperm, before and after swim up, were measured. The statistical analysis was performed by using SPSS soft ware, version 16.0. All tests were two-tailed with a confidence level of 95% (p<0.05).

**Results:** There were significant differences between mean number of sperm after swim up ( $84.14 \times 10^6$ ) and before swim up ( $55.92 \times 10^6$ ).

Sperm motility before swim up was 55/6% and after swim up improve to 92/3% and swim up lead to improving sperm motility in Grade A ( $22.11 \pm 7.40$ ).

**Conclusion:** swim up had significant effect on semen parameters including: motility, morphology and sperm grading.

**Key words:** Swim up, Sperm count, Morphology, Motion, Swim up grading.

### P-33

#### A comparative Study of the quality of life between man and woman in infertile couples

Erfanian Ahmadpoor M<sup>1</sup>, Azizi H<sup>1</sup>, Joneidi E<sup>1</sup>, Mansouri Torshizi M<sup>2</sup>, Naghvizadeh M<sup>2</sup>.

1. Department of Anatomy and Embryology, Shahinfar School of Medicine, Islamic Azad University, Mashhad Branch, Mashhad, Iran.



2. *Novin Infertility Treatment Center, Mashhad, Iran.*

**Email:** mary.naqavi@gmail.com

**Introduction:** Infertility is a serious disabling condition and medical problem which often leads to many health and social issues and affects couple's quality of life. Studies on the impact of infertility on quality of life mostly focus on the female partner and few of them compare the quality of life between male and female. The aim is comparing the different aspects of quality of life between female and male in infertile couples.

**Materials and Methods:** This analytical cross sectional study was carried out on one hundred infertile couples referred to Novin infertility treatment center, Mashhad, Iran. Data was collected through interview and questionnaire based on WHOQOL-BREF. The primary outcome measure was score of Quality life in every aspect. Data was analyzed by SPSS 16 software and t-test was used in order to compare men and women's score.  $P < 0.05$  was considered as the level of significance.

**Results:** There was a significant difference between men and women in physical and psychological aspects of quality of life ( $p=0.002$ ,  $p=0.001$  respectively).

**Conclusion:** There was a significant difference between men and women in physical and psychological aspects of quality of life ( $p=0.002$ ,  $p=0.001$  respectively).

**Key words:** *Quality of life, Infertility, Gender.*

### P-34

#### **Effects of L-Carnitine and pentoxifylline on mice testicular sperms carbohydrate distribution**

**Aliabadi E, Karimi F, Talaei Khozani T.**

*Department of Anatomy, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.*

**Email:** elham\_ali@yahoo.com

**Introduction:** Sperm glycoconjugates content indicates its physiological and fertility properties. Lectin relativities show the intact, capacitated and acrosomal-reacted sperms. In the epididymis, sperms face to maturation, modification of glycoconjugates and simultaneously, higher L-carnitine concentration. The aim of this project was to evaluate the effects of L-carnitine (LC) and Pentoxifylline (PF) on the integrity, capacitation and acrosomal reaction of the sperms by study their lectin reactivity.

**Materials and Methods:** Mice testicular sperm samples divided into three parts. Each sample was added Ham's F10 (control) or the media contained 1.76 mM LC or PF. At 30 and 90 min after incubation sperm motility was assessed. Peanut agglutinin (PNA), wheat germ agglutinin (WGA) and Concanavalin A (Con A) was used to detect nonacrosomal-reacted, non-capacitated and acrosomal-reacted sperms, respectively and the

frequency was evaluated by flowcytometry. Statistical analysis was performed using ANOVA.

**Results:** Sperm motility increased after 30 and 90 min of incubation in LC- and PF-treated cultures ( $p=0.001$ ). L-carnitine administration showed a significant increase in the percentage of nonacrosomal-reacted sperm compared to the control after 30 and 90 min ( $p=0.02$ ,  $p=0.03$ , respectively). The frequency of non-capacitated sperms in LC-treated group increased compared to the control sperms after 30 min significantly ( $p=0.01$ ).

**Conclusion:** Although the administration of the LC and PF enhanced sperm motility, LC also impact in the glycoconjugates on the sperm surface. Glycoconjugates involve in the interaction between sperm, zona pellucida and subsequently in fertilization and by this way they may influence the male fertility state.

**Key words:** *Glycoconjugates, Testicular sperm, Lectin, L-carnitine, Pentoxifylline.*

### P-35

#### **Effects of different doses of Pregnant mares serum gonadotropin (PMSG) on oocyte zona pellucida glycoconjugates**

**Aliabadi E<sup>1</sup>, Banaei M<sup>2</sup>, Talaei Khozani T<sup>1</sup>.**

1. *Department of Anatomy, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.*

2. *Department of Biology, Azad University, Shiraz, Iran.*

**Email:** elham\_ali@yahoo.com

**Introduction:** Gonadotropins are widely used in hyper-ovulation induction ART techniques. Oocyte zona pellucida glycoconjugates (ZPGs) which appear during folliculogenesis and ovulation, play important roles in sperm-oocyte attachment steps and finally zygote formation. So is it possible that different doses of gonadotropins change ZPGs? In order to evaluate this subject the below investigation was designed.

**Materials and Methods:** Sixty mature female Sprague dawley rats were randomly divided into six groups. In experiment groups animals received 4, 8, 16, 24, or 40 IU PMSG and 10 IU hCG after 48 hours intraperitoneally. In control group animals received only PMSG vehicle in metestrus and 10 IU HCG in proestrus. Oocyte-granulosa complexes were collected from oviducts. Granulosa cells were removed by hyaluronidase digestion. Oocytes ZPGs stained with WGA, DBA, ConA or PNA (FITC type lectins) and screened by fluorescent microscopy. The data were analyzed by one-way ANOVA.

**Results:** It seems that simultaneously with increasing PMSG doses, the optical density of ZPGs when they stained with WGA, DBA or Con A decreased, but it increased when stained with PNA.

**Conclusion:** Different doses of gonadotropins (such as PMSG) can change the amount of different ZPGs which play important roles in sperm-oocyte attachment steps and finally zygote formation, so It seems that this

important point must be included in hyper-ovulation induction ART techniques.

**Key words:** *Zona pellucida, Glycoconjugates, Gonadotropin, Pregnant mares serum gonadotropin.*

### P-36

#### Comparison of two ovulation induction regimens in infertile women

Rasekh Jahromi A<sup>1</sup>, Maalhigh M<sup>2</sup>, Alavi F<sup>2</sup>, Poorshojai S<sup>3</sup>.

1. Department of Obstetrics and Gynecology, Jahrom University of Medical Sciences, Jahrom, Iran.
2. Jahrom University of Medical Sciences, Jahrom, Iran.
3. Rasekh Clinic, Jahrom University of Medical Sciences, Jahrom, Iran.

**Email:** drrasekhjahromi@gmail.com

**Introduction:** Infertility is defined as a one-year unprotected intercourse which does not result in pregnancy. The incidence of infertility is 10-15% during their reproductive age. 50% of infertility are due to female infertility. The cost of Infertility treatment is expensive. Anovulation disorders cause 30-40% of infertility cases. since 1996 different clinical trials has been done but best results and least complications is still a big concern and studies still continues. The aim of this study is comparison of 2 regimens in different aspects such as endometrial thickness and follicles size, pregnancy rates, and OHSS.

**Materials and Methods:** 90 infertile women with anovulatory cycles that referred to Rasekh clinic were selected with mean age of 27.5%. They were divided into two groups. Group A was medicated with combination of Tamoxifen +letrozole and group B Tamoxifen+ letrozole +estrogen. The results of these two regimens were tested with  $\beta$ -HCG and serial transvaginal sonography.

**Results:** Group A had better conception rates (22.2%: 17.8%) and lesser the abortion rate (4.4%: 12.5%). But the OHSS rate was almost the same in both groups (6.6%: 6.7%). In the other hand, endometrial thickness was more in group B (9.11%: 4.79%).

**Conclusion:** each regimen has its own benefits and these benefits must be considered for any individual of infertile women. The cost of treatment is cheap and convenient in both groups. But Pregnancy rate was higher in group A. According to satisfactory results in group A, so, it is suggested to use of this method. More extensive studies is suggested.

**Key words:** *Comparison, Tamoxifen, Letrozole, Estrogen, Conception.*

### P-37

#### The relation between women's pelvic organ prolapse and clinical markers of connective tissue weakness

Yousefi F, Hafizi L<sup>1</sup>, Razmjoo N<sup>2</sup>, Mirfeizi Z<sup>3</sup>.

1. Department of Obstetrics and Gynecology, Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran.

2. Faculty of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.

3. Department of Internal Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

**Email:** fatiyousefi@yahoo.com

**Introduction:** Pelvic organ prolapse is a common gynecologic condition of obscure etiology. One possible cause of genital prolapsed is an inherent weakness of connective tissue of pelvic support structures. The aim of study was to determine whether joint hypermobility, striae, easy bruising and varicose veins- clinical markers for connective tissue abnormalities- is associated with pelvic organ prolapse.

**Materials and Methods:** In this cross-sectional study, 30 women with POP (POP quantification, stage  $\geq$ II) and 30 controls (stages 0 and I) with similar age and parity were recruited from a gynecology clinic in Mashhad Imam Reza hospital. POP was evaluated by a POP-quantification (POP-Q) system and, for the purposes of this study, POP was defined as stage  $\geq$ II. All the subjects were examined in the dorsal litotomy position with an empty bladder. A separate investigator, blinded to the results of the gynecologic examination evaluated each subject for connective tissue weakness markers.

**Results:** Clinical joint hypermobility was found in 24 of 69 (40%) subjects. there were no significant difference in the prevalence of joint hypermobility between subjects with pelvic organ prolapse and healthy women. The prevalence of hypermobility in the POP group was 36.7% versus 43.3% in healthy women ( $p=0.59$ ). No Significant differences were found between the groups with regard to other Markers of connective tissue weakness such as presence of varicose veins ( $p=0.37$ ), easy bruising ( $p=0.43$ ) and observed striae ( $p=0.42$ ).

**Conclusion:** A clinical marker of connective tissue abnormalities was not associated with pelvic organ prolapse.

**Key words:** *Pelvic organ prolapse, Connective tissue, Joint hypermobility, Easy bruising, Striae.*

### P-38

#### Study of effects of *Stachys lavandulifolia* aerial parts on the paraclinical signs of polycystic ovarian syndrome

Modarresi M<sup>1</sup>, Jalilian N<sup>2</sup>, Rezaei M<sup>3</sup>, Ghaderi L<sup>1</sup>, Jalilian N<sup>4</sup>.

1. Department of Pharmacognosy and Biotechnology, Faculty of Pharmacy, Kermanshah University of Medical Sciences, Kermanshah, Iran.
2. Department of Obstetrics and Gynecology, Faculty of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran.
3. Department of Biostatistics and Epidemiology, Faculty of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran.
4. Research Center of Agriculture and Natural Resources of Kermanshah Province, Kermanshah, Iran.

**Email:** mmodarresi@kums.ac.ir

**Introduction:** Polycystic ovarian syndrome (PCOS) is a complex endocrine and metabolic disorder in 6-8% of

women. The important signs of this syndrome include acne, hirsutism, irregular menstruation, obesity, hyperandrogenism and small ovarian cysts. In this study, effects of medroxyprogesterone and *Stachys lavandulifolia* aerial parts in improving the paraclinical signs of PCOS have been compared.

**Materials and Methods:** 66 patients with PCOS were classified randomly and voluntarily with respect to age, height and weight similarities. For 3 successive months, 33 patients received 10mg medroxyprogesterone in 10 continuous nights per month and to 33 patients were administered an infusion from 5g *S. lavandulifolia* aerial parts three times a day. The paraclinical signs of patients were collected in a particular questionnaire before and after treatment. Finally data obtained from the questionnaires were analysed by statistical methods.

**Results:** Average of age and body mass index in both groups of patients treated by either medroxyprogesterone or *S. lavandulifolia* aerial parts showed no significant difference. Also it was observed that after treatment, there was no a significant difference between the two groups in improvement of serum LH/FSH ratio ( $p>0.05$ ). Although there was a remarkable difference between the two groups in improvement of serum testosterone level and sonographic appearance of ovarian ( $p<0.05$ ).

**Conclusion:** Although previous study has demonstrated that *S. lavandulifolia* compared with medroxyprogesterone can be effective in treating abnormal uterine bleedings due to PCOS, but this plant can not improve paraclinical signs of PCOS.

**Key words:** Polycystic Ovarian Syndrome, *Stachys lavandulifolia*, Medroxyprogesterone, Paraclinical Signs.

### P-39

#### The efficacy of combination therapy in ovulation induction of infertile women with unexplained reason

Rasekh Jahromi A<sup>1</sup>, Maalhigh M<sup>1</sup>, Maalhigh M<sup>1</sup>, Poorshojai S<sup>2</sup>, Alavi F<sup>1</sup>, Pad N<sup>1</sup>.

1. Department of Obstetrics and Gynecology, Jahrom University of Medical Sciences, Jahrom, Iran.
2. Rasekh Clinic, Jahrom University of Medical Sciences, Jahrom, Iran.

Email: drrasekhjahromi@gmail.com

**Introduction:** Infertility has different reasons such as PCO syndrome, abnormal sperm analysis, but in some cases of infertile women who aren't involved with PCO syndrome and their age is under 35 year old have no acceptable reason for their infertility and can be categorized as unexplainable infertility. The aim of this study is evaluation of Tamoxifen +letrozole combination efficacy in treatment of infertile women with unexplained infertility.

**Materials and Methods:** We selected 28 women with unexplained infertility that referred to Rasekh clinic. Age patients are under 35 years and without PCO syndrome that were prescribed Tamoxifen +letrozole as ovulation induction treatment. The successful outcome

of this method was evaluated with transvaginal sonography and  $\beta$ -HCG test.

**Results:** Pregnancy rate is 25% (7 people), abortion in 7.1% (2 person) and OHSS rate in 7.1% (2 people) in this regimen. 46.42% (13) patients had ovarian follicles with acceptable size (18mm). 89.29% (25) patients were detected three layers of transparent endometrium and endometrial thickness  $>8$ mm in only 25% (7) patients.

**Conclusion:** This regimen had good effects on endometrial quality and follicular size in patients with unexplained infertility reasons. Fertility rate is acceptable. Due to the favorable results of this study, so, It is recommended on a broader range study.

**Key words:** Unexplained reason, Tamoxifen, Letrozole, Combination.

### p-40

#### Predicting the success rate of ICSI method in treatment of infertile patients using neural fuzzy model

Anvari SM<sup>1</sup>, Naghavi M<sup>2</sup>.

1. Department of Computer, Dezful Branch, Islamic Azad University, Dezful, Iran.
2. Department of Social Medicine, School of Medicine, Babol University of Medical Sciences, Babol, Iran.

Email: ghaem.anvari@gmail.com

**Introduction:** Infertility is one of the major problems involving 15% of young couples. To solve this problem, there are some special laboratory techniques called ART. One of ART techniques is ICSI which due to its expensive cost, many couples do not try that. There have been interests in cognitive sciences, neural networks, fuzzy theory and statistical neural models and theoretical and practical studies have been conducted about these issues. The purpose of this study was to predict the success rate of ICSI technique in treatment of infertile patients with Neuro fuzzy method.

**Materials and Methods:** 300 infertile women aged between 20-38 years old referring to Fatemeh-Alzahra infertility center entered in this retrospective study. After data collection and initial analysis using univariate statistical tests, logistic regression model was performed for synchronic modeling of obtained variants from previous steps and important clinical variants by using SPSS v.18 software. Besides, to practice neural fuzzy model, data were divided into training and testing groups with Matlab software. Then, appropriate model was resulted from training data and was tested on testing group to assess its accuracy. Finally, ROC curve was used to evaluate the prediction power of various models.

**Results:** Logistic regression model showed that of entered variables into the model, wife's age, kind of infertility (primary or secondary), and duration of infertility can predict success of infertility treatment. Prediction value was 82% for fuzzy neural networks.

**Conclusion:** Neural fuzzy model can considerably predict possibility of pregnancy with ICSI method.

**Key words:** Infertility, Fuzzy neural networks, Prediction, ICSI.

## p-41

### Genetic screening on egg and embryo donors: It's role in a safe donation process

Davoudi A<sup>1</sup>, Sadri S<sup>2</sup>, Tarang A<sup>3</sup>, Rafeie F<sup>4</sup>, Tahmoressi F<sup>3</sup>.

1. *Research Deputy of Guilan Branch of the Academic Center for Education, Culture and Research (ACECR), Guilan, Rasht, Iran.*
2. *Infertility and IVF Center, Family Hospital, Rasht, Iran.*
3. *Department of Genomics, Agricultural Biotechnology Research Institute of Iran (ABRII), North Region of Iran, Rasht, Iran.*
4. *Department of Animal Science, Islamic Azad University, Chalous Branch, Chalous, Iran.*

Email: arash1983@gmail.com

**Introduction:** Nowadays, egg and embryo donation have been used to treat problems fertility caused by a variety of conditions affecting the ovary. Numerous disorders, including premature ovarian failure, advanced reproductive age, unexplained recurrent implantation failure, inherited conditions, or women's with after chemotherapy therapy are amenable to gamete donation, with high pregnancy rates and good obstetrical outcomes observed in recipients.

**Materials and Methods:** In this study we review articles in various Internet sites about importance of genetic screening on egg and embryo donation.

**Results:** Genetic screening is one of tests that performed on the donor's and provides important information about potential risks for future pregnancy. Genetic screening involves checking if person carries a copy of an abnormal gene that can put you at risk for having a child with a specific disorder. This is usually done by a blood test. Persons who carry genes for these disorders usually don't have symptoms. Most can only be inherited if both parents are carriers, whereas others can be passed on if only one parent carries the gene. There are several genetic tests that routinely offer to all patients, such as Cystic Fibrosis, Fragile X syndrome, Hemoglobinopathy and etc. Some others may only be desired if a person belongs to an ethnic group in which the disease is more common, such as screening for Tay-Sachs disease, spinal muscular atrophy, and other genetic diseases is indicated.

**Conclusion:** The ultimate goal of genetic screening, the ensuring of received safe egg or embryo and delivery of a healthy child.

**Key words:** Genetic screening, Egg donor, Embryo donor, Donation Process.

## P-42

### The fertility status in Iran

Kamali K<sup>1</sup>, Akhondi MM<sup>1</sup>, Mohammad K<sup>2</sup>, Ranjbar F<sup>1</sup>, Shafeghati S<sup>1</sup>, Behjati Ardakani Z<sup>1</sup>, Shirzad M<sup>1</sup>, Farahani M<sup>1</sup>.

1. *Reproductive Biotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.*

2. *Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.*

Email: amedvala@gmail.com

**Introduction:** Infertility is one of the most significant problems that affect the health of families and societies. Determining the prevalence of infertility is important for evaluating the capacity of fertility in a society. There are different reports on the prevalence of infertility in Iran, but the current research has been done for the first time by using the of people's fertility history in order to provide an unbiased estimation of primary infertility.

**Materials and Methods:** This research was designed and performed by Avicenna Research Institute. In this research, we evaluated the history of fertility as the basis for gathering information in 2010-2011. After design of a questionnaire, we recruited trained nurses and obstetricians to call on married women aged 20-40 years old throughout Iran to fill the questionnaires.

**Results:** In this research we questioned 17187 women in 1011 clusters. The mean age of the women at the time of their marriage was 20.1, and that of their husbands was 25.4 years. The mean age of women at the time of their first pregnancy was 21.1 and the mean age of their first menstruation was 13.3 years. This research revealed the prevalence of primary infertility to be 20.2% in Iran.

**Conclusion:** The prevalence of primary infertility in the Islamic Republic of Iran seems to be higher than the world average. Therefore, it is crucially important to support the large number of people who face this problem, regarding the psychosocial importance of this issue.

**Key words:** Prevalence rate, Epidemiology, Primary infertility, Iran.

## P-43

### Comparison of infertility evaluation algorithm in the Iranian versus conventional medicine

Tansaz M<sup>1</sup>, Bios S<sup>2</sup>, Mokabberinejad R<sup>2</sup>, Sohrabvand F<sup>3</sup>.

1. *School of Traditional Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.*
2. *School of Traditional Medicine, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran.*
3. *Department of Infertility, Vali-Asr Hospital, Tehran University of Medical Sciences, Tehran, Iran.*

Email: fsohrabvand@yahoo.com

**Introduction:** In the absence of pregnancy after a year without contraception, a basic assessment of infertility is performed before treatment. The basic evaluation consists of semen analysis, detection of ovulation and patency of the fallopian tubes. In Traditional Iranian Medicine difficulty in getting pregnant spontaneously or in a natural way and when the couples need to be treated for some period, is considered as "Oghr" or infertility.

**Materials and Methods:** According to the Iranian medicine the diagnostic algorithm for the infertile couple requires at the first stage a determination of

whether the cause of infertility is a male or female factor. This is done by using the “Garlic test” in women by inserting garlic vaginally and “Water Test” in men. In the latter test, the seminal ejaculate is poured into a transparent glass of water and the sperm alignment and the way it is spread in the water reflects different sperm abnormalities.

**Results:** In women if it is proven that the infertility is due to female factor by performing other tests, specific pathologies like obstructions in genital tract such as “suddah” or blockage of the fallopian tubes or adhesions are specified. Also after obtaining the results of “Water Test” in men and in the later stages, the infertility causes are determined using a special algorithm.

**Conclusion:** In addition to being simple and of low cost, evaluation of infertility in traditional medicine is supported by the scientific and practical recommendations of great Iranian scientists (Hakims) like Avicenna, Razi, Jorjani, and etc. In this manuscript the algorithm used for evaluation of infertility in Iranian versus conventional medicine has been explained and compared.

**Key words:** *Infertility evaluation, Traditional Iranian Medicine, Garlic test.*

#### P-44

##### **Embryo selection in IVF cycles**

**Moradan S.**

*Department of Obstetric and Gynecology, Semnan University of Medical Sciences, Amir Hospital, Semnan, Iran.*

**Email:** sm42595@yahoo.com

**Introduction:** Most methods of determining which embryo to transfer during in vitro fertilization rely on a visual assessment under the microscope. Unfortunately, this approach ignores the most common cause of IVF failure that is chromosomal abnormalities. It is impossible to tell by simply looking at an embryo whether it is chromosomally competent. It will either fail to develop, result in a miscarriage, or be manifest as a birth defect. Therefore, it needs to use some reliable method for diagnosis of chromosomally competent embryo.

**Materials and Methods:** By searching the internet, one of the methods available for analyzing the number of chromosomes is FISH. Another remarkable new technology that was started in 2007 called CGH and now allows analysis of every pair of chromosomes in the embryo for numerical abnormalities.

**Results:** The problem with FISH is that it only analyzes 8-12 of the 23 chromosome pairs. This leaves more than half of the chromosomes unaccounted and therefore falls short as a reliable method of embryo selection. Until now several hundred of patients have undergone IVF using CGH method and more than 60% have achieved pregnancies. This is about twice the national average per embryo.

**Conclusion:** CGH is the preferred method for chromosomal analysis of embryos and have higher pregnancy rate than FISH.

**Key words:** *IVF, Embryo selection.*

#### P-45

##### **Empty follicle syndrome: A case report**

**Moradan S.**

*Department of Obstetric and Gynecology, Semnan University of Medical Sciences, Amir Hospital, Semnan, Iran.*

**Email:** sm42595@yahoo.com

**Introduction:** The empty follicle syndrome (EFS) is a rare frustrating condition in which no oocytes are retrieved in an IVF or ICSI cycle. The mechanisms responsible for EFS remain obscure. The EFS is a rare event (1.8% of oocyte retrievals) but with profound implications for counseling the couple about their future reproductive performance. In this study it was decided to report a case of empty follicle syndrome that was underwrt ICSI.

**Case:** A twenty nine years old women with infertility of about 14 years referred to our center. She had two times ectopic pregnancies, underwent surgery and her both tubes were removed. She underwent the ICSI and a long protocol consists of superfact and gonadotropin was used, after 9 days of ovulation induction, transvaginal sonography was performed and about 12 dominant follicles in left and 10 dominant follicles in right ovary were present; therefore, 10000u HCG was injected. 34 hour after HCG injection oocyte pick up was done and about 16 follicles of both ovaries were aspirated but there was no oocyte in these follicles and this cycle was failed.

**Conclusion:** This was a real case of empty follicle syndrome and there is possible recurrence for this syndrome, therefore, this patient should be counseled regarding the possibility of recurrence of such an event in future cycles. Despite being a rare phenomenon, EFS has profound implications for counseling about the future reproductive performance of the couple, especially when the chances of recurrence are high.

**Key words:** *Empty follicle syndrome, Infertility.*

#### P-46

##### **The role of complementary and alternative medicine for enhancing fertility**

**Jahangiri N<sup>1</sup>, Jahanian Sadatmahalleh Sh<sup>2</sup>.**

1. *Department of Endocrinology and Female Infertility at Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.*
2. *Department of Midwifery and Reproductive Health, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.*

**Email:** jahangiri\_n@yahoo.com

**Introduction:** The utilization of Complementary and Alternative Medicine (CAM) in infertility treatments has been increased in recent years. CAM is considered as a various practices, such as: acupuncture, nutritional supplements, vitamins, herbal and physical therapies. The aim of this paper is to search the existing literature underlying the use of CAM to determine which modalities are efficacious, and safe.

**Materials and Methods:** A literature search was conducted on PubMed.

**Results:** There are several broad categories that CAM fall into: unsuccessful standard fertility treatments, worrying about the side effects of ART and a desire to avoid technological or unnatural assistance, the belief that CAM treatment would be more efficient than mainstream medicine and women using CAM modalities in combination with ART to maximize their chances of becoming pregnant. Acupuncture is reported as one of the most widely used types of CAM which seems to be useful for men with oligoasthenospermia and azoospermia. Oral treatment with the antioxidant has been reported to be associated with higher fertility rates in men or women. Some oral supplements such as N-acetyl cysteine, omega-3, fatty acid, Vitamin C, vitamin E, zinc, selenium and folate have been proposed as a possible solution for male factor infertility.

**Conclusion:** With the growing use of CAM, fertility specialists need to be more active in obtaining information about the use of these therapies. There is a need for additional well-designed studies to confirm the safety and efficacy of these therapies as an infertility treatment or as an adjunct to ART treatment.

**Key words:** Complementary and Alternative Medicine, Infertility, Assisted reproductive technology.

#### P-47

### Comparison the total intravenous anesthesia (TIVA) with propofol-remifentanil and propofol-fentanyl for transvaginal oocyte retrieval

Atashkhoyi S<sup>1</sup>, Negargar S<sup>2</sup>, Hatami Mardani P<sup>3</sup>.

1. Department of Anesthesiology, Al-Zahra Hospital, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Anesthesiology, Shahid Madani Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: satashkhoyi@gmail.com

**Introduction:** Ultrasound-guided transvaginal oocyte retrieval is a short procedure and can be performed under sedation, local or general anesthesia. The most common anesthetic agents used are the combination of propofol and fentanyl. This study compared TIVA using propofol-remifentanil with propofol-fentanyl during IVF respect to recovery profile and postoperative nausea and vomiting (PONV).

**Materials and Methods:** In a prospective double-blind study, 60 women aged 20-45 years undergoing ultrasonically guided oocyte retrieval for in vitro fertilization (IVF) were studied. Anesthesia in study group (n=30) was based on remifentanil at the dose of 0.05 microg/kg/min with micropump and in control group (n=30), a bolus injection fentanyl, 2µg/kg. One minute later, all the patients were given a continuous infusion of propofol of 5-10 mg/kg/hr.

**Results:** There were no significant differences between groups with regard to age, weight and duration of procedure. Amnesia for the puncture and analgesia were always perfect. Induction was significantly shorter for remifentanil, 1.5± 0.8 min, than for fentanyl, 4.3±1.8 (p<0.01). Propofol requirements is higher in fentanyl group than remifentanil group (8-10 mg/kg/hr vs 5-6mg/kg/hr; p<0.01). All who received fentanyl were drowsy at the end of the procedure, while those in the remifentanil group were fully awake and able to move from operating table to stretcher with minimal help. Postoperative nausea was significantly higher in fentanyl group than remifentanil group (30% vs. 6.6%; p<0.01).

**Conclusion:** TIVA with propofol-remifentanil significantly was associated with reduced propofol consumption, during anesthesia, improvement recovery profile and lower PONV during oocyte aspiration in IVF treatment.

**Key words:** Ultrasound guided transvaginal oocyte retrieval, Anesthesia, Recovery profile, PONV.

#### P-48

### Multimodal preemptive early premedication to prevent pain after diagnostic gynecologic laparoscopy

Rasooli S<sup>1</sup>, Moslemi F<sup>1</sup>, Abdollahi Fard S<sup>2</sup>.

1. Department of Anesthesia, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Obstetrics and Gynecology, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: moslemi\_fa@yahoo.com

**Introduction:** Post operative pain is usually treated by opioids, which is expensive and may induce various side effects. Women experiencing moderate-to-severe pain on the first day after diagnostic laparoscopy. The aim of this study was to assess the efficacy of multimodal early premedication to prevent pain after laparoscopy.

**Materials and Methods:** Following approval from the Local Ethics Committee and receipt of written informed consent, 40 ASA physical status I-II patients who underwent diagnostic laparoscopy were enrolled into the study. Thirty minutes before induction of anesthesia, diclofenac suppository 100 mg were given to all patients. General anesthesia was standardized. The patients received 1 g i.v. Paracetamol (Group I, n: 20) or normal saline (Group II, n: 20) 10 minutes (min) before the end of the operation. Pain was assessed by Visual Analogue Scale (VAS) after arrival in the postanesthesia care unit (PACU) (VAS 1) and at the 30th minute (VAS 2) and 1st hour (VAS 3) of the PACU stay. Pethidine 20 mg i.v was administered to the patient with VAS >5. The following measures were recorded: intensity of pain by VAS at arrival and after 30 and 60 min, total consumption of pethidine, and nausea and vomiting.

**Results:** All assessments were performed by an anesthesiologist blinded to the study protocol. VAS 3 scores were significantly higher in Group II than Group I ( $p < 0.05$ ). Opioid consumption was significantly difference between the groups. Two patients in each group had postoperative nausea and vomiting; no other adverse effects were noted.

**Conclusion:** We recommend the use of i.v. Paracetamol and an NSAID with together is associated with a significant decrease in pain and opioid requirements after laparoscopy.

**Key words:** Pain, Diagnostic Gynecologic Laparoscopy, Paracetamol, Diclofenac.

#### P-49

### Effects of simvastatin on ovulation and pregnancy rates before using clomiphene again in clomiphene-resistant women with polycystic ovary syndrome

Azargoon A<sup>1</sup>, Ghorbani R<sup>2</sup>, Faraji Z<sup>3</sup>.

1. Department of infertility, Semnan University of Medical Sciences, Semnan, Iran.
2. Department of Community Medicine, Semnan University of Medical Sciences, Semnan, Iran.
3. Department of Obstetrics and Gynecology, Semnan University of Medical Sciences, Semnan, Iran.

Email: azarmona2003@yahoo.com

**Introduction:** The objective of this study is to determine if simvastatin pretreatment would change clomiphene response in clomiphene citrate-resistant (CC-R) women with PCOS.

**Materials and Methods:** This quasi experimental study included twenty five clomiphene resistant women with PCOS. All patients received cyclic oral contraceptives pills (OCP) (30 $\mu$ g of ethinyl estradiol and 150 $\mu$ g of desogestrol) from the 5th day of their spontaneous or progesterone (P) induced menstrual cycle; in addition, they received simvastatin (20mg/day) from the first day of cycle for two consecutive months. Then, patients were given 100 mg clomiphene citrate (CC or Clomid) (Iran Hormone, Iran) for five days starting from day three of their menstrual cycles. The primary outcome measures were ovulation and pregnancy rates. The change in body mass index (BMI), the mean number of follicles  $\geq 18$  mm, the mean of follicular size and endometrial thickness on the day of human chorionic gonadotropin (HCG) administration were secondary outcome measures.

**Results:** Ovulation occurred in 5 out of 25 (20%) patients, but none of the patients conceived in this study. No important change in BMI was observed after using simvastatin (0.28 $\pm$ 1.13;  $p=0.228$ ). In all patients with ovulation, the number of follicles  $\geq 18$ mm was one. The mean follicular size and endometrial thickness on the day of HCG administration were 19.67 $\pm$ 2.04 and 7.00 $\pm$ 1.34, respectively.

**Conclusion:** In this study, we did not observe the favorable effect on ovulation and pregnancy rates with CC following of simvastatin pretreatment in CC-

resistant PCOS women. So, further studies with a larger number of patients, higher doses of CC and more cycles are necessary to make this obvious.

**Key words:** Clomiphene-resistant, Poly cystic ovary syndrome, Simvastatin, Statins.

#### P-50

### Comparison of agonist, antagonist GnRH with gonadotropin and only gonadotropin on level of serum prolactin in women undergoing in vitro fertilization and intrauterine insemination

Seyedoshohadaei F<sup>1</sup>, Izadpanah M<sup>1</sup>, Rahmani E<sup>2</sup>, Izadpanah F<sup>3</sup>, Aflatoonian A<sup>4</sup>.

1. Department of Obstetrics and Gynecology, Besat Hospital, Kurdistan University of Medical Sciences, Sanandaj, Iran.
2. Department of Obstetrics and Gynecology, Bushehr University of Medical Sciences, Bushehr, Iran.
3. Ministry of Health and Medical Education, Research Center for Food and Drug, Tehran, Iran.
4. Department of Obstetrics and Gynecology, Research and Clinical Center for Infertility, Shahid Sadoughi Medical University, Yazd, Iran.

Email: f.seyedoshohadaei@muk.ac.ir

**Introduction:** Nearly 14% of couples have infertility. 15-25% of infertile women have unexplained infertility. The principal methods for treatment unexplained infertility are IUI and IVF. GnRH antagonists and GnRH agonists and Gonadotropins which used in IUI and IVF cycles have different effect on serum Prolactin level. This study was designed for evaluation of Prolactin changes.

**Materials and Methods:** We studied 90 infertile women with unexplained infertility. They have normal ovulation cycle and normal level of FSH, LH and RPL. According to age and previous treatments, patients divided to 3 groups (30 persons in each group). The first group was treated with GnRH, antagonist and Gonadotropins followed by IVF, the second group was treated with GnRH agonist and Gonadotropins followed by IVF and the third group was treated with only Gonadotropins followed by IUI. The level of serum prolactin measured on the second day of cycle and 36hr after injection of HCG 10000 IU.

**Results:** All of patients in three groups have significant increase in serum prolactin level at 36h after HCG administration ( $p=0.01$ ).

**Conclusion:** Serum prolactin level increased in all patients, with or without receiving GNRH Agonists and Antagonists. Therefore, Gonadotropins are principal factor for increasing level of Prolactin.

**Key words:** Prolactin, Agonist GnRH, Antagonist GnRH, Gonadotropins.

#### P-51

### Hematometrocolpos after failed vacuum delivery

Ghazizadeh S<sup>1</sup>, Rahmanpour H<sup>2</sup>.

1. Faculty of Medicine, Vali-Asr Hospital, Tehran University of Medical Sciences, Tehran, Iran.

2. Faculty of Medicine, Ayatollah Moosavi Hospital, Zanjan University of Medical Sciences, Zanjan, Iran.  
Email: hale509@gmail.com

**Introduction:** Operative vaginal delivery has increased the incidence of genital lacerations. But labial and vaginal adhesion are rare complications in postpartum. Up to now, several cases of post-partum labial adhesion have been reported in the literature. However, there has been no reported case of vaginal adhesion and hematometocolpos. We report this case for importance of it in creation of endometritis and secondary infertility.

**Case:** A 25-year-old woman was referred to our center with abdominal pain, distention and urinary retention. She had an abdominal mass from the symphysis pubis to the umbilical area with a complete vaginal obstruction. Her abdominal ultrasound and MRI confirmed the presence of a huge uterus with hematometocolpos. Six months before her referral, she had undergone a cesarean section after vacuum failed delivery at term and a 3200 gr healthy baby was born. She had no complication after delivery until 2 months later, when she referred back to the delivery center with pain and irritation in vagina and inability to resume sexual activity. However, her problem was not diagnosed. The patient underwent surgical separation of the vaginal fusion under general anesthesia and 2 liters of blood was evacuated from her vagina. After the surgery she was instructed to use a vaginal dilator and vaginal estrogen cream for 4 weeks so that she may resume sexual activity very soon.

**Conclusion:** Vaginal adhesion and its complications can be due to inattention of surgeons to vaginal injury during delivery especially instrumental delivery.

**Key words:** Hematometocolpos, Vacuum delivery.

## P-52

### Effect of cervical mucus aspiration before intrauterine insemination. Abstract

Farimani M<sup>1</sup>, Nazari A<sup>2</sup>, Rabiee S<sup>3</sup>, Yavangi M<sup>3</sup>, Pormonsef F<sup>3</sup>.

1. Endometriosis and Endometrium Research Center, Fatemeh Hospital, Hamadan University, Hamadan, Iran.
2. Department of Obstetrics and Gynecology, Hamadan University, Hamadan, Iran.
3. Hamadan University, Hamadan, Iran.

Email: dr\_farimani@yahoo.com

**Introduction:** This clinical trial was done to see if cervical mucus aspiration before intrauterine insemination (IUI) has any effect in the clinical pregnancy rates.

**Materials and Methods:** The outcomes of 90 IUI cycles in 90 patients that mucus was aspirated before IUI were compared retrospectively with those of 90 IUI cycles in 90 women.

**Results:** The pregnancy rate was 18.8% (17 pregnancies for 90 cycles) in the cervical mucus aspiration group and 15.5% (14 pregnancies for 90 cycles) in the control

group (p=0.23). Mucus aspiration led to non-significantly increased pregnancy rates for women with infertility (18.8% in the aspiration group vs 15.5% in the control group; p=0.23).

**Conclusion:** Cervical mucus aspiration before IUI might improve clinical pregnancy rates but not very significantly.

**Key words:** IUI, Mucus aspiration.

## P-53

### Relationship between number of insemination and also infertility duration to rates of IUI success

Moghaddam A, Malekshah A.

Department of Infertility, Imam Khomeini Hospital, Mazandaran University of Medical Sciences, Sari, Iran.

Email: mog1339@gmail.com

**Introduction:** Intrauterine insemination (IUI) is one of the oldest treatments and often the first starting line for infertility. S: To evaluate the number of insemination and infertility duration in pregnancy success.

**Materials and Methods:** This study was included of 904 infertile couples who underwent 1294 IUI treatment cycles. The cycles of IUI were analyzed from 2006 to 2009 in our ART center. The following variables were studied: length of infertility and the cycle number in which the IUI were performed. Patients carried out a protocol of ovarian stimulation and follicular follow up.

**Results:** The number of pregnancy was 180 (19.91%), resulting in a pregnancy rate per cycle of 13.91%. The results showed that the length of infertility less than 2 years was 64.17% and 2-4 years was 11.61% and more than 4 years was 1.26%, that were statistically significant (p<0.05). The pregnancy rate of single insemination was 8.86% (p<0.0001), and double insemination and more were 40.17% and 41.1% respectively (p=0.83).

**Conclusion:** The greatest success in IUI will be achieved with infertility of 2 years or less with at least 2 times insemination.

**Key words:** Infertility duration, IUI, Pregnancy.

## 2- Embryology, Genetic, Stem cells

### P-54

#### Appropriate number of embryos transferred in assisted reproductive technology: In regard to infertile couple's attitude

Azedi Tehrani F, Behjati Ardakani Z, Momeniha M, Kamali K, Akhondi MM.

Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: akhondi@avicenna.ac.ir

**Introduction:** It has been well documented that infertile couples consider multiple pregnancy and especially twin pregnancy as a desirable outcome. Also, they may be



positively inclined towards double or more embryo transfer because it increases the possibility of successful treatment in spite of many complications of multiple pregnancies. Therefore, a trade-off exists between the risk of multiple pregnancy and prospects for pregnancy among them.

**Materials and Methods:** This study was conducted with 300 randomly selected infertile couples that were candidates for embryo transfer through using ICSI in Avicenna Research Institute (Tehran, Iran). Data gathering was done by using a questionnaire. The questions about attitudes were scored on a scale and the scores less than 50, between 50-75, and greater than 75 were considered as negative, moderate and positive attitudes respectively. Data analysis was performed by SPSS software.

**Results:** The majority of the infertile couples preferred having twins (47.9%) and 15.2%, preferred to transfer three embryos, 14.8% single embryo, 10.2% four embryos and 4.9% more than four embryos. Overall, 2.3% of them gave score of less than 50, 57.6%, between 50-75 and 4.8% greater than 75 and the scores of attitudes were negatively associated with increase in the age and decline in education level.

**Conclusion:** Among the infertile couples, there was a considerable interest for twin pregnancy without considering success rates of ICSI and risk of multiple pregnancies. Infertility insurance and reimbursement system, using freezing embryo and blastocyst transfer can help them.

**Key words:** Attitude, Infertile couple, Transferable embryo, Multiple pregnancies.

## P-55

### Protein expression of XKRY in testes of azoospermic patients

Ahmadi Rastegar D<sup>1,2</sup> Ahadi A<sup>1</sup>, Hosseini Salekdeh G<sup>2</sup>.

1. Department of Genetics, Faculty of Science, Shahrekord University, Shahrekord, Iran.
2. Department of Molecular Systems Biology, Cell Sciences Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran.

Email: rastegar\_diba@yahoo.com

**Introduction:** Study of protein expression pattern of an AZFb gene (XKRY) in the testes of azoospermic patients for the first time.

**Materials and Methods:** Testicular tissues from azoospermic men (6 tissues; 2 of them with sertoli cell only syndrome (SCOS) histology, 2 of them with maturation arrest (MA) histology and 2 normal tissues were evaluated by western-blot technique for the expression of XKRY protein.

**Results:** XKRY protein expression was detected in normal testes and among the azoospermic tissues, the 2 MA tissues expressed this protein but it was not detected in 2 SCOS tissues.

**Conclusion:** Although the property of protein coding for XKRY is on debate, but we could demonstrate the protein expression of XKRY in testis for the first time.

Besides, expression of XKRY at protein level in MA group but not in SCOS could be the evidence that it might have an important role in spermatogenesis and maturation process.

**Key words:** XKRY, Azoospermic, SCOS, MA.

## P-56

### Cryopreservation of white fish oocytes by rapid vitrification

Khanbabaee R<sup>1</sup>, Bozorgnia A<sup>2</sup>.

1. Department of Biology, Faculty of Basic Sciences, Islamic Azad University, Qaemshahr Branch, Mazandaran, Iran.
2. Faculty of Agricultural Sciences, Islamic Azad University, Qaemshahr Branch, Mazandaran, Iran.

Email: khanbabaee@gmail.com

**Introduction:** Cryopreservation of fish oocytes is very difficult because of presence of thick zona pellucida and low permeability to water and cryoprotectant and hypersensitivity to chilling. In this study, cryopreservation of *Rutilus frisii kutum* carried out by rapid vitrification method.

**Materials and Methods:** First, concentration of KCl buffer in order to optimum keeping of oocytes on it determined and then equilibrated oocytes in KCl buffer putted in VS (Vitrification solution) with ascending concentration of cryoprotectant (Dimethyl sulfoxide, Methanol, and Ethylene Glycol) and pulled in straw and plunged in liquid nitrogen. For thawing, straw removed from liquid nitrogen and plunged in water bath and expelled either on glucose 0.5 M or ES (Equilibrated Solution). Evaluation of viability of oocytes carried out by Trypan blue 15 and 30 minute after thawing.

**Results:** Evaluation of Frozen-Thawed oocytes showed that thawing of oocytes in ES had higher viability comparing oocytes that thawed in glucose solution. Also viability evaluation of oocytes putted in VS showed that this solution could protect viability of oocytes during cryopreservation.

**Conclusion:** Vitrification of *Rutilus frisii kutum* was done for the first time. In this method oocytes of white fishes could preserve for IVF in appropriate time. Some of the oocytes were swollen and semitransparent during thawing procedure that might because of lysis of vitellin plaque by intracellular ice formation or increase of osmosis pressure.

**Key words:** White Fish, Oocyte.

## P-57

### Effect of satureja khuzistanica against changes of estrogen and progesterone level in blood of mice induced by busulfan

Bamohabat Chafjiri S, Sadrkhanlou RA, Ahmadi A.

Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: sbc\_rgi@yahoo.com

**Introduction:** Reproduction is the most important factor for the maintenance of a species. The key event in this process is fertilization. Future fertility is a major

concern for cancer patients who undergo intensive chemotherapy. There has been controversy about whether treatment by some drugs or extract may have protective effects against disadvantages of chemotherapy on fertility. In this study the effect of satureja khuzistanica investigated against change of sexual hormones (estrogen, progesterone) in blood of mice induced by busulfan.

**Materials and Methods:** 48 adult female mice were randomly divided into 6 groups (n=8): control group received only vehicle orally once a day, two chemotherapy groups were gavaged and injected (ip) with Busulfan, a group were gavaged with satureja khuzistanica, and another two groups were gavaged and injected (ip) with Busulfan and were gavaged with saturejakhuzistanica. After 35 days their blood collected by cutting the neck, then the rate of estrogen and progesterone gauged in their blood.

**Results:** The rate of hormones (estrogen, progesterone) in blood of mice treated with busulfan was significantly lower than control group. In groups that received busulfan and extract of satureja there is significant increase in hormones compare with busulfan therapy group. In group that only received the extract orally they show significant increase in the rate of this two hormone compare with control group.

**Conclusion:** In blood sample test we consider that busulfan decreased level of estrogen and progesterone and extract of satureja khuzistanica may be effective against side effects of busulfan on the estrogen and progesterone of blood in mice.

**Key words:** Satureja khuzistanica, Busulfan, Estrogen, Progesterone.

## P-58

### The effects of different doses of ketamine on quality of normal ejaculated sperms

Absalan F<sup>1</sup>, Ghannadi AR<sup>2</sup>, Zabihi A<sup>2</sup>.

1. Department of Anatomical Sciences, Medical Faculty, Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Human Assisted Reproductive Center, Shiraz, Iran.

**Email:** forouzan\_absalan@yahoo.com

**Introduction:** Ketamine used as an injectible anesthetic in human and animal medicine is also a recreational drug used by young adult. The aim of this study was to evaluate the effects of ketamine on membrane integrity, DNA fragmentation and sperm parameters in human.

**Materials and Methods:** This experimental study was conducted on thirty fertile male that referred to Shiraz-Human Infertility Centre. They were randomly allotted in three equal groups. Group I, II and III that semen samples were adjusted to different concentration of ketamine (1, 3, 5 µL) for 1 hours. Sperm analysis was done for routine parameters, motility and morphology. Evaluation of DNA fragmentation and membrane integrity was done by eosin-Y staining and sperm chromatin dispersion (SCD) test respectively. The results were analyzed by performing ANOVA and Tukey's tests.

**Results:** Total sperm progressive motility (fast and slow) in all case groups were significantly lower compare with control group ( $p \leq 0.05$ ). In case group III progressive motility showed significant difference with case group II ( $p \leq 0.05$ ). The mean percentage of sperm morphology decreased slightly in all case groups compared with control group, but it was not significant. Evaluation of sperm membrane integrity, using Eosin-Y staining, showed the rate of necrospermia increased in all case groups. However, it should be noticed that ketamine can affect membrane integrity only in case group III significantly ( $p \leq 0.05$ ). In final step, SCD staining showed that in control group nucleoids with medium halo ( $63.44 \pm 1.2$ ), showed significant difference with all case groups ( $15.44 \pm 0.45$ ), ( $9.05 \pm 1.16$ ) and ( $10.55 \pm 1.14$ ) respectively. Between case groups, nucleoids with big and medium halo showed significant difference in case group II and III with case group I and nucleoids with medium halo had significant difference between case group II and III ( $p \leq 0.05$ ).

**Conclusion:** We have found that ketamine, through effects on membrane integrity and DNA fragmentation, decreased sperm viability as well as causing abnormal sperm parameters in progressive motility.

**Key words:** Ketamine, Sperm parameters, Sperm chromatin dispersion test, Membrane integrity.

## P-59

### Up-regulation of TSGA10 gene by manganese in formalin-treated mice

Tajaddini S<sup>1</sup>, Behnam B<sup>2</sup>, Bakhtiyari M<sup>3</sup>, Koruji M<sup>3</sup>.

1. Department of Basic Sciences, Payam- e- Noor University, Tehran, Iran.
2. Department of Genetics and Molecular Biology, Cellular and Molecular Research Center, School of Medicine, Iran University of Medical Sciences, Tehran, Iran.
3. Department of Anatomical Sciences, Cellular and Molecular Research Center, Iran University of Medical Sciences, Tehran, Iran.

**Email:** koruji1@iums.ac.ir

**Introduction:** Formaldehyde (FA) exerts adverse effects on sperm parameters through increasing oxidative stress and antioxidants inhibit its damages. The aim of this study was to investigate the expression of TSGA10 gene by manganese in formalin-treated mice.

**Materials and Methods:** Twenty five of mice were selected and randomly divided into four groups: (1) Control; (2) Sham; (3) "FA" exposed group; and (4) "FA & Manganese chloride" exposed group. The FA exposed groups received 10 mg/kg FA daily for 14 days and Manganese chloride was just injected 5mg/kg on second weeks, intera- peritoneally. Mice were then scarified and the testes from experimental groups were used for TSGA10 gene expression ratio in real-time PCR. In this study beta-2-microglobin was as an internal control. The results were analyzed by

performing ANOVA and Tukey's tests, with ( $p \leq 0.05$ ) considered as statistically significant.

**Results:** The findings of this study revealed that FA significantly reduced TSGA10 gene expression ratio compared with control and FA<sup>+</sup> Mn<sup>2+</sup> groups ( $p \leq 0.05$ ). However, Manganese could improve testicular structure, sperm parameters and TSGA10 gene expression in FA-treated mice testes ( $p \leq 0.05$ ).

**Conclusion:** Manganese in formalin-treated mice could up-regulate the expression of TSGA10 gene, and therefore results in elevate of sperm motility.

**Key words:** Formaldehyde, Manganese, TSGA10 gene.

## P-60

### Appropriate number of transferable embryos in assisted reproductive technology in Iran: In regard to specialist's attitude

Momeniha M, Behjati Ardakani Z, Azedi Tehrani F, Kamali K, Akhondi MM.

Reproductive Biotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.

Email: amedvala@gmail.com

**Introduction:** The incidence of infertility is 12-15% in the world but it is 20.2% in Iran which is a concerning issue in comparison with the global incidence. However, the high likelihood of implantation of transferred embryos through ART methods has led to an increase in the number of multiple pregnancies and several complications. Many variables can affect the specialists' attitudes and subsequently pregnancy is sometimes considered as the only treatment for infertility. Therefore, making decision about the number of embryos transferred is a controversial issue.

**Materials and Methods:** The population under study consisted of 101 specialists (80 gynecologists and 21 embryologists) who worked at ART clinics across the country and had attended an infertility congress in Tehran in 2008. The devised questionnaire enquired about the infertility specialists' attitude towards the appropriate number of transferable embryos. The scores of the questionnaire ranged from 0-60 which were later scaled up to 100 for ease of data analysis. Accordingly, scores below 50 were considered as "negative", between 50-75 "moderate" and greater than 75 as "positive".

**Results:** Overall, 9.9% of the specialists gained a score less than 50 (negative view), 67.3% between 50-75 (moderate view) and 22.8% greater than 75 (positive view).

**Conclusion:** The infertility specialists in Iran are relatively reluctant to transfer a high number of embryos for infertility treatments. It seems that financial assistance for infertile couples like infertility insurance and comprehensive guidelines for embryo transfer can be helpful suggestions.

**Key words:** Attitude, Specialist, Transferable embryo, Infertility.

## P-61

### Comparison of antioxidant effects of saffron extract and crocin on in vitro culture of immature mouse oocytes

Mokhber Maleki E<sup>1</sup>, Eimani H<sup>2</sup>, Bigdeli M<sup>1</sup>, Ebrahimi B<sup>3</sup>, Shahverdi A<sup>3</sup>, Golkar Narenji A<sup>3</sup>, Abedi R<sup>1</sup>.

1. Department of Biology, Faculty of Sciences, Shahid Beheshti University, Tehran, Iran.

2. Department of Anatomy, Faculty of Medicine, Baqiatallah (a.s.) University of Medical Sciences, Tehran, Iran.

3. Department of Embryology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

Email: vafa\_bio@yahoo.com

**Introduction:** In this study, considering the antioxidant properties of saffron extract, we evaluated the antioxidative effect of different concentrations of Saffron (*Crocus sativus* L.) Aqueous Extract (SAE) and its ingredient, crocin, on the improvement of In Vitro Maturation (IVM) and subsequent in vitro fertilization (IVF) of mouse oocytes.

**Materials and Methods:** Cumulus Oocyte Complexes (COCs) were collected from ovaries, Germinal Vesicle (GV) oocytes were cultured in presence of SAE and crocin. SAE was added with low dosages including 5, 10 and a higher dosage such as 40 µg/ml. Low dosages of crocin was including 50, 100 and higher dosage was 400 µg/ml. All dosages were added to maturation medium (MEM $\alpha$ ) and a group without SAE or crocin was considered as control group.

**Results:** Both SAE and its ingredient, crocin improved the rate of IVM at all doses. Also only 40 µg/ml SAE and 100 µg/ml crocin significantly increased the IVM rate compared to control group ( $p < 0.05$ ). Furthermore after IVF, formation of 2PN in SAE and crocin groups is higher comparing control group. By comparing these two cases we demonstrated that, just addition of 40 µg/ml SAE group to maturation medium increased the rate of IVM and IVF significantly among all listed groups ( $p < 0.05$ ).

**Conclusion:** Our results revealed that use of SAE during IVM can affect on IVM and IVF on dosage dependant manner. However SAE seemed to have a stronger effect than pure crocin.

**Key words:** Antioxidant, Oocytes, *Crocus sativus* L, Maturation, Fertilization.

## P-62

### Effects of Pyriproxyfen on Sex Hormones Level and Testis Histological Changes in Adult Rats

Ghavami M<sup>1</sup>, Shariati M<sup>2</sup>, Khatamsaz S<sup>2</sup>.

1. Department of Biology, Islamic Azad University, Arsanjan Branch, Fars, Iran.

2. Department of Biology, Islamic Azad University, Kazerun Branch, Kazerun, Iran.

Email: mehroush38@yahoo.com

**Introduction:** Pyriproxyfen is a dinitroaniline herbicide and used in agriculture widely. Extensive application of

Pyriproxyfen to control annual grasses and broadleaf weeds in agriculture, horticulture and home garden, leads to environmental pollution and its entrance into the food chain could have determined effects on human and other species. In this research the effects of Pyriproxyfen on reproductive parameters of the male Wistar rats including serum LH, FSH, testosterone levels, and changes in testicular tissue and body weight were investigated.

**Materials and Methods:** For this purpose 250 5g male Wistar rats (n=40) were randomly divided in 5 groups, to include control, sham (received normal saline as a solvent), and three experimental groups which received 500, 1000 and 1500 mg/kg oral Pyriproxyfen respectively. After 16 days, body and testis weight were measured and blood samples were taken from heart and used for measurement of LH, FSH and testosterone levels. To evaluate histological changes, testes were removed and weighed and, after obtaining tissue section, stained by HE.

**Results:** Serum testosterone, FSH, and LH levels showed significant decrease in experimental groups ( $p=0.05$ ). There was significant decrease in the number of germinal and somatic cells in testis in experimental groups. There was also a significant decrease in body and testis weight in experimental groups, as compared to control group.

**Conclusion:** It can be concluded that oral administration of Pyriproxyfen could decrease gonadotropins and testosterone hormone levels and also this herbicide could have hazardous effects on testis tissue.

**Key words:** Pyriproxyfen, Testosterone, Gonadotropins, Testis, Rat.

### P-63

#### The Effect of Abilizol on Reproductive Physiology in Adult Male Rats

Shariati M<sup>1</sup>, Khatamsaz S<sup>1</sup>, Hatami H<sup>1</sup>, Ghavami M<sup>2</sup>.

1. Department of Biology, Islamic Azad University, Kazerun Branch, Kazerun, Iran.
2. Department of Biology, Islamic Azad University, Arsanjan Branch, Arsanjan, Iran.

Email: mehrdadshariati@hotmail.com

**Introduction:** Abilizol is an antidepressant drug. Its side effects on reproductive functions have not been sufficiently studied. This study was designed to evaluate the effect of Abilizol on pituitary-gonad axis and spermatogenesis in adult male rats.

**Materials and Methods:** 40 adult male rats Wistar strain were randomly divided into five groups. Animals in group 1 (Control group) were injected with any treatment. Animals in group 2 (Sham group) received the three-component solvent (propylenglycol, ethanol and distilled water in a ratio of 5:2:3) in a corresponding volume, i.e., 1 ml/kg.bw. Animals in groups 3, 4, 5 received Abilizol dissolved in solvent, respectively, in doses of 5, 10, 15 mg/kg.bw/day i.p. for 28 days. At the end of the study, blood gonadotropins (LH and FSH)

levels as well as testosterone of rats in five groups were determined. The animals were sacrificed, then, spermatogram and histological changes of their testes were studied under light microscope.

**Results:** The results show that in treated Abilizol groups, particular experimental group 3, blood testosterone levels were significantly decreased as compared to the control group. Plasma concentrations of LH, FSH assayed and there were no significant differences among the Abilizol treated groups as compared with control group. Body weight in Abilizol treated rats relatively increased. However, sperm density and testes weight were not different from those of the control group.

**Conclusion:** These findings indicate that Abilizol has a relative suppressive influence on reproductive function in rats. We suggest that Abilizol directly affects production of testosterone in Leydig cells or centrally increased estradiol biosynthesis subsequently lowered testosterone levels by negative feedback.

**Key words:** Abilizol, Testosterone, Gonadotropin, Sperm.

### P-64

#### The effect of bilateral vasectomy on the serum levels of oxidative stress in rat

Faramarzi A<sup>1</sup>, Seifi B<sup>1</sup>, Sadeghipour Rodsari H<sup>1</sup>, Najafi A<sup>1</sup>, Ebrahimpoor M<sup>2</sup>, Sohani M<sup>3</sup>.

1. Department of Physiology, School of Medicine, Tehran University, Tehran, Iran.
2. Department of Epidemiology and Biostatistics, School of Public Health, Tehran University, Tehran, Iran.
3. Department of Laboratory Sciences, School of Paramedicine, Tehran University, Tehran, Iran.

Email: faramarzi\_90@yahoo.com

**Introduction:** Vasectomy is a widespread contraceptive method in men. In recent years, the number of men who perform vasectomy reversal is increasing. Vasectomy has complications, probably leading to vasectomy reversal failure. It is assumed that oxidative stress is the main cause of these complications. The aim of this study was to investigate the indices of oxidative stress serum after vasectomy.

**Materials and Methods:** In this experimental study, male rats were divided in 8 groups of seven each: bilateral vasectomy (15, 45 days, 3 and 6 months) and sham (15, 45 days, 3 and 6 months) groups. Serum PAB (Prooxidant-Antioxidant Balance) and MDA (Malondialdehyde) as a product of lipid peroxidation were measured 15, 45 days, 3 and 6 months after intervention. Comparisons between groups were made by Repeated Measure test.

**Results:** Vasectomy increased serum MDA remarkably after 45 days, 3 and 6 months ( $p<0.05$ ). After vasectomy serum PAB also increased, although not significantly.

**Conclusion:** Bilateral vasectomy increased serum levels of MDA. It is supposed that increase in MDA causes adverse effects and unsuccessful reversal vasectomy. By prescribing antioxidants, these effects can be decreased.

**Key words:** Vasectomy, Oxidative stress, Rat.

## P-65

### Comparative effects of Benzyl ester and propylene glycol administration on quantitative indices of rat seminiferous tubules

Khanehzad M<sup>1</sup>, Kameli SM<sup>2</sup>, Noori Mugehi SMH<sup>2</sup>.

1. Department of Anatomy, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Histology, Faculty of Medicine, Tehran University of Medical Science, Tehran, Iran.

Email: maryam\_khanehzad@yahoo.com

**Introduction:** According to highlighted role of men in family planning, the use of reversible methods of contraception with no adverse effects on androgen-dependent metabolic reactions is very important. Therefore, in order to achieve a conductor combination in the designing contraceptive drugs, in the study, the effect of two drugs: Propylene glycol and Benzyl ester on histological parameters of seminiferous tubules was investigated.

**Materials and Methods:** This study was conducted on the 33 rat Sprague-Dawley with weighing 250-300 g and least 100 days. Then they were divided into a group containing 13 mice and two groups containing 10 mice and were Received respectively 15 mg/kg of Propylene glycol and Benzyl ester and normal saline as subcutaneous injection daily for 60 days. Next, samples of testicular fixative were stained by the usual method (H&E) and Histological parameters of seminiferous tubules were measured through stereometry and morphometry methods.

**Results:** Reduce the Diameter and Perimeter of seminiferous tubules in the group of Benzyl Ester had significant difference with the two other groups while there was not noticeable difference among the three studied groups in terms of seminiferous tubules number.

**Conclusion:** Benzyl ester was more effective on Histological parameters of seminiferous tubules. Thus with eliminating the cardiovascular effects and Conservation the contraceptives properties, It can be used as a guide combination.

**Key words:** Benzyl ester, Morphometry, Propylene glycol, Seminiferous tubules, Stereometry.

## P-66

### The Study of the Protective Effects of Taurine on the Alteration of Spermatogenesis in Experimentally Induced Adult Diabetic Rats

Kianifard D.

Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tabriz, Tabriz, Iran.

Email: davoudkianifard@gmail.com

**Introduction:** Taurine is the most abundant free intracellular amino acid presents in many tissues of mammals. It has been established that Taurine has some preventive effects on diabetic complications when used alone or together with other drugs, but there are few reports about the effects of Taurine on the prevention of

abnormal spermatogenesis in diabetic patients, so the mechanisms of which are still unknown.

**Materials and Methods:** The numbers of 30 adult rats was divided into three groups. Diabetes was induced by intraperitoneal injection of STZ (45 mg/kg BW). Diabetic animals were administered with 500 mg/kg daily Taurine two weeks after diabetes. At the end of 10 weeks, the animals scarified, the blood samples were collected and testicular tissue was prepared for histological investigations.

**Results:** Histomorphometric analysis showed that mean diameter of seminiferous tubules in diabetic rats was reduced significantly whereas, in treated diabetic rats this index was comparable with control group. The number of spermatogonia, spermatocytes and spermatids were reduced significantly in diabetic rats in comparison to other two groups.

**Conclusion:** The results from this study revealed that, the administration of antioxidant supplements such as Taurine may have an effective role in improvement of spermatogenic indices due to reduction of oxidative stress resulting from microvascular alterations in diabetic conditions.

**Key words:** Diabetes, Rat, Spermatogenesis, Taurine.

## P-67

### Epididymal sperm analysis in experimentally induced diabetic rats treated with Taurine

Kianifard D, Hasanzadeh S.

Department of Basic Sciences, Faculty of Veterinary Medicine, University of Tabriz, Tabriz, Iran.

Email: davoudkianifard@gmail.com

**Introduction:** Taurine is the most abundant free intracellular amino acid presents in many tissues of mammals. It has been established that Taurine has some preventive effects on diabetic complications when used alone or together with other drugs, but there are few reports about the effects of Taurine on the prevention of abnormal spermatogenesis and production of spermatozoid in diabetic patients, so the mechanisms of which are still unknown.

**Materials and Methods:** The numbers of 30 adult rats was divided into three groups. Diabetes was induced by intraperitoneal injection of STZ (45 mg/kg BW). Diabetic animals were administered with 500 mg/kg daily Taurine two weeks after diabetes. At the end of 10 weeks, the animals scarified, the blood samples were collected and epididymal sperm analysis was investigated.

**Results:** The blood glucose levels were reduced in treated diabetic rats in comparison to untreated diabetic group. In both diabetic groups, the blood concentration of testosterone was reduced in comparison to control group but, this reduction was more in untreated diabetic rats. Sperm analysis showed the significant reduction of epididymal sperm population in untreated diabetic group in comparison to other groups whereas, the motility of spermatozoids was reduced in both diabetic groups but this reduction was not significant.

**Conclusion:** The results from this study revealed that, the administration of antioxidant supplements such as Taurine may have an effective role in improvement of sperm production due to reduction of oxidative stress resulting from microvascular alterations in diabetic conditions.

**Key words:** Diabetes, Rat, Spermatozoid, Taurine.

#### P-68

### The effects of calligonum extract on sperm parameters and expression of catsper 2 gene in aging male mice.

Askarijahromi M<sup>1</sup>, Movahedin M<sup>2</sup>, Amanloo M<sup>3</sup>, Mowla S<sup>4</sup>, Batooli H<sup>4</sup>, Mazaheri Z<sup>1</sup>.

1. Department of Anatomy, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
2. Department of Medicinal Chemistry, Faculty of Pharmacy and Drug Design and Development Research Center, Tehran University of Medical Sciences, Tehran, Iran.
3. Department of Genetic, Faculty of Basic Sciences, Tarbiat Modares University, Tehran, Iran.
4. Isfahan Research Center of Agriculture and Natural Resources, Botanical Garden, Kashan, Iran.

**Email:** mahsaasgari12@yahoo.com

**Introduction:** Catsper family code protein cation channels in plasma membrane of sperm. Catsper proteins are responsible for entering  $Ca^{2+}$  to the cell and play an important role in sperm motility and male fertility. Antioxidants are vital for sperm motility too. Calligonum extract possess some of the important antioxidant like catechin and quercetin. Here we investigate the effects of calligonum extract on expressing of catsper gene.

**Materials and Methods:** Fifteen 11-13 months aging male and fifteen 2-3 months young adult male mice were used and divided into 3 groups: control, sham and experiment. The experiment groups were injected intra peritoneally with calligonum (30mg/kg) weekly for up to 5 weeks. The sham groups were injected intraperitoneally (DMSO) for 5 weeks. The control groups didn't get any injection in this period. After this period animals sacrificed by cervical dislocation and sperm parameters were analyzed also one of the testis from each mice was used for Real time PCR. We used GAPDH gene as housekeeping. Our data analyzed by SPSS using anova test.

**Results:** Our result showed that there was a statistical significance between expression of catsper 2 in aging experiment group comparison with aging control group. Our result according to sperm parameters analysis showed that after calligonum treating the sperm parameters were improved in aging male mice. The result also demonstrated decreasing of apoptosis in aging male mice.

**Conclusion:** The antioxidant in the calligonum extract (30 mg/kg) could improve the sperm parameters in aging male mice and change the expression of gene responsible for  $Ca$  channels and decrease apoptosis in cells.

**Key words:** Spermatozoa, Catsper gene, Calligonum extract.

#### P-69

### In vitro culture of whole mouse ovary

Abdi S<sup>1</sup>, Salehnia M<sup>1</sup>, Hossein Khani S<sup>2</sup>.

1. Department of Anatomy, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
2. Department of Biochemistry, Faculty of Biological Sciences, Tarbiat Modares University, Tehran, Iran.

**Email:** shabnam.abdi62@yahoo.com

**Introduction:** The aim of this study was to investigate a culture system for primordial follicles growth in neonatal mice ovary.

**Materials and Methods:** Neonatal mouse ovaries were cultured in  $\alpha$ -MEM medium supplemented with 5% fetal bovine serum, 100 mIU/ml recombinant follicle stimulating hormone, 1% ITS (insulin, transferrin and selenium), 100 IU/ml penicillin and 50  $\mu$ g/ml streptomycin for 7 days. The size of ovarian tissue was determined as mean area during culturing. The survival rates of cultured preantral follicles were assessed using trypan blue staining after their mechanical isolation. Histological evaluation of whole ovary was done by hematoxylin and eosin staining. 17- $\beta$  estradiol, progesterone and dehydroepiandrosterone concentrations in the medium were measured during culture.

**Results:** The mean area of ovary after culture was increased than the beginning of culturing (1.47 vs. 0.212  $mm^2$ ). The survival rates of isolated follicles in ovary after culture were 99.2%. The percentage of primordial follicles was declined after 7 days culturing (91.8 $\pm$ 0.2% vs. 65.08 $\pm$ 1.1%), whereas the rate of preantral follicle was increased (4.6 $\pm$ 0.4% vs. 29.2 $\pm$ 0.5%). The levels of estradiol, progesterone and dehydroepiandrosterone after culture were increased significantly ( $p < 0.001$ ).

**Conclusion:** These results show that the growth and development of primordial follicles was increased during the in vitro culture of neonatal mouse ovaries and it could be a suitable model to study the folliculogenesis.

**Key words:** Ovary, In vitro culture, Primordial follicles.

#### P-70

### Assessment of percoll gradient solution on enrichment and culture of perinatal goat spermatogonial stem cells

Gifani M<sup>1</sup>, Heidari B<sup>2</sup>, Shirazi A<sup>2,3</sup>, Behzadi B<sup>2</sup>, Akhondi MM<sup>2</sup>, Zarnani A<sup>4</sup>, Baradaran B<sup>1</sup>.

1. Immunology Research Center (IRC), Tabriz University of Medical Sciences, Tabriz, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Research Institute of Animal Embryo Technology, Shahrekord University, Shahrekord, Iran.
4. Nanobiotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.

**Email:** b.heidari@avicenna.ac.ir

**Introduction:** Spermatogonial Stem Cells are the foundation of spermatogenesis and have the potential to self-renew and at the same time generate the cascade of

differentiating germ cells. The objective of this study was to assess the effect of percoll gradient on enrichment of goat type A spermatogonia in dissociated cellular suspension of goat testes, and to observe the separated fractions from the gradients (32, 30, 28 and 20%) for cell number, viability and purification rate of goat spermatogonia in culture.

**Materials and Methods:** After removing the tunica albuginea of one month old goat castrated testes and the macroscopic evaluation of the testes for any pathologic signs, the seminiferous epithelial cells were dispersed by using two-step enzymatic digestion with collagenase IV and trypsin/EDTA respectively. For enrichment of goat type A spermatogonia the cellular suspension was transferred on the top of the column of percoll with four gradients (20%, 28%, 30%, and 32%) and then centrifuged at 700 xg for 20min. The separated cellular populations on the top of the each gradient, after trypan blue staining, were immunostained for PGP9.5 molecular marker. For each percoll gradient the percentage of PGP9.5 positive cells was determined after cytospin.

**Results:** The mean percentages of PGP9.5 positive cells in 20% percoll gradient (67.1±3.8) was significantly ( $p \leq 0.001$ ) lower than higher gradients (87.7±2.2, 91.2±1.4, and 91.1±1 for 28%, 30%, and 32%, respectively). More than 98% of separated cells were viable.

**Conclusion:** The application of 28-32% percoll gradients is safe and efficient in enrichment of goat type A spermatogonia.

**Key words:** Percoll gradient, Goat, Type A spermatogonia, PGP 9.5.

## P-71

### Effect of geldanamycin, a HSP90 inhibitor, on human sperm characteristics

Forootan Jahromy F<sup>1</sup>, Keshtgar S<sup>1</sup>, Ghani E<sup>1</sup>, Talaei Khozani T<sup>2</sup>, Zabihi A<sup>3</sup>.

1. Department of Physiology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Department of Anatomy, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Shiraz Infertility Center, Shiraz, Iran.

**Email:** fa.forootan@yahoo.com

**Introduction:** Heat shock protein 90 (HSP90) regulates a wide range of biological processes of the cells. Although the function of HSP90 on sperm have not been clearly identified, but it has been found that it plays a role in some physiologic sperm functions including capacitation and also help to diagnose zonapellucida. In some studies, an inhibitor of HSP90, geldanamycin (GA), used to determine the function of this protein.

**Materials and Methods:** Semen samples obtained from men (20-40 years old) who were referred to the Shiraz Infertility Center for couple's infertility were analyzed. Eleven samples selected for this experiment, which were completely normal according to the WHO criteria. The samples were washed and sperm motility and

viability were assessed. Sperms incubated in 1, 5, and 10  $\mu$ M GA for 2 hours at 37°C under 5% CO<sub>2</sub>. Sperm motility tested every 30 minutes and compared to control group. The percent of viable and acrosome reacted cells determined at the end of experiment.

**Results:** The results showed that GA reduced sperm motility in a dose and time dependent manner. The percent of live cells decreased and acrosome reacted sperms increased in the presence of GA.

**Conclusion:** GA has adverse effects on sperm function. This indicated that HSP 90 may play a critical role in sperm motility, survival and acrosome reaction.

**Key words:** Heat shock protein 90, Geldanamycin, Human sperm.

## P-72

### Endometrial and serum estrogen changes in PCOS female rats that treated with Metformin.

Sadrefozalayi S, Farokhi F, Khaneshi F.

Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.

**Email:** sfozala@gmail.com

**Introduction:** Polycystic Ovary Syndrome (PCOS) affects approximately 5-10% women in their reproductive age. High incidence of endometrial hyperplasia have been reported in PCOS women. Metformin is one of medicines for treatment of PCOS. The aim of this study was to examine endometrial thickness and serum estrogen in PCOS female rats treated with Metformin.

**Materials and Methods:** Twenty four female rats were randomly divided into three groups (n=8). 1) Control: They received normal diet. 2) PCOS: They were induced PCO with intramuscularly injection with 4mg/rat Estradiol-Valerate 3) P+M: PCOS treated with 100 mg/kg/w Metformin. At the end of treatment period, the animals were killed and their uterine samples were harvested for histological studies. Amount of Estrogen assay were determined in serum.

**Results:** The results showed that endometrial thickness reduced in PCOS group significantly but increased in the PCOS group that treated with Metformin. Also, serum estrogen increased in PCOS group and decreased in PCOS group treated with Metformin.

**Conclusion:** Metformin can decrease serum estrogen and improve the endometrial thickness in PCOS rats.

**Key words:** PCOS, Metformin, Estrogen, Endometrial, Female.

## P-73

### Effect of hydro- alcoholic extract of Descurainia sophia seed on percentage of sperm motility in streptozotocin-induced diabetic rats

Nejati V, Khaneshi F.

Department of Biology, Faculty of Science, Urmia University, Urmia, Iran.

Email: f.khaneshi@yahoo.com

**Introduction:** Streptozotocin (STZ)-induced diabetes in rats provides a relevant model to study reproductive dysfunction under diabetic conditions. The aim of this study was examination the effects of *Descurainia sophia* seed on sperm percentage of motility.

**Materials and Methods:** In this study twenty-four male rats were divided into 3 groups: diabetic groups became diabetic with intraperitoneal injection of STZ, (65 mg/kg bw/i.p) and then control and diabetic control groups received saline normal and other diabetic group received *D. sophia* with (100 mg/kg bw) for 42 days. After treatment, caudal epididymis was cut in a medium. Released spermatozoa were used to analyze sperm percentage of motility. Data was analyzed using ANOVA.

**Results:** Results showed that diabetes caused a significant decrease compared to the control and *D. sophia*.

**Conclusion:** This study showed that consumption of *D. sophia* has therapeutic effect of testis damages in diabetic rats.

**Key words:** Diabetes, *Descurainia Sophia*, Streptozotocin, Sperm.

#### P-74

### CHDH gene polymorphism (rs12676) in idiopathic male infertility

Ebrahimi M, Vaziri H.

Department of Biology, Faculty of Sciences, University of Guilan, Rasht, Iran.

Email: biologist.88@gmail.com

**Introduction:** Approximately 15% of couples are affected by infertility and up to half of these cases arise from male factor infertility. Unidentified genetic aberrations such as single nucleotide polymorphisms (SNPs) may be the underlying cause of many cases of idiopathic male infertility. There is some evidence that rs12676 (G233T), a non-synonymous SNP located in the choline dehydrogenase gene (*CHDH*) coding region, is associated with decreased CHDH protein, altered sperm motility patterns and dysmorphic mitochondrial structure in sperm. The aim of the present study was to investigate whether the genetic polymorphism of *CHDH* gene associated with idiopathic male infertility.

**Materials and Methods:** The study included 50 patients with idiopathic male infertility and 50 fertile men in Guilan population. Genomic DNA was extracted from peripheral blood leukocytes. Genotypes were determined by polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP). Statistical analysis was performed using the MedCalc program (v12.1.4.0).

**Results:** The prevalence of genotype frequencies of rs12676; GG, GT, TT were 28%, 50% and 22% respectively, for patients, while in healthy subjects were 52%, 36% and 12% respectively. In other words there was a significant difference in the genotype distribution of this SNP in patients in comparison with controls ( $p < 0.05$ ).

**Conclusion:** rs12676 may be associated with an increased risk of idiopathic male infertility. Therefore it is a tag SNP that marks a functional haplotype of the *CHDH* gene.

**Key words:** Idiopathic male infertility, Choline dehydrogenase, SNP.

#### P-75

### Effect of hydro- alcoholic extract of *Plantago major* on sperm parameter and LH levels in citric acid induced asthma rats

Farokhi F, Khaneshi F.

Department of Biology, Faculty of Sciences, Urmia University, Urmia, Iran.

Email: f.khaneshi@yahoo.com

**Introduction:** Use of medicinal plants in treating asthma is clinically very important. We decided to assess the effect of extract of *P. major* on LH levels and sperm parameter in asthma rats.

**Materials and Methods:** Thirty-two adult male rats were randomly divided into 3 groups. Control group were treated with saline, Groups 2 and 3 after encountering with citric acid, respectively received normal saline and 100 mg/kg/bw extract of *P. major*, by intraperitoneally. At the end of treatment, blood was collected and the level of LH measured in their serum. All the rats were sacrificed and testes were removed and sperms were collected of epididymis cauda, then their parameters were assessed. Data were analyzed using ANOVA and SPSS.

**Results:** Results showed that asthma caused a significant decrease in sperm count and LH was compared to group treated with *P. major*.

**Conclusion:** The present study revealed that medicinal plants such as *P. major* were a good source for control asthma and has protective effects on sperm count.

**Key words:** Asthma, Sperms, *Plantago major*, Rat, Extract.

#### P-76

### Evaluation of Sesame on the morphology of testes and LH levels in streptozotocine (STZ) induced diabetic rats

Khaneshi F<sup>1</sup>, Nasrolahi O<sup>2</sup>, Sadrefozalayi S<sup>2</sup>, Nejati V<sup>2</sup>.

1. Department of Biology, Urmia University, Urmia, Iran.

2. Department of Biology, Faculty of Science, Urmia University, Urmia, Iran.

Email: f.khaneshi@yahoo.com

**Introduction:** This study was conducted to evaluate the effects of diabetes on histological testicular, and reproductive hormone level.

**Materials and Methods:** Thirty rats were divided into three control group, diabetic group and diabetic group+Sesame. The experimental group received Sesame extract (100 mg/kg bw). Diabetes was induced in two group by streptozotocine (STZ) 65 mg/kg bw /i.p. the experimental period for each rat were 6 weeks. At the end of treatment, blood was collected and the



level of LH measured in their serum. The rats were sacrificed and testes were removed and fixed and after tissue processing stained with H and E technique, histological studies were performed with an optical microscope.

**Results:** The results showed in diabetic group a significant decrease in LH and the repopulation index (RI), compared to the group treated with sesame.

**Conclusion:** Diabetic has a deleterious effect on histological testicular and affect reproductive hormone.

**Key words:** *Sesame, Stereozotocine, Diabetic, Rat, Testes.*

#### P-77

### Isolation, expansion and purification of mouse spermatogonial stem cells in homologous sertoli cells co-culture system

Javanmardy S<sup>1</sup>, Asadi M<sup>1</sup>, Movahedin M<sup>2</sup>.

1. *Department of Anatomical Sciences, Faculty of Medical Sciences, Baqiyatallah University of Medical Sciences, Tehran, Iran.*
2. *Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.*

**Email:** setareh\_javanmardy@yahoo.com

**Introduction:** Spermatogonial stem cell (SSC) is a self-renewing population of male adult stem cell. SSCs can be differentiated into specific cell types using different approaches and be a potential source for pluripotent cells for stem cell-based therapy. As other stem cells, SSCs are found in very low numbers. We used a simple protocol for isolation, expansion and purification of neonatal mouse spermatogonial stem cell.

**Materials and Methods:** Cell suspension includes spermatogonial stem cells and sertoli cells were isolated from neonatal 2 day-old mice by enzymatic digestion. These cells were cultured together in DMEM/F12 containing 10% serum for 2 week. Characteristics of sertoli and spermatogoni cell were confirmed by examining for the presence of vimentin and PLZF proteins respectively. To assess the rate of spermatogonia stem cells expansion, the area and number of colonies formed were determined during the 2 week of culture. The presence of spermatogonial stem cell specific genes (Stra8, Piwill2, DAZL, Mvh) were carried out at the end of 2<sup>nd</sup> week.

**Results:** These results indicated that isolated sertoli cells and SSCs were immunopositive for Specific markers. During the culture period, at four time points, significant difference was seen in the number and area of SSC colonies ( $p < 0.05$ ). In addition, SSC-specific gene expression after two weeks of culture, demonstrated that these cells are undifferentiated.

**Conclusion:** Our study showed that co-culture of spermatogonial stem cells and sertoli cells from same source provides a convenient and efficient environment which without adding external growth factors and chemical manipulations can be used for proliferation of spermatogonia stem cells.

**Key words:** *Spermatogonial Stem Cell, Co-culture, Colonization.*

#### P-78

### Protective effect of vitamin E in experimental varicocele rats

Khosravanian H<sup>1</sup>, Farokhi F<sup>1</sup>, Razi M<sup>2</sup>, Khosravanian N<sup>1</sup>.

1. *Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.*
2. *Department of Comprative Histology and Embryology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.*

**Email:** hagarkh397@yahoo.com

**Introduction:** Varicocele are theorized to result in competent valves in the spermatic veins resulting in increased pressure transmitted to the testicular vein and causing retrograde blood flow down the internal spermatic Veins and cremastic veins .varicocele is associated with increased production of spermatozoa reactive oxygen species .In this study we investigated the role of vitamin E as antioxidant in rejuvenating the testis Following its damage in experimental varicocele.

**Materials and Methods:** Eighteen male rats weighing 220-250 g were divided in to three group .while the first group had sham operations, experimental varicocele were established by left renal vein ligation was Performed at direct medial to the junction of adrenal and spermatic vein .In the later two groups ,the third group addition to varicocele induction had gavage 3 time a week administration of 150 mg/kg body weight Vitamin E along sixty days. Testicular weights, caudal epididymis sperm characteristics, testicular histology were evaluated.

**Results:** Our findings show that testis of rats that were given vitamin E post experimental varicocele had better histological profiles than those of the untreated animals.

**Conclusion:** In conclusion, our study showed a protective effect of vitamin E on testicular histology and physiology. Although treatment of infertility due to varicocele a significant number of men remain infertile after varicolectomy. The possibility of vitamin E supplementation in this subset of infertile men could be considered.

**Key words:** *Vitamin E, Varicocele, Testis.*

#### P-79

### Effect of testosterone on sperm quality in experimental varicocele rats

Khosravanian N<sup>1</sup>, Farokhi F<sup>1</sup>, Razi M<sup>2</sup>, Khosravanian H<sup>1</sup>.

1. *Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.*
2. *Department of Comparative Histology and Embryology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.*

**Email:** nargeskh719@yahoo.com

**Introduction:** The known and common etiology of varicocele is a retrograde blood flow down from the internal spermatic and the creamasteric veins in to the

pampiliform plexus which itself, is the result of missing and/or incomplete valves. It is thought that the retrograde blood flow leads to varying degrees of increased hydrostatic pressure and in turn; this impairment increases the temperature within the testis. In varicocele patients, the germinal cell apoptosis is predictable which in turn leads to testicular atrophy and decreased levels of serum testosterone. In this study we investigated the role of exogenous testosterone in rejuvenating the testis following its damage in experimental varicocele.

**Materials and Methods:** Eighteen male rats weighing 220-250 g were divided into three groups. While the first group had sham operation, experimental varicocele rats were established by left renal vein ligation was in the later two groups. The third group addition to varicocele induction had daily intraperitoneal injection 4 µg/kg body weight testosterone for sixty days.

**Results:** Our findings show that motility, viability and number of sperms significantly increased in varicocele rats treated with testosterone in comparison with varicocele rats.

**Conclusion:** Testosterone has many physiological actions in: muscular, reproductive and sexual organs. Injection of testosterone could repair destructive effects of varicocele rats.

**Key words:** Varicocele, Testosterone, Testis.

#### P-80

##### **Histopathological changes of uterus in diabetic female rats treated with hydroalcoholic extract of *Prangos ferulacea* (L.) Lindle**

**Farokhi F<sup>1</sup>, Kaffash Farkha N<sup>2</sup>, Heydarian F<sup>2</sup>.**

*Department of Biology, Faculty of Science, Urmia University, Urmia, Iran.*

**Email:** f.farokhi@urmia.ac.ir

**Introduction:** *Prangos ferulacea* have a great antioxidant potential that is more than α-tocopherol (vitamin E). In the present study, effect of hydroalcoholic extracts *Prangos ferulacea* was investigated on uterus in the alloxan monohydrate-induced diabetic rats.

**Materials and Methods:** In this study, 32 female Wistar rats were randomly divided into 4 groups including: Control non diabetic rats received normal saline, D: Diabetic rats administered with distilled water, D+P1: Diabetic rats receiving roots' hydro-alcoholic extract of P.f at 100 mg/kg bw by intra-gastric tube daily for a month, D+P2: Diabetic rats receiving leaves and stems' hydro-alcoholic extract of P.f at 100 mg/kg bw with the same route. Diabetes was induced in rats by alloxan monohydrate at dose of 120 mg/kg bw injected intraperitoneally. At the end of experiment, the rats were anesthetized and their uterus were taken out

and transferred to 10% formalin. After staining with H&E, PAS, slides were studied with binocular-micrometer and netted lens in LM.

**Results:** In diabetic rats (D) the rate of FSH and LH hormones were significantly decreased ( $p < 0.05$ ) in comparison with the other groups. Moreover, in this group, number of endometrial gland and thickness of endometrial and uterus epithelium were significantly decreased ( $p < 0.05$ ). Diabetic rats treated by root extract of P.f compared with diabetic group, all of previous signs were significantly improved.

**Conclusion:** Root hydroalcoholic extract of P.f found prevents the histopathological changes of reproductive system associated with alloxan diabetes in rats.

**Key words:** *Prangos ferulacea* reproductive system, Diabetes mellitus, Alloxan.

#### P-81

##### **Endometrial effect of progesterone and Sildenafil in superovulated mice: an ultrastructural study**

**Roshangar L<sup>1</sup>, Rashide B<sup>2</sup>, Soleimani Rad J<sup>3</sup>, Soleimani Rad S<sup>4</sup>, Nikzad B<sup>5</sup>.**

1. *Neuroscience Research Center, Faculty of Medicine, Tabriz University, Tabriz, Iran.*

2. *Department of Anatomical Sciences, Faculty of Medicine, Isfahan University, Isfahan, Iran.*

3. *Department of Anatomical Sciences, Faculty of Medicine, Tabriz University, Tabriz, Iran.*

4. *Department of Obstetrics and Gynecology, Faculty of Medicine, Isfahan University, Isfahan, Iran.*

5. *Department of Neuroscience, Tabriz University, Tabriz, Iran. Department of Anatomical Sciences, Faculty of Medicine, Tabriz University, Tabriz, Iran.*

**Email:** lroshangar@yahoo.com

**Introduction:** Implantation is proceeded by a process referred as adhesion. Adhesion requires maturation of endometrium and blastocyst to confer adherence ability to them. Considering vasodilatory effect of Sildenafil, in genital organs, it appears that Sildenafil may have similar effect as progesterone. The aim of the present study is to compare ultrastructural characteristics of mice uterine endometrium in natural cycle.

**Materials and Methods:** For this purpose, 90 mice were used. The female mice were divided into 4 groups as: controls, gonadotropin, gonadotropin+ Sildenafil and gonadotropin+ progesterone. In experimental groups the mice received 7.5IUHMG and 48 hours later 7.5IUHCG. In the gonadotropin+ progesterone and gonadotropin+ Sildenafil groups, the mice respectively received 1mg progesterone and 3mg sildenafil citrate at 24, 48 and 72 hours after HMG injection. 96 hours after HMG injection, the uterine specimens were fixed in formalin for light microscopic study. For electron microscopic studies the specimens were fixed in glutaraldehyde. Statistical analysis was performed using ANOVA.

**Results:** Microscopy revealed that in control group the cells had numerous apical microvilli and some granules

were found in basal portion. In gonadotropin+ progesterone group, the granules were found in basal and apical portions and their microvilli appeared shorter than the control and gonadotropin groups and the apical membrane also contained some pinopodes projecting toward the lumen. In gonadotropin+Sildenafil group the granules were found in both apical and basal portions and the microvilli appeared shorter than the control and gonadotropin groups. In this group, pinopodes appeared slightly numerous than the other groups.

**Conclusion:** It is concluded that superovulatory drugs in mice stimulate endometrial maturation but injection of Sildenafil and progesterone has a negligible effects on it.

**Key words:** Implantation, Progesterone, Viagra, Mice, Uterine.

### P-82

#### Effect of natural honey on testicular morphology in streptozotocin (STZ) induced diabetic rats

Nasrolahi O, Khaneshi F, Rahmani F.

Department of Biology Faculty of Sciences, Urmia University, Urmia, Iran.

Email: nasrolahio@yahoo.com

**Introduction:** Reproductive dysfunction is a consequence of diabetes. Honey is a natural product and it possesses some biological properties such as antimicrobial, anti-inflammatory and antioxidant properties. In the present study, was investigated the effect of natural honey on testis histology in streptozotocin-induced diabetic rats.

**Materials and Methods:** Twenty-four Wistar male rats were randomly divided into four groups including C: non diabetic rats received distilled water (0.05ml/day), CH: non diabetic rats received honey (1g/kg b.w), CD: diabetic rats administered with distilled water (0.05ml/day) and DH: honey treated diabetic rats. Diabetes was induced by a single dose of Streptozotocin (65 mg/kg; i.p.). The animals were treated by oral gavage once daily for four weeks. At the end of the treatment period, the animals anesthetized by diethyl ether and their testis were immediately removed. Their weights were measured on a sensitive digital balance with volume measured by water displacement using a 10 ml measuring cylinder. Later, the sizes (length and width) were recorded by use of a sliding gauge (d=0.1).

**Results:** In this study, we observed a significant reduction ( $p<0.001$ ) in testicular weight in the CD group than C, CH and DH groups. Also were showed a significant reduction ( $p<0.05$ ) in testicular diameter (mm), length (mm) and volume ( $\text{cm}_3$ ) in DC group than other groups.

**Conclusion:** These data demonstrate natural honey significantly improve complication of diabetes in testis of rat. This study suggests that natural honey might have a protective effect against oxidative stress -induced impaired testicular functions in diabetic rats.

**Key words:** Diabetes, Testis, Natural Honey.

### P-83

#### Evaluation of effects of Chlorpromazine - induced hyperprolactinaemia on uterus and reproductive function in female rats

Zamani Z<sup>1</sup>, Zare S<sup>1</sup>, Sadrkhanlou RA<sup>2</sup>, Ahmadi A<sup>2</sup>, Movahed E<sup>1</sup>.

1. Department of Biology, Faculty of Sciences, Urmia University, Urmia, Iran.

2. Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: zahrazamani1363@yahoo.com

**Introduction:** Oxidative stress in the body result from accumulation of oxidants such as reactive oxygen species and or reduction of antioxidants. Oxidative stress leads to several pathologic effects and during pregnancy can impair embryonic development. Since glutathione is a major intracellular antioxidant the aim of the present study is to investigate the response of pregnant and non-pregnant mice to glutathione reduction produced by buthionine sulfoximine injection.

**Materials and Methods:** In the present study, Balb/C mice were used as experimental model. The mice were divided into 4 groups of 10, including: 2 groups of pregnant consisting of a control and an experimental subgroups and 2 groups of non-pregnant consisting of a control and an experimental subgroups. On the 10th day of pregnancy both experimental groups (pregnant and nonpregnant) received 2 mMol/kg buthionine sulfoximine. Twelve hours after buthionine sulfoximine injection, the mice in all control and experimental groups were sacrificed and blood samples are collected from their heart. The glutathione level in the sera were determined and compared with each other.

**Results:** Comparison of glutathione level in the sera from experimental groups with the relevant control groups showed that glutathione was reduced significantly ( $p<0.05$ ) in experimental groups. However, the level of glutathione in pregnant control was slightly higher than in non pregnant group and its reduction was less extensive in pregnant group compared to non-pregnant group (51% vs. 56%).

**Conclusion:** The results indicated that buthionine sulfoximine injection could reduce glutathione level both in the pregnant and non-pregnant mice. However, the effect of buthionine sulfoximine in the pregnant group was less extensive than that of non-pregnant group.

**Key words:** Pregnancy, Oxidative stress, Buthionine sulfoximine, Glutathione.

### P-84

#### Equisetum arvense extract protects structure testicular in diabetic mice

Azizi B<sup>1</sup>, Nejati V<sup>1</sup>, Najafi G<sup>2</sup>.

1. Department of Biology, Faculty of Medical Sciences, Urmia University, Urmia, Iran.

2. Department of Anatomy and Embryology, Faculty of Veterinary Medicine Urmia University, Urmia, Iran.  
Email: ba\_bahar2008@yahoo.com

**Introduction:** Diabetes is a metabolic disorder with an impairment on insulin secretion and/or with tissue inability to respond to insulin. This disease in long period can impair the male fertility potential. *Equisetum arvense* is a medicinal plant. The purpose of this study was to evaluate the protective effects of *Equisetum arvense* methanol extract (EE) on testicular tissue of diabetic mice.

**Materials and Methods:** 24 mature male mice were divided equally into four groups. These groups were control-sham, diabetic (induced by STZ, 50 mg/kg), diabetic+EE 250 mg/kg, diabetic+EE 500mg/kg. After 45 days, all animals were sacrificed and underwent histopathological analyses.

**Results:** The results showed that, the percentage of seminiferous tubules with positive differentiation (TDI), repopulation (RI), spermiogenesis (SPI) indices significantly ( $p < 0.05$ ) increased in diabetic group in comparison to EE-treated animals. Comparing seminiferous tubules diameter between test groups revealed that, the tubules diameter remarkably ( $p < 0.05$ ) reduced in diabetic groups, while tubular diameter in D+EE administered animals was remarkably higher than diabetic group and manifested similar to control-sham tubules diameter.

**Conclusion:** The EE prevents diabetes-induced detrimental effects by antioxidative feature and its ability in reducing blood glucose.

**Key words:** Diabetes, *Equisetum arvense* methanol extract, Testicles.

## P-85

### Effects of chronic CPZ treatment on reproductive endocrine hormones in female rats

Zamani Z<sup>1</sup>, Zare S<sup>1</sup>, Sadrkhanlou RA<sup>2</sup>, Ahmadi A<sup>2</sup>, Movahed E<sup>1</sup>.

1. Department of Biology, Faculty of Science, Urmia University, Urmia, Iran.

2. Laboratory of Embryology, Department of Basic Science, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: zahrazamani1363@yahoo.com

**Introduction:** Phenothiazines represent a group of antipsychotic drugs which are widely prescribed primarily for the treatment of psychotic illnesses such as schizophrenia and manic depression. Elevations in serum prolactin levels (hyperprolactinaemia) are a common side effect of these drug treatments.

In this study, the effect of treatment of CPZ for 28 days on reproductive hormones of female rats was investigated.

**Materials and Methods:** In this study 32 adult female wistar rats (160±5g) were randomly divided into four groups (n=8 each) with one group serving as control sham (5 mL/kg of 0.5% methylcellulose solution.), in

the drug treated groups female rats were orally administered CPZ (3, 10, 30 mg/kg) once daily for 28 days. The test compound was suspended in 0.5% methylcellulose solution. On day 29<sup>st</sup> all rats were sacrificed by CO<sub>2</sub> inhalation and blood samples were collected for biochemical analyses.

**Results:** Administration of the CPZ produced significant increase ( $p < 0.05$ ) in the serum prolactin, estradiol, LH, FSH concentration whereas those of progesterone were significantly reduced.

**Conclusion:** The alterations in the female rat reproductive hormones by the CPZ treatment are indications of adverse effect on fertility and conception in female rats. Thus, the CPZ treatment may be explored as a female contraceptive.

**Key words:** *Chlropromazine*, Prolactin, Hyperprolactinaemia, Reproductive hormones, Rat.

## P-86

### Testicular biohistochemical alterations following hyperprolactinemia in adult mice

Ahmadi A, Ahmadi A, Mostafavi M, Kalantari A.

Laboratory of Histology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: aram.ahmadi82@gmail.com

**Introduction:** Cytoplasmic biochemical alterations in germinal epithelium (GE) and the role of inflammation on sperm production are obvious. Cytoplasmic carbohydrates are the source energy of the most of biochemical activities. Aim of this study was to illustrate the effect of hyperprolactinemia on cytoplasmic carbohydrate supplement, unsaturated fatty acid and tissue alkaline-phosphatase as an inflammation biomarker in seminiferous tubules (ST).

**Materials and Methods:** 18 adult mice were categorized into 3 groups. For hyperprolactinemia induction treatment group was administered sulphiride 40mg/kg/day IP. Control-sham received placebo. 45 days later testes were dissected and cut. For analysing testicular GE carbohydrate ratio PAS staining was used. Sudan-Black-B staining method was performed to evaluate the ratio of lipid foci supplement and the ratio of Alkaline-phosphatase enzyme was demonstrated by ALP staining method.

**Results:** In test group most of cells in different GE cellular layers showed Sudan-Black-B stained cytoplasm. In 2 other groups lipid agglomeration was only detected in spermiogenesis cell lineage. In hyperprolactinemic mice number of spermatogenesis cells with ALP positive reacted sites and leydig cells with sharp reaction increased in comparison with sham and control groups which spermatogonial and few number of GE cells showed ALP positive reaction. Hyperprolactinemic-mice showed higher number of sertoli cells with faint cytoplasmic carbohydrate ratio and spermatogenesis cell series exhibited a weak reaction to PAS staining in comparison with control and sham animals.

**Conclusion:** Following hyperprolactinemia-induction, cells of STs with their energy source from glucose to lipids leads to lose of biological activities and cellular degeneration that consequently causes gonadal malfunction and fertility problems.

**Key words:** Hyperprolactinemia, PAS staining, ALP, Lipid, Mice.

#### P-87

### Phenylhydrazine-induced anemia-related hypoxia effect on mice sperm quality: Implication for protective effect of Crocin

Kalantari Hesari A<sup>1</sup>, Shahrooze R<sup>1</sup>, Ahmadi A<sup>1</sup>, Malekinejad H<sup>2</sup>, Mostafavi M<sup>1</sup>, Ahmadi A<sup>1</sup>.

1. Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.
2. Laboratory of Toxicology and Pharmacology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** ali.kalantari.histology@gmail.com

**Introduction:** There are reports indicating that among the others, hypoxia is one of the sperm quality threatening factors, which may occur intentionally or accidentally. Hypoxia could be created secondarily after some pathological conditions such as anemia. In this study we aimed to investigate the crocin protective effect on sperm quality in the animals that were exposed against Phenylhydrazine to induce anemia-dependent hypoxia.

**Materials and Methods:** 49 male and clinically healthy mice (20-25 g and 6-8 weeks old) were divided to 7 groups including control and test groups. The anemia-dependent hypoxia was induced by using Phenylhydrazine. The control (C) animals were received only saline normal during the experiment and the test groups were treated as follow: Phenylhydrazine (PHN, 2mg/100 g, 4mg/100g and 6 mg/100g), PHN (2 mg/100 g) plus crocin (CRN, 200 mg/kg), PHN (4 mg/100 g) plus CRN, 200 mg/kg, and PHN (6 mg/100 g) plus CRN, 200 mg/kg. The groups received the treatments via intraperitoneal injection for 35 days.

**Results:** The results of this study showed that anemia-related hypoxia resulted in a drastic reduction in sperm total count, motility, percentage of viability, percentage of sperm with intact DNA and increased the number of immature sperms, while those groups which were treated with CRN showed a remarkable improvement in sperm quality parameters.

**Conclusion:** These results indicate a protective effect of CRN against the anemia-related hypoxia on sperm quality parameters including total count, motility and viability along with DNA damages. The protective capacity of CRN might relate to its known antioxidant power.

**Key words:** Crocin, Hypoxia, Phenylhydrazine, Sperm quality.

#### P-88

### Comparative anti-fertility effects of two esters (di ethyl and di t-butyl of 1,4-dihydro-2,6-dimethyl-4-(4-nitrophenyl) pyridine-3,5-dicarboxylic acid) on male rats

Kameli SM<sup>1</sup>, Khanehzad M<sup>2</sup>, Noori Mugehi SMH<sup>1</sup>.

1. Department of Histology, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Anatomy, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** maryamkameli80@yahoo.com

**Introduction:** In research for new male contraceptive agent, dihydropyridine compounds show promising activity and property.

**Materials and Methods:** Accordingly, the suspensions of two esters, diethyl and di t-butyl of 1,4-dihydro-2,6-dimethyl-4-(4-nitrophenyl) pyridine-3,5-dicarboxylic acid, in propylene glycol were prepared and were injected subcutaneously once a day to male rats in (10 mg/kg/day) dose for 67 day. Then rats were euthanized and physiological and histological criteria were studied.

**Results:** Results show that esters decreased motility and viability of sperm. Epididymal sperm reserve (E.S.R/G) was also decrease. But the esters are ineffective on body weight difference (B.W.D) and gonado somatic index (G.S.I) and daily sperm production (D.S.P/g). The ethyl ester decreased fertility index significantly in male rats. From histomorphometric angular point of view the diameter and density of seminiferous tubules are decreased. But circumference and area of tubules showed increase. The area of testis did not any change. In microscopic crosswise the distraction of germinal epithelium and reduction of spermatocytes number were observed.

**Conclusion:** These results certify the effective activity of two compounds on process of spermatogenesis and maturation of sperm. But ethyl ester had longer duration and more potent.

**Key words:** Esters, Fertility, Seminiferous Tubules, Rat.

#### P-89

### Phenyl hydrazine-induced anemia-related hypoxia effect on mice sperm quality

Kalantari Hesari A<sup>1</sup>, Shahrooze R<sup>1</sup>, Ahmadi A<sup>1</sup>, Malekinejad H<sup>2</sup>, Mostafavi M<sup>1</sup>, Ahmadi A<sup>1</sup>.

1. Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.
2. Laboratory of Toxicology and Pharmacology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** ali.kalantari.histology@gmail.com

**Introduction:** There are reports indicating that among the others, hypoxia is one of the sperm quality threatening factors, which may occur intentionally or accidentally. Hypoxia could be created secondarily after some pathological conditions such as anemia. In this

study we aimed to investigate the sperm quality in the animals that were exposed against phenyl hydrazine to induce anemia-dependent hypoxia.

**Materials and Methods:** Twenty seven male and clinically healthy mice (20-25 g and 6-8 weeks old) were divided to 4 groups including control and test groups. The anemia-dependent hypoxia was induced by using Phenyl hydrazine (1). The control (C) animals were received only saline normal during the experiment and the test groups were treated as follow: Phenyl hydrazine (PHN, 2mg/100 g, 4mg/100g and 6 mg/100g). The control and test animals received the treatments via intraperitoneal injection. PHN was administered each 48 h for 35 days. At the end of experiment, semen samples were collected from caudal part of epididymis in HTF Medium. Then the sperm samples were examined for total count, viability, motility, DNA damage and sperm maturation.

**Results:** The results of this study showed that anemia-related hypoxia resulted in a drastic reduction in sperm total count, motility, percentage of viability, percentage of sperm with intact DNA and increased the number of immature sperms.

**Conclusion:** These results indicate effect of the anemia-related hypoxia on sperm quality parameters including total count, motility and viability along with DNA damages.

**Key words:** Hypoxia, Phenyl hydrazine, Sperm quality.

#### P-90

##### **Beneficial effects of the Aloe vera gel on diabetic disorders in STZ-induced diabetic rats**

**Azizi B<sup>1</sup>, Nejati V<sup>1</sup>, Najafi G<sup>2</sup>.**

1. Department of Biology, Faculty of Science, Urmia University, Urmia, Iran.
2. Department of Anatomy and Embryology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** ba\_bahar2008@yahoo.com

**Introduction:** Structure and function of many organs alters in diabetic status Testicular is important organ of reproductive system and its structure influenced in diabetes. Aloe vera has been widely reported for its numerous effects but little is known of its effects on reproductive organs. In present study, its protective effect on rat testis structure was evaluated.

**Materials and Methods:** 24 adult male rats were divided into 4 groups. One group was kept as control group Experimental diabetes was induced by (STZ 60mg/kg) in two groups of rats One of these groups and the fourth group were daily treated by *Aloe vera* gel (100 mg/kg) for 5 weeks. then rats sacrificed and their testes were removed.

**Results:** The leydig cells number/ mm<sup>2</sup> of the connective tissue and the sertoli cells number/one tubule significantly (p<0.05) decreased in diabetic animals in comparison to D+Aloe-treated and control groups. Sperm parameters demonstrated that, the sperms motility and viability remarkably (p<0.05) increased in D+Aloe-administrated groups in comparison to diabetic group.

**Conclusion:** The Aloe vera has beneficial effects on testicular tissue and spermatogenesis if used as a hypoglycemic agent in diabetes.

**Key words:** Diabetes, Aloe vera gel, Testicles, Spermatogenesis.

#### P-91

##### **Effect of Omega-3, fatty acids on ovarian tissue in polycystic ovarian (PCO) rats**

**Ouladsahebmadarek E<sup>1</sup>, Khaki A<sup>2</sup>, Farzadi L<sup>3</sup>, Fardiazar Z<sup>3</sup>.**

1. Women's Reproductive Health Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Veterinary Medicine, Alzahrah Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Department of Obstetrics and Gynaecology, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

**Email:** elmadarek33@yahoo.com

**Introduction:** Polycystic ovarian syndrome (PCOS) is the most frequent cause of female infertility, affecting about 5-10% of women in age of reproduction. The aim of this study was to survey the protective effects of omega-3 polyunsaturated fatty acid on experimental PCO induced by estradiol-valerat (PPA) in rats.

**Martials and Methods:** Wistar female rats (n=40) were allocated into two groups, controlgroup (n=10) ,and test groups (n=30)which subdivided into 3 subgroups,one subgroup received omega-3 (60 mg/ rat/ orally/ daily), second and third subgroups were induced PCO by single injection of estradiol-valerate (4 mg/rat/IM),and then received no supplement or omega-3 (60 mg/rat) for 60 subsequent days. Animals were kept in standard conditions. In sixty days the ovaries of rats in whole groups were removed and prepared to pathological analysis.

**Results:** Hemorrhage, hyperemia and fibrosis were seen in PCO groups. These side effects in groups that received omega-3 significantly decreased (p<0.05) in comparison to experimental groups. Ovarian weights in both experimental and control groups were similar (p>0.05).

**Conclusion:** Results revealed that administration of omega-3 significantly treated PCO. This suggests that polyunsaturated fatty acid may be promising in PCO patients.

**Key words:** Fibrosis, Omega-3, Ovary, Super oxide dismutase, PCO.

#### P-92

##### **Effect of water melon seeds extracts (Citrullus vulgaris) on sperms in diabetic rats**

**Khaki A<sup>1</sup>, Ouladsahebmadarek E<sup>2</sup>, Farzadi L<sup>2</sup>, Jafari Shobeiri M<sup>3</sup>.**

1. Department of Veterinary Medicine, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Women's Reproductive Health Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.

3. Department of Obstetrics and Gynaecology, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: elmadarek33@gmail.com

**Introduction:** Citrullus vulgaris is an antioxidant and has been shown to reduce oxidative stress. Previous studies confirmed antioxidants have essential effect on infertility through participating in reactive oxygen's spaces. Chronic hyperglycemia is known to cause infertility in diabetes disease.

**Materials and Methods:** Wistar male rats (n=40) were allocated into three groups: control group (n=10), citrullus vulgaris seeds extract (CVE) group that received 55mg/kg by gavage method (n=10), and Diabetic group that received 55mg/kg (IP) streptozotocin (STZ) (n=20). The last group was subdivided into two groups of 10. STZ group and treatment group. Treatment group received 55mg/kg (IP) STZ plus 55mg/kg CVE, daily for 4 weeks; however, the control group just received an equal volume of (0.9% NaCl) daily (gavage). Diabetes was induced by a single (IP) injection of streptozotocin (55mg/kg). Animals were kept in standard condition. In 28th day, 5 cc blood samples were taken from each rat for biochemical analysis. Epididymis tissues were collected and prepared for sperm analysis by WHO method.

**Results:** In comparison to other groups, sperm parameters were significantly increased in groups that received 55mg/kg (CVE) (p<0.05).

**Conclusion:** Since in our study, 55mg/kg (CVE) has substantially improving effect on sperm population, so it seems that using CVE by infertile Diabetic patients has beneficial antioxidant effects.

**Key words:** Citrullus vulgaris, Diabetes, Sperm, Rat.

### P-93

#### Effect of Allium cepa seeds ethanol extract, on serum total antioxidant in experimental induced polycystic ovarian (PCO) rats

Farzadi L<sup>1</sup>, Ouladsahebmadarek E<sup>2</sup>, Khaki A<sup>3</sup>, Ghasemzadeh A<sup>2</sup>, Bahari Asl Z<sup>4</sup>.

1. Women's Reproductive Health Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Obstetrics and Gynecology, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Department of Veterinary Medicine, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
4. Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: elmadarek33@gmail.com

**Introduction:** Polycystic ovarian syndrome (PCOS) is the most frequent cause of female infertility, affecting about 5-10% of women in age of reproduction. The aim of this study was to survey antioxidant effects of Allium cepa seeds ethanol extract on experimental PCO induced by estradiol-valerat (PPA) in rats.

**Materials and Methods:** Wistar female rats (n=60) were allocated into three groups, control (n=30), C1: an equal volume of (0.9% NaCl); C2: extract (1cc/ rat/ orally/ daily); C3: Sesame oil (0/3cc/rat/orally/daily) and test groups (n=30), that subdivided into 3 groups, one group received extract supplement (0.5cc Sesame oil+0.5cc Allium Cepa /rat/orally/daily), second and third groups were induced PCO by single injection of estradiol-valerate (4mg/rat/IM), third group, received extract supplement, for 60 subsequent days. Animals were kept in standard conditions. After sixty days the blood samples of Rats in whole groups were taken and prepared for biochemical analysis.

**Results:** Level of TAC, superoxide dismutase and catalase were significantly decreased in PCO groups (p<0.05), which was significantly increased in groups that received extract in comparison to control and PCO groups (p<0.05). Level of MDA was significantly higher in PCO groups compared to control and Extract groups (p<0.05).

**Conclusion:** Results revealed that administration of Allium cepa ethanol extract significantly compensates blood antioxidants levels in PCO induced rats.

**Key words:** Allium cepa extract, Sesame oil, Superoxide dismutase, MDA, PCO, Catalase, TAC.

### P-94

#### Effect of Allium cepa seeds ethanol extract, on ovarian apoptosis in experimental induced polycystic ovarian (PCO) rats by tunel assay

Ghasemzadeh A<sup>1</sup>, Farzadi L<sup>2</sup>, Ouladsahebmadarek E<sup>2</sup>, Khaki A<sup>3</sup>.

1. Women's Reproductive Health Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Obstetrics and Gynaecology, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Department of Veterinary Medicine, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: elmadarek33@gmail.com

**Introduction:** Polycystic ovarian syndrome (PCOS) is the most frequent cause of female infertility, affecting about 5-10% of women in age of procreation. The aim of this study was to survey the effects of Allium cepa seeds ethanol extract on ovarian apoptosis in experimental PCO induced by estradiol-valerat (PPA) in rats.

**Materials and Methods:** Wistar female rats (n=60) were allocated into three groups, control (n=30); C1: an equal volume of (0.9% NaCl), C2: extract (1cc/rat/orally/ daily), and C3: Sesame oil (0.3cc/rat/orally/daily) and test groups (n=30) that subdivided into 3 groups, one group received extract supplement (0.5CC Sesame oil+0.5CC Allium Cepa /rat/orally/daily), second and third groups were induced PCO by single injection of estradiol-valerate (4mg/rat/IM) and third group received extract supplement, for 60 subsequent days. Animals were kept in standard conditions. After sixty days ovarian tissue samples of rats in whole groups were taken and prepared to apoptosis analysis.

**Results:** The percentage of tissue apoptosis was significantly higher in PCO groups ( $p < 0.05$ ). This side effect in groups that received extract was significantly decreased ( $p < 0.05$ ) in comparison to PCO groups.

**Conclusion:** Results revealed that administration of *Allium cepa* ethanol extract can significantly decrease the percentage of apoptosis in PCO induced rats.

**Key words:** *Allium cepa* extract, Apoptosis, Sesame oil, PCO, Rat, TUNEL.

## P-95

### Study effect of parsley (*Petroselinum Crispum*) on female rat endometrium

Rezazad M, Farokhi F.

Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.

Email: maryamrezazad@yahoo.com

**Introduction:** The aim of this study is to evaluate the effect of ethanolic extract of parsley seeds (*Apiaceae*) in rats to explore its effect on endometrium of female rats.

**Materials and Methods:** 20 female rats weighing 90-150 gr were divided in two groups: control and parsley treated. To prepare the plant extract, 100 g of powdered seed was subjected to 1000 ml ethanol for 48 hours then filtered and dried using rotary. A dose of 5mg/kg body weight was used and extract was administered orally.

**Results:** Diameter of endometrium was decreased. Blood vessels had lower account and some of them were degenerated.

**Conclusion:** Parsley extract had strong effects on female reproductive system and caused tissue degeneration in endometrium.

**Key words:** Parsley, Seed, Female rat, Endometrium, Ethanolic extract.

## P-96

### The effect of vitrification on mouse oocytes apoptosis by Cryotop method

Rajaei F<sup>1</sup>, Abedpour N<sup>1</sup>, Salehnia M<sup>2</sup>.

1. Department of Anatomy, Faculty of Medicine, Qazvin University of Medical Sciences, Qazvin, Iran.

2. Department of Anatomy, Faculty of Medicine, Tarbiat Modares University, Tehran, Iran.

Email: farzadraj@yahoo.co.uk

**Introduction:** Oocyte cryopreservation is one of the most important topics in the field of assisted reproductive technology (ART) to preserve women fertility but the relationship between cryopreservation and apoptosis is still a matter of debate. The present study was aimed to investigate the effects of vitrification on apoptosis in mouse oocytes by Cryotop method.

**Materials and Methods:** A total of 200 germinal vesicle (GV) and 200 metaphase II (MII) oocytes obtained from ovaries and fallopian tubes of NMRI mice respectively and divided into two control and experimental groups. Oocytes in experimental group were vitrified by Cryotop using vitrification medium

and were kept in liquid nitrogen for one month. The survival rate of oocytes was evaluated after 2 hours incubation time. Then, the oocyte apoptosis were evaluated by TUNEL technique and compared with those in control group. The data was compared statistically using SPSS software and chi-square test.

**Results:** The survival rates of vitrified GV (93%) and MII oocytes (88%) showed a significant decrease compared with the control group ( $p < 0.05$ ) but there was no significant difference in survival rate of both vitrified oocyte groups. The incidence of apoptosis in vitrified and control GV oocytes showed no significant difference (13% vs. 7%) but, the rate of apoptosis in vitrified MII oocytes significantly was increased not only in comparison with MII control group (25% vs. 5%) but also with vitrified GV oocytes ( $p < 0.05$ ).

**Conclusion:** Vitrification increases apoptosis in mouse MII oocytes and apoptosis may play a role in MII oocyte injury after vitrification.

**Key words:** Vitrification, Apoptosis, Cryotop, Oocyte.

## P-97

### Relationship between alcohol consumption and ovarian histological changes in adult mice

Ghodrati S, Ahmadi A, Shojazadeh S.

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: somgh66@yahoo.com

**Introduction:** This study was performed to examine the effect of ethanol consumption on microscopic structure of mouse's ovaries. Long-term alcohol consumption is a major risk factor for reproductive dysfunction in humans and experimental animals.

**Materials and Methods:** In this study adult female mice were randomly divided in 2 groups ( $n=10$ ) with one group serving as control sham (saline normal) and test group received ethanol (3 g/kg body weight as 25%, v/v) was given by gastric intubation daily for 35 days. Following 35 days anesthetized and sacrificed. Ovaries were removed and washed in normal saline. Then they were placed in fixative (formalin) for 48 hours. After routine histological processing and embedding in paraffin, all the specimens were cut in to 5 $\mu$ m thickness sections and stained by Hematoxylin-Eosin. Then specimens were observed by microscopy and photographed.

**Results:** Histological observations demonstrated that, in alcoholic group the atretic follicles were significantly ( $p < 0.05$ ) increased in number and had lower follicles quantity with comparison to control animals. Moreover the total number of healthy follicles within both side ovaries were remarkably ( $p < 0.05$ ) reduced in alcoholic animals. The corpus luteum number per ovary in the alcoholic groups was not significantly ( $p < 0.05$ ) reduced in comparison to control animals in both side ovaries.

**Conclusion:** High alcohol consumption associated with increased risk of infertility and ovarian toxicity including increase in atresia of the follicles and changes the fertility parameters. The total number of



healthy follicles will reduce early and finish ovary's stores then maybe it will occur early menopause onset.

**Key words:** Alcoholism, Ethanol, Follicle, Atresia, Ovary.

## P-98

### Morphometric analysis on the uterine horn of adult mice after chronic experimental alcoholism

Ghodrati S, Ahmadi A, Shojazadeh S.

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: somgh66@yahoo.com

**Introduction:** The objective of the present study was to examine the effects of alcohol ingestion on the endometrium layer of the uterine of mice submitted to experimental chronic alcoholism were observed by morphometric methods.

**Materials and Methods:** In this study adult female mice were randomly divided in 2 groups (n=10) with one group serving as control sham (salin normal) and test group received ethanol (3 g/kg body weight as 25%, v/v) was given by gastric intubation daily for 35 days. Following 35 days anesthetized and sacrificed. Uterine horns were dissected out and washed in normal saline. Then they were placed in fixative (formalin) for 48 hours. After routine histological processing and embedding in paraffin, all the specimens were cut in to 5µm thickness sections and stained by Hematoxylin-Eosin. Then specimens were observed by microscopy and photographed.

**Results:** The morphometric results showed that Epithelium thickness of the endometrium, endometrium thickness of uterine horns and Branching of endometrial glands in the alcoholic group significantly (p<0.05) decreased in comparison to control group in both side uterine horns. Morphometric analysis confirmed myometrium thickness of uterine horns in the alcoholic group didn't change in comparison to control group in both side uterine horns.

**Conclusion:** We concluded that alcohol acts as a toxin on the epithelial layer of the mice endometrium and endometrium layer. Lower endometrium thickness of uterine horns can disrupt implantation and then it can lead to infertile.

**Key words:** Alcoholism, Ethanol, Uterine horns, Mice, Endometrium.

## P-99

### Novel intronic polymorphism in TNP1 gene in Iranian varicocele infertile men

Heidari M<sup>1</sup>, Khatami M<sup>1</sup>, Talebi A<sup>2</sup>, Moezzi F<sup>1</sup>.

1. Department of Biology, Faculty of Sciences, Yazd University, Yazd, Iran.
2. Department of Anatomy, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

Email: f.moezzi\_genetic@yahoo.com

**Introduction:** A varicocele is a vascular abnormality of the scrotum that is defined as dilated veins of the pampiniform plexus and the important cause of infertility in men. The molecular mechanisms by which fertility is affected have not been satisfactorily explained. During spermatogenesis, the sperm nucleus undergoes a marked rearrangement, which involves the removal of histones and their replacement by Transition nuclear proteins and Protamines. Thus any dysregulation of expression of these genes results in abnormal spermatogenesis. Therefore, the aim of this study is to evaluate the sequence of TNP1 gene and its correlate with varicocele.

**Materials and Methods:** Transition nuclear protein 1 (TNP1) gene was analyzed using PCR-SSCP technique and DNA sequencing to search for mutations in 72 infertile patients with varicocele.

**Results:** Analysis of these patients revealed a single nucleotide polymorphism (SNP) g. IVS1+75T>C in the intron of the TNP1 gene. We found this polymorphism in 15 patients that has not been previously described.

**Conclusion:** This alteration might not be involved in sperm chromatin condensation and cause male varicocele infertility in Iranian population and their role in infertility are still controversial.

**Key words:** Varicocele, TNP-1 gene, Polymorphism, Infertility, PCR-SSCP.

## P-100

### The role of alcohol consumption in female mice fertility

Ghodrati S, Ahmadi A, Shojazadeh S.

Laboratory of Embryology, Department of Basic Science, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: somgh66@yahoo.com

**Introduction:** Alcoholic women are known to have a variety of menstrual and reproductive disorders, associated with reproductive functional imbalances. The objective of the present study was to verify if there is any relation between alcoholism and female fertility.

**Materials and Methods:** In this study adult female mice were randomly divided in 2 groups (n=10) with one group serving as control sham (salin normal) and test group received ethanol (3 g/kg body weight as 25%,v/v) was given by gastric intubation daily for 35 days. Following 35 days to induce superovulation in mouse of each group undergoing for gonadotrophin treatment (PMSG, 7.5 IU and HCG, 7.5IU after 48 hrs). The oocyte collected from each mouse was fertilizing by fresh sperm in HTF+4mg/mlBSA medium. The number of oocyte and oocyte quality, rate of fertilization, two cell embryos, arrested embryos, blastocysts and embryos quality was examined in period of 120 hours.

**Results:** The animals in alcoholic administered groups; showed remarkably (p<0.05) lower fertilizing success rate in comparison to control group. In the alcoholic

groups, significantly ( $p < 0.05$ ) lower percentage of fertilized oocytes developed until blastocyst stage and remarkably ( $p < 0.05$ ) higher percentage of embryos was blocked in different stages (types of I and II) of embryonic development and significantly lower percentage of embryos was blocked in III type of embryonic development.

**Conclusion:** High alcohol consumption was associated with increased risk of infertility. The study showed that chronic alcohol consumption decreased oocyte quality, fertility potential, embryo development and embryo quality.

**Key words:** Alcohol, Oocyte, In vitro fertilization, Preimplantation embryo development, Mouse.

### P-101

#### Does hyperprolactinemia effect on in vitro fertilization cycles?

**Ahmadi A, Mostafavi M.**

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** aram.ahmadi82@gmail.com

**Introduction:** Prolactin hormone's unbalanced concentration makes unusual impression on reproductive system like difficulties in mating, fertilization, zygote division and growth. In present study the effect of hyperprolactinemia on in vitro fertilization rate and embryo quality was investigated.

**Materials and Methods:** 18 male adult mice were divided in 3 groups as test, control sham and control. For hyperprolactinemia induction test group received 40mg/kg sulpiride solution, daily for 45 days IP. Control sham received sesame oil as a drug vehicle. For each male mouse, 3 female mice were superovulated, killed and ova collected. 50000-100000 of taken sperms of each male mouse were injected in macro droplets as each oocyte. After 24 hours the rate of fertilization and 2-cell zygotes and after 120 hours rate of necrotic cells, cytoplasmic vesicles in each embryos and arrested embryos were investigated and were compared with 2 other groups data.

**Results:** There was a significant reduction in fertilization rate and zygote division between hyperprolactinemic group with control and sham groups. In test group percentage of fertilization was lower than 2 others. Moreover in treatment group division occurred just in some zygotes and the rate of arrested embryos which including necrotic cells and cytoplasmic vesicles was significantly much more than 2 other groups.

**Conclusion:** In hyperprolactinemic mice, because high prolactin serum concentration causes disturbance of the hypothalamus-pituitary axis and consequently abnormalities on steroidogenesis and spermatogenesis and spermiogenesis processes, remarkable reduction in IVF ability is obvious so in vitro fertilization is not guarantee fertility in these cases.

**Key words:** Prolactin, Mice, In vitro fertilization, Fertilization cycles, Zygote.

### P-102

#### Study sperm motion with CASA (Computer-assisted semen analysis) in rats treated with Cyclophosphamide and American ginseng

**Hosseini A<sup>1</sup>, Ghaderi Pakdel F<sup>2</sup>, Ahmadi A<sup>3</sup>.**

1. Department of Biology, Faculty of Sciences, Urmia University, Urmia, Iran.

2. Department of Physiology, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran.

3. Department of Embryology, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** hosseinia30@yahoo.com

Capacity of sperm fertilization is depended on sperm motility and sperm membrane integrity; and fertilization will be impaired if they are damage. Cyclophosphamide (cp), an anticancer drug which causes cellular toxicity, was treatment to Wistar male rats at dose 6.1 mg/kg/day intraperitoneally (IP) for 14 weeks. In addition, American ginseng used at dose 500mg/kg/day orally during treatment. Sperm analyses (motion, count, morphology and viability) were evaluated in the end of experiments. Sperm motion was assayed by computer-assisted sperm analysis (CASA) and VSL, VCL, VAP, ALH, MAD, and BCF parameters were noted. There was a significant decrease in the epididymal sperms counts and significant increase in dead and abnormal sperms following cp treatment in rats. Also in cp-treated animals, in sperm motion analysis, sperm velocity and ALH parameters were significantly less than control group, MAD significantly increased and, BCF has not significant different while Co-treatment ginseng with Cyclophosphamid could be improved these parameters. In conclusion, Cyclophosphamide has negative effects on sperm status but American ginseng reversed these effects.

**Key words:** Cyclophosphamide, American ginseng, CASA system, Sperm, Male rat.

### P-103

#### The effect of vitamin E in improving the oviduct in rats treated with citalopram

**Salehi L, Farokhi F, Hoseini H.**

Faculty of Sciences, Urmia University, Urmia, Iran.

**Email:** l.1365@yahoo.com

**Introduction:** Citalopram is one of several selective serotonin reuptake inhibitors (SSRIs). Moreover citalopram induced sexual dysfunction is a result of gonadotropin-releasing hormone (GnRH), kisspeptin or RF-amide related peptide (RFRP) alteration is unknown. Vitamin E is the major fat soluble antioxidant in the body. The reproductive behavior is flounced by oxidant-antioxidant balance of body.

**Materials and Methods:** This study female rats were randomly divided into five groups of eight each, the

citalopram was administered via drinking water (30 mg/kg): group I served as depressed controls; group II served as non depressed controls; group III received in their drinking water citalopram; group IV received vitamin E; group V was treated with citalopram and vitamin E.

**Results:** Glands in the mucosa of the oviduct in the groups treated with vitamin E and control groups had a structurally normal healthy. Whereas, in group III, most of the glandular masses were being destroyed.

**Conclusion:** Based on the observations mentioned, these results were obtained: citalopram have harmful side effects on the oviduct glands and vitamin E is able to reduce the harmful side effects of this drug on the reproductive system.

**Key words:** Vitamin E, Citalopram, Antioxidant, Female rats, Oviduct.

#### P-104

### Correlation of diagnostic and screening tests in prenatal diagnosis of fetal chromosomal abnormalities: evaluation of 5000 pregnancies

**Akbari M.**

Department of Medical Genetics, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

**Email:** mtakbari@modares.ac.ir

**Introduction:** Trisomy 21 with the incidence of 1 in 700 live newborns is the most common genetic cause of mental retardation. Hence, one of the major issues in genetic counseling and especially antenatal genetics is the prevention of the birth of Down syndrome children and its diverse methods and approaches. It is worth mentioning that other common trisomies, trisomy 18 and trisomy 13, plus sex chromosome abnormalities (Turner and Klinefelter syndromes) are significant issues which require preventive measures too.

**Materials and Methods:** It is also evident that with present available technologies, provision and execution of diagnostic tests including karyotyping and other genomic techniques are not feasible for all pregnancies, and it is desirable initially to identify the mothers with higher risk by one or other of the screening modalities before the application of a diagnostic test, i.e. karyotyping as the gold standard. In the present study 5000 pregnancies belonging to various risk categories were chromosomally analyzed following amniocentesis and cell culturing.

**Results:** The results showed screening by sonography and in particular NT and NB measurements had the greatest predictive power (11%) and maternal serum biochemical markers had 5-6 percent predictive power. Meanwhile, it was established that advanced maternal age by itself was equal to biochemical markers in terms of prediction value.

**Conclusion:** Therefore, there is no scientific justification to do biochemical marker screening for advanced maternal age group of pregnancies and karyotyping them straight away is more appropriate and cost effective.

**Key words:** Amniocentesis, Fetal chromosomal abnormalities, Sonography markers, Advanced maternal age, Mental retardation.

#### P-105

### The effects of hydro-alcoholic extract of celery (*Apium graveolens*) leaf on the number of sexual cells and testicular structure in rat

**Kooti W<sup>1,2</sup>, Mansori E<sup>3</sup>, Ghasemiboron M<sup>4</sup>, Karami N<sup>5</sup>, Harizi M<sup>1</sup>, Ahangarpour A<sup>6</sup>.**

1. Department of Laboratory Sciences, School of Paramedicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Student Research Committee, Vice-Chancellor for Research Affairs, Ahvaz, Iran.
3. Department of Anatomical Sciences, School of Medicine Jundishapur University of Medical Sciences, Ahvaz, Iran.
4. Department of Public Health, School of Health, Jundishapur University of Medical Sciences, Ahvaz, Iran.
5. Department of English, School of Health, Jundishapur University of Medical Sciences, Ahvaz, Iran.
6. Department of Physiology, School of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.

**Email:** kweasm@yahoo.com

**Introduction:** Celery (*Apiumgraveolens*) belongs to the Umbelliferae family. The leaves and stems of celery contain phenols. One of the main flavonoids of the celery leaf is Apigenin. Physiological knowledge of the men sexual organ and the effect of some materials on it are important. According to the earlier mentioned effects of flavonoids on spermatogenesis, this research is aimed to investigate the effects of hydro-alcoholic extract of celery on the histological properties of testis and number of sexual cells in male rats.

**Materials and Methods:** In this experimental study, 32 adult male wistar rats were divided into 4 groups. Group 1 as the control didn't receive any treatment, group 2 (vehicle) received propylene glycol, and experimental groups 3 and 4 received 1ml hydro-alcoholic extract of celery in doses of 100 and 200 mg/kg. B.W every 48 hours during 20 days by oral administration. One day after the last gavage animals anaesthetized. Caudal part of the right epididymis was used for spermatozoids counting. The number of primary spermatocytes, certoli cells and lumen volume were done with provided sections of seminiferous tubules using light microscope. Data were analyzed by the SPSS15 software by using one-way ANOVA.

**Results:** The result showed a significant decrease in the number of spermatozoid in doses of 200 mg/kg compared to the control groups ( $p < 0.05$ ), and the microscopic studying has not shown significant differences between the experimental groups and control group.

**Conclusion:** It seems that celery reduced fertility and spermatogenesis in male rats but has no Destructive effect on testicular structure.

**Key words:** Celery, Testicular structure, Leaf, Rat.

## P-106

### The effect of hydro-alcoholic extract of celery (*Apium graveolens*) consumption in male rats on the number and sex ratio of rat offspring

Ghasemiboron M<sup>1,2</sup>, Kooti W<sup>3</sup>, Ahangarpour A<sup>4</sup>, Karami N<sup>5</sup>.

1. Department of Public Health, School of Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Student Research Committee, Vice-Chancellor for Research Affairs, Ahvaz, Iran.
3. Department of Laboratory Sciences, School of Paramedicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
4. Department of Physiology, School of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
5. Department of English, School of Health, Jundishapur University of Medical Sciences, Ahvaz, Iran.

Email: healthwes@yahoo.com

**Introduction:** Celery (*Apium graveolens*) belongs to Apiaceae. The most important compositions in its oil are limonen and palmetic acid. Developed countries are trying to control the population by presenting new methods of pregnancy prevention. Less side effect and availabilities are the benefits of celery for fertility control. This study was conducted to evaluate the effect of celery consumption in male rats on the number and sex ratio of rat offspring.

**Materials and Methods:** In this experimental research, 20 male and 40 female rats were divided into control (1), sham group (2) and treatment groups (3 and 4). 5 male rats of each two treatment group 3 and 4 received 1 ml hydro-alcoholic extract of celery in doses of 100 and 200 mg/kg.B.W during 30 days by gavage, sham group received propylene glycol but the control didn't receive anything. After the 30 days, each gavaged male rat was mated with two female rats. The rats with vaginal plaque were kept in separate cages until their delivery time and the study of their number and sex ratio. The data were analyzed by one-way ANOVA using SPSS15 software.

**Results:** The result showed a significant decrease in the number of offspring in doses of 100 and 200 mg/kg ( $4.20 \pm 0.67$  and  $4.40 \pm 0.88$  respectively) compared to the control group ( $6.60 \pm 0.30$ ), also an increase in the number of male genesis in dose of 100 mg/kg ( $1.26 \pm 0.068$ ) was observed (female: 26.2% and male: 73.8%)  $p < 0.05$ .

**Conclusion:** It seems that consumption of celery in male decreases the number of offspring and increases the male genesis.

**Key words:** Pregnancy, Hydro-Alcoholic extract, Sex ratio, Offspring.

## P-107

### The effect of hydro-alcoholic extract of celery (*Apium graveolens*) consumption before pregnancy in female rats on the length of pregnancy, number, sex ratio and the weight of rat offspring

Ghasemiboron M<sup>1,2</sup>, Kooti W<sup>3</sup>, Ahangarpour A<sup>4</sup>, Karami N<sup>5</sup>.

1. Department of Public Health, School of Health, Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Student Research Committee, Vice-Chancellor for Research Affairs, Ahvaz, Iran.
3. Department of Laboratory Sciences, School of Paramedicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
4. Department Of Physiology, School of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
5. Department of English, School of Health, Jundishapur University of Medical Sciences, Ahvaz, Iran.

Email: healthwes@yahoo.com

**Introduction:** Celery (*Apium graveolens*) is from the family of Apiaceae. The leaves and stems of celery contain furanocomarin, psoralen and luteolin. In traditional medicine the effects of celery on period and abortion have been mentioned, therefore, the aim of this study was to determine the effect of consumption of celery in female before pregnancy on the length of pregnancy rat, number, weight and sex ratio of offspring.

**Materials and Methods:** In this experimental study 15 male and 30 female rats (170-220g) were divided to two experimental groups (2 and 3) and one control (1) group. The females of the experimental groups 2 and 3 received 1ml hydro-alcoholic extract of celery in doses of 100 and 200 mg/kg.B.W in two weeks before mating by oral administration, but the control group didn't receive any dose. After 2 weeks, every two female rats were mated with one male rat. After mating and observing the vaginal plaque, the female rats of the three groups were kept in 3 different cages. Length of the pregnancy, number gender and the weight of the offspring were evaluated on the first day of being born. The data were analyzed by one-way ANOVA using SPSS15 software.

**Results:** The result showed a significant decrease in the weight mean of the offspring in doses of 100 and 200 ( $4.32 \pm 0.197$  and  $4.46 \pm 0.221$  respectively) compared to the control group ( $5.98 \pm 0.204$ ),  $p < 0.05$ . The difference between the number of offspring, gender and the length of pregnancy were not statistically significant.

**Conclusion:** As a result, consumption of celery before pregnancy in the female has not any negative effect on delivery and the number of offspring, but it can decrease the weight of offspring.

**Key words:** Celery, Pregnancy, Sex ratio, Weight, Female.

**P-108****Effect of Oxymetholone and Royal jelly on some of sperm parameters**

Zahmatkesh E<sup>1</sup>, Nejati V<sup>1</sup>, Najafi G<sup>2</sup>, Heidari R<sup>1</sup>, Babaei M<sup>2</sup>.

1. Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.

2. Department of Veterinary, Sciences Faculty, Urmia University, Urmia, Iran.

Email: ensieh\_zahmatkesh@yahoo.com

**Introduction:** Oxymetholone (17b-hydroxy-2-hydroxymethylene-17a-methyl-5a-androstan-3-one) is a synthetic anabolic steroid, first described by Ringold et al. Royal jelly, the principal food source of the queen honeybee, is secreted by the hypopharyngeal glands of nurse bees, and it contains many important nutritious constituents, such as proteins sugars, free amino acids, fatty acids, minerals, and vitamins. The aim of this study was evaluated effect of oxymetholone and Royal jelly on the quality of sperm parameters.

**Materials and Methods:** in this study, 32 adult male NMRI mice were used weighing (30±2gr). Then, the animals were divided into 4 groups. 1) Control group: 30 days, daily 0.1 ml saline administered orally. 2) Group treated with Oxymetholone: 30 days, daily 5 mg / kg Oxymetholone; administered orally. 3) Group treated with Royal Jelly: Royal jelly dose was 110 mg/kg daily for 30 days orally. 4) Combination therapy group: the 30 days, daily 5 mg / kg Oxymetholone; and 110 mg / kg royal jelly was received orally. 3 days after the end of treatment, mice were laparotomized. After that, cauda epididymis was removed surgically. At the end, sperm count and percent of mature sperm were analyzed.

**Results:** The results showed that oxymetholone decreased sperm count and percent of mature sperm. Royal jelly increased sperm count and percent of mature sperm.

**Conclusion:** The present results highly support the idea that Oxymetholone; adversely affect the sperm maturation and sperm count. Royal Jelly with antioxidant properties has positive effects on the number and maturation of sperm.

**Key words:** Oxymetholone, Royal jelly, Sperm quality, Sperm count, Maturity.

**P-109****Stem cell factor increases oocyte maturation and in vitro viability of mouse preantral follicles after vitrification**

Ganji R<sup>1</sup>, Nabiuini M<sup>1</sup>, Bahadori M<sup>2</sup>.

1. Department of Cell and Molecular Biology, Faculty of Biological Sciences, Kharazmi University, Tehran, Iran.

2. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University of Medical Science, Rasht, Iran.

Email: ganji3@yahoo.com

**Introduction:** Cryopreservation has now become an established procedure in the storage of gametes and embryos for the future treatment of patients. However,

much work is still needed in identifying the specific effects of different cryopreservation protocols. Stem cell factor and its receptor c-kit are essential for oocyte migration during embryonic development and follicular development in the adult ovary. The purpose of this study was to investigate the action of the SCF during vitrified-warmed preantral follicle development.

**Materials and Methods:** Preantral follicles with diameter of 150-180µm were isolated from prepubertal mouse ovaries. Follicles were vitrified and warmed with cryolock method and cultured individually for 7 days in droplets supplemented with 0, 50 and 100 ng SCF and then induced to ovulate with EGF and HCG. The survival rate of follicles and nuclear maturation of ovulated oocytes were determined.

**Results:** At the end of culture a significant increase (p<0.05) in follicle survival was noticed in two treatment groups compared to control group. After induction of ovulation the metaphase II stage oocytes in group of 50 ng SCF were higher than other groups (p=0.001). The maturation rate was not influenced by 100 ng SCF (p>0.05).

**Conclusion:** Culture of mouse vitrified-warmed preantral follicles in medium supplemented with 50 ng SCF increases the number of surviving follicles and oocyte maturation capacity.

**Key words:** Stem cell factor, Cryolock, Vitrification, Oocyte maturation.

**P-110****Melatonin increases survival of vitrified-warmed mouse preantral follicles**

Bahadori M<sup>1</sup>, Ganji R<sup>2</sup>, Nabiuini M<sup>2</sup>.

1. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University of Medical Science, Rasht, Iran.

2. Department of Cell and Molecular Biology, Faculty of Biological Sciences, Kharazmi University, Tehran, Iran.

Email: Bahadori@gums.ac.ir

**Introduction:** Reactive oxygen species (ROS) are produced within the follicle, especially during the ovulatory process. An excessive amount of ROS cause oxidative stress and may damage oocyte and granulosa cells. Melatonin is an endogenous substance produced by the pineal gland, and by various other organs. It is possible that melatonin is the most effective antioxidant in the follicle. In this study we investigated the direct effects of different melatonin concentrations on folliculogenesis and oogenesis by exposing in-vitro cultured mouse vitrified-thawed ovarian follicles to melatonin.

**Materials and Methods:** Preantral follicles with diameter of 150-180µm were isolated from prepubertal mouse ovaries. Follicles were vitrified and warmed with cryolock method and cultured individually for 7 days in droplets supplemented with 0, 500 pM, 100 pM and 10 pM melatonin then induced to ovulate with EGF and

HCG. The survival rate of follicles and nuclear maturation of ovulated oocytes were determined.

**Results:** At the end of culture a significant increase ( $p=0.0001$ ) in follicle survival was noticed in group of 10 pM compared to control group. In other treatment groups survival rate was not affected by melatonin. Also after induction of ovulation the number of metaphase II stage oocytes in treatment groups was not influenced by melatonin ( $p>0.05$ ).

**Conclusion:** Culture of mouse vitrified-warmed preantral follicles in medium supplemented with 10 pM melatonin increases the number of surviving follicles.

**Key words:** Melatonin, Cryolock, Vitrification, Mouse preantral follicle.

### P-111

#### Impact of melatonin on blastocyst formation in mouse vitrified-warmed 4-cell stage embryos

Ganji R<sup>1</sup>, Nabiyuni M<sup>1</sup>, Bahadori M<sup>2</sup>.

1. Department of Cell and Molecular Biology, Faculty of Biological Sciences, Kharazmi University, Tehran, Iran.
2. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University of Medical Science, Rasht, Iran.

Email: ganji3@yahoo.com

**Introduction:** Vitrification of embryos has important applications in the management of genetic resources. One cause responsible for the low rate of early embryonic development is attributed to the increased amounts of ROS induced by vitrification. Production of ROS production by embryos is particularly important during in vitro culture at various stages of development. It has been shown that melatonin and its metabolites are potent scavengers of free radicals and the melatonin effect on apoptosis regulation is also documented. The aim of this study was to investigate the effect of two doses of melatonin on mouse 4-cell stage embryo development in vitro.

**Materials and Methods:** 4-6 weeks old female mice were superovulated by i.p. injection of 7.5 IU PMSG and 46-48 h later 7.5 IU HCG and caged overnight with males. 4-cell stage embryos were collected 59-60 h after HCG injection from oviducts and vitrified by the cryolock method. The vitrified embryos were warmed and introduced into G1 medium for culture that contains melatonin at two concentrations (10 and 100 nM) to blastocyst stage then the number of blastocysts, hatching/ hatched and survived blastocysts was assessed.

**Results:** There was no difference in blastocyst formation between 10 and 100 nM melatonin and control groups ( $p>0.05$ ). Difference in hatching rate and blastocyst survival among control and treatment groups was not significant ( $p>0.05$ ).

**Conclusion:** Culture of mouse vitrified-warmed 4-cell embryos in the presence of melatonin has no effect on the rate of blastocyst formation.

**Key words:** Melatonin, 4-cell Embryo, Cryolock, Vitrification, Blastocyst formation.

### P-112

#### Effects of seasons on oocyte aspiration rate of Iranian native sheep in west-southern of Iran

Shokrollahi E.

Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahid Chamran University, Ahvaz, Iran.

Email: el\_sh390@yahoo.com

**Introduction:** Sheep and goat are farm animals that are frequently used as model for some human biomedical experiments in the field of reproductive biotechnologies. They have seasonal reproductive activity. Aim of the present study was to evaluate the oocyte recovery rate following aspiration of ovary follicles during three different seasons in southwest of Iran.

**Materials and Methods:** Total numbers of 1079 (spring 203; autumn 306 and winter 540) ovaries were collected from the local slaughterhouse and transported to the lab in a 35-37°C container. The oocytes were aspirated in a TCM199 medium supplemented with 1% FCS and adequate antibiotics. The oocytes were qualified based on the number and density of cumulus cells layers around oocytes and homogeneity of oocyte cytoplasm and grade A and B oocytes according to IETS manual were considered as high quality oocytes.

**Results:** The results showed that rate of recovery of total and high quality oocytes were 1.6 (1699/1079) and 0.8 (867/1079) for all of ovaries. The similar results were noticed in three evaluated seasons: The mean of total and high quality aspirated oocytes (per ovary) in spring; autumn and winter were 1.5 and 0.88, 1.8 and 0.88, and 1.5 and 0.79, respectively. The mean percentage of high quality aspirated oocytes in spring, autumn and winter were 50.5±6.48, 48.5±5.26 and 50.5±3.6, respectively ( $p>0.05$ ).

**Conclusion:** High quality aspirated oocyte can be performed regardless the seasonal condition of sheep in southwest of Iran. Although, effects of summer heat stress was not evaluated in the present study.

**Key words:** Sheep, Oocyte recovery rate, Grade A and B oocyte, Khouzestan province, Season.

### P-113

#### Antioxidant effect of Royal Jelly on bleomycin-induced damage on sperm parameters of adult rat

Amirshahi T<sup>1</sup>, Nejati V<sup>1</sup>, Najafi G<sup>2</sup>, Najafi A<sup>2</sup>.

1. Department of Biology, Sciences Faculty, Urmia University, Urmia, Iran.

2. Department of Veterinary Medicine, Sciences Faculty, Urmia University, Urmia, Iran.

Email: t.amirshahi@yahoo.com

**Introduction:** Bleomycin (BLM) is a glycopeptide antibiotic obtained from *Streptomyces verticillus* which is routinely used for treatment of human cancers. It is commonly thought to exert its biological effects as a metalloprotein with oxidative damage of DNA. Royal jelly (RJ) is a specific bee, produced from the hypopharyngeal, mandibular and postcerebral glands of nursebees. RJ consists of 66% water, 15% sugars, 5% lipids and 13% proteins, essential amino acids and vitamins. The aim of this study was evaluation of bleomycin and RJ effects on sperm parameters.

**Materials and Methods:** 21 adult male Wistar rats (200±20g) were randomly divided into 3 groups as following: group 1 was served as control; Group 2 was exposed to 0.9 mg/kg bleomycin dissolved in 0.9% normal saline (twice a week with intraperitoneal injections for 6 weeks). The 3<sup>rd</sup> group was a combination of group 2 with the same dose, route of administration and period of treatment, except that the RJ was administered with 110 mg/kg dose for 42 days by oral gavage. 18 days after the end of treatment, they were humanely sacrificed with cerebrospinal displacement. Then epididymal tails were collected and sperm count, motility and maturity were evaluated.

**Results:** The results showed that BLM decreased sperm count, motility and maturity significantly and, RJ increased these parameters.

**Conclusion:** The present results highly support the idea that BLM adversely affects sperm parameters and the RJ with antioxidant properties has positive effects on these parameters.

**Key words:** Royal jelly, Bleomycin, Sperm parameter.

#### P-114

##### The relationship of $\beta$ hCG and progesterone with IL-4 in recurrent spontaneous abortion

Ghafourian Borojerdnia M<sup>1</sup>, Kooti W<sup>2,3</sup>, Nikbakht R<sup>4</sup>, Khosravi N<sup>1</sup>.

1. Department of Immunology, School of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
2. Department of Laboratory Sciences, School of Paramedicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
3. Student Research Committee, Vice-Chancellor for Research Affairs, Ahvaz, Iran.
4. Department of Gynecology, School of Medicine, University of Medical Sciences, Ahvaz, Iran.

Email: kweasm@yahoo.com

**Introduction:** Spontaneous abortion is the most common complication of pregnancy. Recurrent spontaneous abortion (RSA) or habitual abortion, defined as three or more clinical pregnancy losses before the 20th week of gestation. A wide variety of abnormalities such as anatomic, endocrinologic and immunological has been reported for the etiology of

recurrent spontaneous. Recent studies focused on elucidating the immunobiological roles of cytokines in abnormal human pregnancy. This prospective study was designed to determine the relationship of  $\beta$ hCG and progesterone with IL-4 in recurrent spontaneous abortion in the first 3 month of pregnancy and considering their situation until the end of pregnancy, in comparison to normal control group.

**Materials and Methods:** In this case-control study, 5 cc peripheral blood samples were obtained from all case and control group. Progesterone and  $\beta$ hCG hormones were measured by radioimmunoassay and IL-4 by ELISA on serum samples from 43 pregnant women suffered RSA in early pregnancy was compared with 30 gestationally age-matched pregnant controls in the first 3 month of pregnancy and considering their situation until the end of pregnancy. The data were analyzed statistically using Minitab version 14.

**Results:** In this study There was a relationship between progesterone and IL-4 in recurrent abortion pregnant who had successful pregnant in comparison to women with history of abortion and pregnancy failure ( $p < 0.05$ ). But there was not relationship between the amount of  $\beta$ hCG and IL-4 in recurrent abortion pregnant women in comparison with normal pregnant women.

**Conclusion:** It seems progesterone has a role in regulation of IL4 which led to successful pregnancy.

**Key words:** Recurrent abortion,  $\beta$ HCG, Progesterone.

#### P-115

##### The specific effects of air pollution on estradiol and progesterone sex hormones in female rats

Naderi E, Yazdian MR, Roshanaei K.

Department of Biology, Faculty of Sciences, Islamic Azad University, Qom, Iran.

Email: elahenaderi64@yahoo.com

**Introduction :** Due to the expanding of cities and the following increase in air pollution resources, the weather in most of mega cities as well as industrial cities is polluted. Since now different aspects of the effects of air pollution on health, including effects on asthma and respiratory problems, allergy, cardiovascular diseases, skin diseases and effect on the neural system have been studied. However the effects of air pollutants on estradiol and progesterone hormones have been studied rarely, so it has been decided to examine the specific influence of air pollutants on Estradiol and Progesterone hormones and to evaluate its consequences.

**Materials and Methods:** According to this study, during a 28 days period, female rats ( $n=50$ ), with Weight limitation 220±20 gr were exposed to pollution from Gasoline engine exhaust. The rats were exposed to pollutants inside a designed box full of exhaust, twice a day: in the morning and afternoon. At the end of this period after blood sampling process, the hormone levels of Estradiol and Progesterone were estimated. After recording all data, statistical analysis based on

comparison of averages and one-way ANOVA test were implemented.

**Results:** The results showed that exposing to air pollutants leads to significant decrease of Estradiol ( $p < 0.001$ ) and progesterone ( $p < 0.01$ ) hormones in experimental groups of rats.

**Conclusion:** The air pollutants leads to stress and increasing CRH and Cortisol through affecting on benzodiazepine receptors. Results showed that HPG axis has a close relationship with HPA axis and reproductive axis is inhibited by HPA axis in all levels.

**Key words:** Air pollution, Estradiol, Progesterone, HPG axis, HPA axis, Rats.

## P-116

### The effect of bilateral vasectomy on the serum levels of oxidative stress in rat

Faramarzi A<sup>1</sup>, Najafi A<sup>1</sup>, Sadeghipour Rodsari H<sup>1</sup>, Seifi B<sup>1</sup>, Ebrahimpoor M<sup>2</sup>, Sohani M<sup>3</sup>.

1. Department of Physiology, School of Medicine, Tehran University, Tehran, Iran.
2. Department of Epidemiology and Biostatistics, School of Public Health, Tehran University, Tehran, Iran.
3. Department of Laboratory Sciences, School of Paramedicine, Tehran University, Tehran, Iran.

Email: faramarzi\_90@yahoo.com

**Introduction:** Vasectomy is a widespread contraceptive method in men. In recent years, the number of men who perform vasectomy reversal is increasing. Vasectomy has complications, probably leading to vasectomy reversal failure. It is assumed that oxidative stress is the main cause of these complications. The aim of this study was to investigate the indices of oxidative stress serum after vasectomy.

**Materials and Methods:** In this experimental study, male rats were divided in 8 groups of seven each: bilateral vasectomy (15, 45 days, 3 and 6 months) and sham (15, 45 days, 3 and 6 months) groups. Serum PAB (Prooxidant-Antioxidant Balance) and MDA (Malondialdehyde) as a product of lipid peroxidation were measured 15, 45 days, 3 and 6 months after intervention. Comparisons between groups were made by Repeated Measure test.

**Results:** Vasectomy increased serum MDA remarkably after 45 days, 3 and 6 months ( $p < 0.05$ ). After vasectomy serum PAB also increased, although not significantly.

**Conclusion:** Bilateral vasectomy increased serum levels of MDA. It is supposed that increase in MDA causes adverse effects and unsuccessful reversal vasectomy. By prescribing antioxidants, these effects can be decreased.

**Key words:** Vasectomy, Oxidative stress, Rat.

## P-117

### Anti apoptotic effects of sphingosine-1-phosphate on pre implantation human two cell embryos

Aaghajani S<sup>1</sup>, Pilevariyan A<sup>1</sup>, Bahadori M<sup>2</sup>.

1. Isfahan Completing Education University, Faculty of Biology, Isfahan Center University, Isfahan, Iran.
2. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University, Guilan, Iran.

Email: shahrzad\_taekwon@yahoo.com

**Introduction:** Fragmentation is a common phenomenon in preimplantation human embryos that some particles of cells are smaller than natural blastomeres. Its result of apoptosis that approximate be in 50 percent of IVF and ICSI embryos and in the following step of develop often resulting be stop cleavage and damage embryos. Very soon after transferring this embryo decrease there's developmental potential and pregnancy. The goal of this study is inspection sphingosine-1-phosphate ability such as an antiapoptotic material on decreasing fragmentation degree in preimplantation human embryos until blastocyst.

**Materials and Methods:** In this study patient that instigated with long protocol with using from GnRh analog with pure FSH and hMG entered. After ejecting follicles and washing with culture follicles kept in Co2 6% incubator for 2-4 hours and then denuded for ICSI and inject sperm and observing 2PN on next day and fertilization confirm put on incubator and embryos whit 25-50% of fragmentation put on culture drop with sphingosine-1-phosphate (20 and 40 mlmol/l) and instigate there's growth until blastocyst step and compare with control group.

**Results:** Finding showed increasing sphingosine-1-phosphate caused expressive increasing arriving and grad of blastosyste in group with 25% fragmentation (45 oocyte) in compare with control group (60 oocyte) and in 50 percent group didn't have any expressive different but caused stopping fragmentation degree ( $p < 0.05$ ).

**Conclusion:** By attention to findings in this research showed sphingosine-1-phosphate can be effective on improving fragmentation degree and its necessary to instigate more in this connection on pregnancy degree in embryos.

**Key words:** Apoptosis, Fragmentation, Pre implantation embryos, Sphingosine 1 phosphate.

## P-118

### Effects of cAMP elevator agents and Alpha lipoic acid (ALA) on the developmental competence of mouse GV oocytes in two step in vitro culture

Rahnama A<sup>1,2</sup>, Zavareh S<sup>1,2</sup>, Ghorbanian MT<sup>1,2</sup>.

1. School Of Biology, Damghan University, Damghan, Iran.
2. Institute of Biological Sciences, Damghan University, Damghan, Iran.

Email: Zavareh.s@gmail.com

**Introduction:** This study has conducted to assess the effects of cAMP elevator agents and alpha lipoic acid (ALA) in the presence or absence of cumulus cells in order to reach the optimal oocyte developmental competence.



**Materials and Methods:** Germinal vesicle (GV) oocytes of PMSG-primed mice were divided into cumulus denuded oocytes (CDOs) and cumulus oocyte complexes (COCs) groups. GV oocytes were cultured in Tissue Culture Medium 199 in the presence or absence of ALA; (I) without the meiotic inhibitors (control); (II) supplemented with Cilostamide; (III) supplemented with Forskolin and (IV) supplemented with combination of Forskolin and Cilostamide. Metaphase II oocytes obtained following 18h from Control groups and 48h from two step cultured oocytes (with meiotic inhibitors from 0 to 18h and without meiotic inhibitors from 18-36h) were subjected to *in vitro* fertilization (IVF).

**Results:** The COCs developmental parameters rates were higher than those of CDOs in control group, while no significant difference was observed between relevant COCs and CDOs when were cultured with Forskolin, Cilostamide and combination of them. Combined treatment significantly elevated the developmental competence in both COCs and CDOs as compared to their respective control, only Forskolin and only Cilostamide groups. The developmental parameters rates in the presence of ALA in COCs and CDOs were similar to their respective groups without ALA.

**Conclusion:** Combination of Forskolin and Cilostamide in comparison with each of them in two step *in vitro* maturation manner was more effective. Furthermore, addition of ALA could not improve developmental competence of both COCs and CDOs in one or two step *in vitro* maturation manner.

**Key words:** GV oocytes, Meiotic inhibitors, ALA, Cumulus Cells.

### P-119

#### The protective effect of erythropoietin on follicular survival in heterotopic autotransplantation of mouse ovarian tissue

Mahmoodi M<sup>1</sup>, Soleimani Mehranjani M<sup>1</sup>, Shariatzadeh SMA<sup>1</sup>, Eimani H<sup>2</sup>, Shahverdi AH<sup>2</sup>.

1. Department of Biology, Faculty of Sciences, Arak University, Arak, Iran.
2. Department of Embryology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

Email: mahmoodi803@gmail.com

**Introduction:** Ovarian transplantation is one of the key approaches to preserve fertility of young patients undergoing cancer therapy. A major limitation of ovarian transplants is massive follicular loss during revascularization. This study was aimed to investigate the effect of Erythropoietin (EPO) on graft survival in mouse ovarian transplants.

**Materials and Methods:** The female NMRI mice (4-5 weeks) were divided into three groups (n=8); control, auto transplanted mice treated with EPO (500 IU/kg i.p. one day before till 7day after transplantation), or saline. 4 weeks after transplantation, grafts and control ovaries were processed for histological examination. The total

volume of ovary, cortex, medulla and number of follicles were estimated stereologically. Also, vaginal cytology was carried out to investigate estrous cycle. Data were analyzed with SPSS using one way ANOVA and p<0.05 was considered significant.

**Results:** The total number of primordial, primary and pre-antral (p<0.01) follicles and also the mean volume of ovary, cortex and medulla (p<0.01) significantly increased in the grafts treated with EPO compared to ones treated with saline but not to the level of controls. Histological studies showed that EPO could improve the follicle mass quality in the ovarian. Restoration of estrous cycle was more rapid in the EPO group compared to the saline treated ones.

**Conclusion:** EPO could effectively improve the follicular survival of the autotransplanted ovary which clinically enhances the survival of autologous ovarian transplants.

**Key words:** Erythropoietin, Heterotopic transplantation, Ovary, Mouse.

### P-120

#### Effect of green tea (*Camellia sinensis*) extract on sperm parameters in rats treated with para-nonylphenol

Azizi P, Soleimani Mehranjani M, Shariatzadeh SMA.

Department of Biology, Faculty of Sciences, Arak University, Arak, Iran.

Email: aziziparisa90@yahoo.com

**Introduction:** Para-nonylphenol (p-NP) is an environmental contaminant disturbing reproductive properties. This study was aimed to investigate the role of Green tea extract (GTE) as an antioxidant and free radicals scavenger on sperm parameters in p-NP treated rats.

**Materials and Methods:** 24 adult male rats (215±20 gr) were divided into four groups: control, p-NP (200 mg/kg/day), GTE (200 mg/kg/day) and p-NP+GTE and orally treated for 56 days. At the end of treatments, the rats and their left testis were weighed. Then left caudal epididymis was cut in Ham's F10. Released spermatozoa were used to analyze sperm parameters including sperm number, viability, morphology and motility. Sperm chromatin quality was assessed by nuclear staining using acridine orange and aniline blue.

**Results:** A significant decrease in the number, motility, viability and sperm morphology occurred in rats treated with p-NP compared to the control ones. P-NP had no effect on sperm DNA integrity and histon-protamine replacement. Sperm number, viability and motility significantly increased to the control level in rats treated with GTE compared to the p-NP groups.

**Conclusion:** The present study demonstrated that the adverse effects of p-NP on sperm motility, viability and morphology could be recovered following administration of GTE.

**Key words:** Para-Nonylphenol, Sperm, Green tea extract, Rat.

### P-121

#### Effect of green tea (*Camellia sinensis*) extract on sperm parameters in rats treated with Bisphenol A

Taghipour S, Shariatzadeh SMA, Soleimani Mehranjani M, Hamta A.

Department of Biology, Faculty of Sciences, Arak University, Arak, Iran.

Email: samanetaghpor@yahoo.com

**Introduction:** Bisphenol A as an environmental toxicant is able to exert malformations in male reproductive system by inducing oxidative stress. The aim of this study was to investigate the antioxidant effect of (GTE) on sperm parameters in rats treated with Bisphenol A.

**Materials and Methods:** Adult male rats weighting  $209 \pm 10$  g were randomly divided into 4 groups (n=6): control, Bisphenol A (20 $\mu$ g/kg/day), GTE (100mg/kg/day) and Bisphenol A +GTE. After Oral treatments by gavage for 8 weeks, the animals were sacrificed; Body and left testis weight were recorded. Then left caudal epididymis were placed in Ham's F10 and cut into several fragments. Released spermatozoa were used to analyze number, motility, viability and abnormalities of the sperm. Sperm chromatin quality was assessed by nuclear staining using acridine orange and aniline blue.

**Results:** A significant decrease in the number, motility and viability of sperm was found in rats treated with Bisphenol A compared to the control group. Bisphenol A had no effect on sperm DNA integrity and histon-protamine replacemen. In Bisphenol A +GTE group, GTE could significantly compensate the harmful effects of Bisphenol A on sperm number, motility and viability compared to Bisphenol A group. In addition, sperm viability and motility was significantly increased in rats treated with GTE in comparison to the control and Bisphenol A+GTE group.

**Conclusion:** Green tea extract could compensate the adverse effects of Bisphenol A on sperm parameters in adult rats.

**Key words:** Bisphenol A, Green tea extract, Sperm, *Camellia Sinensis*, Rat.

### P-122

#### Vitamin D receptor BSMI polymorphism in women with recurrent abortions in Iranian population

Sharifi R<sup>1</sup>, Soltanghorae H<sup>2</sup>, Shiravi A<sup>1</sup>, Zarei S<sup>3</sup>, Khorram Khorshid H<sup>2</sup>, Ahani A<sup>2</sup>, Edalatkhah H<sup>2</sup>, Tavangar B<sup>3</sup>.

1. Biology Faculty, Islamic Azad University, Damghan Branch, Damghan, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Monoclonal Antibody Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: soltan@avicenna.ac.ir

**Introduction:** Recurrent spontaneous abortion (RSA) are a frequent reproductive problem, with two or more consecutive abortions in up to 5% of women at reproductive age. In up to 50% of cases, however, the exact underlying pathophysiologic mechanism remains undetermined. Some polymorphisms might be a probable etiology in this group. Vitamin D receptor (VDR) gene polymorphisms seem to be a good candidate to be searched due to its function in placenta.

**Materials and Methods:** This case-control study was performed on 42 women suffering who recurrent abortion referred to Avicenna Infertility Clinic and 74 healthy controls with at least two live children. Blood samples were used to extract DNA, and then PCR-RFLP designed for BSMI VDR gene. The results were analyzed using Chi-square test while a  $p < 0.05$  was considered as significance.

**Results:** The frequency of the BSMI (rs1544410 A/G) polymorphism genotypes in cases were normal (AA): 21.4%, heterozygote (AG): 47.6% homozygote (GG): 31.0% and in controls were (AA): 23.0%, (AG): 48.6%, (GG): 28.4%. The association between case and control groups was not significant ( $p = 0.954$ ).

**Conclusion:** In the present study no significant difference between case and control groups was found.

**Key words:** RSA, Polymorphism, VDR, Genotype.

### P-123

#### The individual and simultaneous effect of the microwaves and sharp noise on sperm viability and total antioxidant capacity of plasma in male rats

Ghanbari M<sup>1</sup>, Mortazavi S<sup>2</sup>, Khavanin A<sup>2</sup>, Khazaei M<sup>3</sup>.

1. Department of Occupational Health, School of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran.
2. Department of Occupational and Environmental Health, School of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
3. Fertility and Infertility Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.

Email: soroushghanbaik@gmail.com

**Introduction:** There is a great concern for the possible adverse effects of radiofrequency radiations of cell phones. Moreover, unwanted sound is one of the physical pollutants of current societies and one of the harmful elements in the workplace. Thus, because of the significant of these physical factors and their possible effects on the individuals' health, the present study was conducted to examine the effect of cell phone waves, sound, and simultaneous effect of cell phone waves and sound on sperm viability and total antioxidant capacity of blood plasma in adult male rats.

**Materials and Methods:** This experimental study was performed on twenty eight Wistar adult male rats (200-250 gr). The animals were randomly assigned to four groups (n=7): control group, two-week exposure to cell phone simulated waves group, exposure to sound group,

and simultaneous exposure to cell phone simulated waves and sound group. The means of sperm viability in all groups were determined with criteria of WHO and total antioxidant capacity of blood plasma in all groups were determined by Ferric Reducing Ability of Plasma FRAP. The results were analyzed by one-way ANOVA statistical technique followed by Tukey test using SPSS (version 16) software.

**Results:** Sperm viability in the exposure to cell phone simulated waves and simultaneous exposure to cell phone simulated waves and sound groups decreased significantly compared to control group ( $p < 0.05$ ). The total antioxidant capacity of blood plasma in all exposure groups decreased significantly compared to control group ( $p < 0.05$ ).

**Conclusion:** Exposure to cell phone waves or sharp sound can cause a significant decrease in sperm viability and a significant decrease in total antioxidant capacity of blood plasma in adult male rats which consequently results in oxidative stress.

**Key words:** Cell phone, Noise, Sperm viability, Oxidative stress, Male rat.

#### P-124

#### Investigation on the association of cytokine gene polymorphisms with recurrent miscarriage

Bahadori M<sup>1</sup>, Zarei S<sup>1</sup>, Idali F<sup>2</sup>, Zarei O<sup>3</sup>, Zarnani AH<sup>4</sup>, Jeddi Tehrani M<sup>1</sup>.

1. Monoclonal Antibody Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
2. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Department of Pharmaceutical Biotechnology, Faculty of Pharmacy, Tabriz University of Medical Sciences, Tabriz, Iran.
4. Nanobiotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: mahjed@yahoo.com

**Introduction:** Recurrent Miscarriage (RM) is defined as three or more consecutive pregnancy losses prior to the 20th week of gestation. Inflammatory cytokine cascades have been implicated in the pathogenesis of RM. Research efforts have focused on studying single nucleotide polymorphisms (SNP) in candidate cytokine genes in RM women. The aim of this study was to survey the frequency of the interleukin IL-1 $\beta$  (-31 T/C, -511 C/T and +3954 C/T), IL-1RN (+9589 A/T, +8061 C/T and +11100 T/C), IL-6 (-174 C/G), IL-10 (-592 A/C, -819 C/T and -1082 A/G) gene promoter polymorphisms in Iranian women with RM as compared to normal women.

**Materials and Methods:** In this case-control study, 105 RM women as the case and 75 healthy women with a history of two successful deliveries, without any pregnancy complications, as the control groups, were selected. Blood samples were recruited from Avicenna Infertility Clinic, Tehran, Iran. Polymerase Chain-Reaction and Restriction Fragment Length

Polymorphisms were performed to assess the frequency of the gene polymorphisms. The frequencies of the polymorphisms were calculated and compared between the case and the control groups.

**Results:** The data showed significant differences in IL10 promoter gene polymorphism (-819 C/T) frequencies between RM women and controls. However there were not any significant differences in the frequencies of interleukin IL-1 $\beta$ , IL-1RN, IL-6 and IL-10 (-592 A/C and -1082 A/G) polymorphisms between normal and RM women.

**Conclusion:** Our finding suggests IL-10 (-819 C/T) polymorphism as a risk factor for RM.

**Key words:** Abortion, Polymorphisms, Interleukin, Cytokine.

#### P-125

#### Association study of NAT2 481 C/T and 590 G/A variations with susceptibility to endometriosis in an Iranian population

Fayez D<sup>1</sup>, Irani S<sup>1</sup>, Saliminejad K<sup>2</sup>, Ahani A<sup>2</sup>, Kamali K<sup>2</sup>, Edalatkhah H<sup>2</sup>, Khorram Khorshid H<sup>2</sup>.

1. Department of Biology, Faculty of Sciences, Islamic Azad University, Science and Research Branch, Tehran, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

Email: h.khorramkhorshid@avicenna.ac.ir

**Introduction:** Endometriosis, a common heterogeneous disorder, characterized by pelvic pain and infertility in 10% of reproductive-aged women. Association of the human *N-acetyltransferase 2* (NAT2) genes with endometriosis have been investigated in several populations. The aim of this study was to evaluate the association of NAT2 variations with endometriosis in an Iranian population.

**Materials and Methods:** Totally, 132 women with diagnosis of endometriosis (Stage I-IV) and 138 healthy women who referred to Avicenna Infertility Clinic were recruited in this study. DNA was extracted from peripheral blood using salting-out method. Genotype and allele frequencies for the two variations, NAT2 481C/T and 590G/A, were determined using PCR-RFLP method. The results were analyzed by  $\chi^2$  and multiple logistic regression tests.

**Results:** The genotype frequencies in the case and control groups of NAT2 481C/T were CC of 47.8% versus 52.2%, CT of 50.3% versus 49.7%, TT of 46% versus 54%, respectively and in the case and control groups of NAT2 590 G/A were GG of 57.9% versus 42.1%, GA of 39.5% versus 60.5%, AA of 53.1% versus 46.9%, respectively. In NAT2 481 C/T variation, no significant differences in the allele and genotype frequencies were found between the case and control groups. In contrast, in NAT2 590 G/A variation the GA genotype was significantly higher in control group than patients ( $p = 0.001$ ).

**Conclusion:** Our present study suggested that NAT2 481 C/T variation was not associated with endometriosis in Iranian population. On the other hand, NAT2 590 G/A variation may be associated with susceptibility to disorder in Iranian population.

**Key words:** Endometriosis, *N-acetyltransferase 2*, Variation, PCR-RFLP.

## P-126

### Aneuploidy analysis of the unfertilized oocytes subjected to intracytoplasmic sperm injection using FISH and PRINS techniques

Ghoraiean P<sup>1</sup>, Mozdarani H<sup>1</sup>, Rezaeian Z<sup>2</sup>, Fallahi P<sup>2</sup>.

1. Department of Medical Genetics, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
2. Department of Infertility, Shariati Hospital, Tehran, Iran.

Email: p.ghoraiean@ymail.com

**Introduction:** Chromosomal aneuploidies are the major cause of fertilization and implantation failure and also pregnancy wastage. The objective of this study was to assess the rate of chromosome 21, 15, X and Y aneuploidy in unfertilized oocytes inseminated by sperm of normal and infertile men (severe oligozoospermia, rare and azoospermia) following intracytoplasmic sperm injection (ICSI), using fluorescent in situ hybridization (FISH) and primed in situ labelling (PRINS) techniques.

**Materials and Methods:** Unfertilized oocytes were analyzed, obtained from 60 women referred to infertility lab of Shariati hospital for ICSI procedure, these oocytes were studied in two groups of normal (28 oocytes each inseminated by a normal male sperm) and infertile (34 oocytes each inseminated by sperm of an infertile men). Aneuploidy rate of sex chromosomes and autosomes (15 and 21) was assessed by FISH and PRINS procedures, respectively.

**Results:** There was no considerable differences for sex chromosome aneuploidy rate between infertile (14.7%) and normal (10.7%) groups ( $p>0.05$ ), this was the same for the rate of aneuploidy of chromosomes 21 (10.7% in normal group vs 11.8% in infertile group) and 15 (7.14% vs 11.8% in normal and infertile group, respectively).

**Conclusion:** Our results showed that although the mean percent of aneuploidy rate for the chromosomes under study was increased in the infertile groups compared to normal, but it was not significant. This indicates that other than sperm aneuploidy, there might be other factors such as sperm premature chromosome condensation; sperm head decondensation, and MPF inactivation involved in failed fertilization of oocytes.

**Key words:** Aneuploidy, Unfertilised oocyte, FISH, PRINS.

## P-127

### In vitro adiponectin effect on human endometrial stromal cells

Khazaei M<sup>1</sup>, Bohlouli Oskoi S<sup>2</sup>, Sadeghi E<sup>3</sup>, Rabzia A<sup>1</sup>.

1. Fertility and Infertility Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran.
2. Department of Physiology, Islamic Azad University, Sciences and Research Branch, Tehran, Iran.
3. Department of Nutrition, Kermanshah University of Medical Sciences, Kermanshah, Iran.

Email: mkhazaei1345@yahoo.com

**Introduction:** Adiponectin secreted from adipose cell and has a direct inhibition effect on the cancer cells.

Adiponectin plays pivotal role in human reproduction and women's fertility. Adiponectin concentration decreases in endometrial cancer and endometriosis. The aim of the present study was to investigate the effect of adiponectin on human endometrial stromal (HESC) cell viability and expression of its receptors.

**Materials and Methods:** Endometrial biopsies (n=8) were used in this experimental study. Stromal cells were separated by enzymatic digestion and cell filtrations. Stromal cells of each biopsy were divided into four groups: control and 10, 100, and 200 ng/ml adiponectin concentrations. The effect of adiponectin on viability of the normal HESCs as studied by trypan blue staining and expression of mRNA Adipo R1 and Adipo R2 was analyzed by RT-PCR. Data were analyzed by one-way ANOVA and unpaired Student's t test and  $p<0.05$  was considered significant.

**Results:** Adiponectin decreased viability of normal human endometrial stromal cells in a dose and time dependent manner. Expression of Adipo R1 and Adipo R2 receptors did not change in the presence of adiponectin.

**Conclusion:** Adiponectin showed direct inhibitory effect on the viability of HESCs.

**Key words:** Adiponectin, Endometrial stromal cells, Adipo R1, Adipo R2.

## P-128

### The effect of PLLA nanofiber scaffold on proliferation of frozen-thawed neonate mouse spermatogonial stem cells

Slahi N<sup>1</sup>, Hadjighassem M<sup>2</sup>, Joghataei M<sup>1</sup>, Bakhtiyari M<sup>1</sup>, Koruji M<sup>1</sup>.

1. Cellular and Molecular Research Center and Department of Anatomical Sciences, Iran University of Medical Sciences, Tehran, Iran.
2. Department of Neurosciences, School of Advanced Medical Technolog, Tehran University of Medical Science, Tehran, Iran.

Email: koruji@iums.ac.ir

**Introduction:** Three-dimensional nanofibers scaffold act similar to the ECM/basement membrane. The goal of the study was to investigate of the effects of a poly L-lactic acid nanofiber scaffold on proliferation of frozen-thawed neonate mouse spermatogonial stem cells.

**Materials and Methods:** Spermatogonial cells (SSCs) were isolated from neonatal 3-6-day-old NMRI mice testes by two steps enzymatic digestion and differential plating. SSCs were divided into four groups: fresh SCs, fresh SCs seeded onto PLLA, frozen-thawed SSCs and frozen-thawed SSCs seeded onto PLLA. Cells were cultured in DMEM with 5% FCS and 10 ng/ml GDNF for 3 weeks. Diameter and number of clusters which were determined during the culture and semi-quantitative RT-PCR were carried out at the end of 3rd week. Presence of spermatogonia at the culture was determined by reverse transcription polymerase chain reaction (RT-PCR) for several important

spermatogonial markers (*PLZF, Oct4, GFR $\alpha$ -1, VASA, ITGA6 and ITGB1*). The significance of the data was analyzed using Repeated Measures and ANOVA tests.

**Results:** The viability rate of the fresh cell and the frozen cells after thawing were  $89.25\pm 2.2$  and  $63\pm 3.56$ , respectively ( $p < 0.001$ ). In vitro culturing of spermatogonial cells on PLLA significantly increased the formation of cell clusters in comparison with those of the control groups ( $p \leq 0.001$ ). Culturing of frozen-thawed cells on PLLA significantly decreased their diameters ( $p \leq 0.01$ ). There was a significant down-regulation of spermatogonial genes in the frozen-thawed groups after three weeks of culture.

**Conclusion:** The spermatogonial cells seeding on PLLA can increase in vitro cluster formation of neonate fresh and frozen-thawed spermatogonial cells.

**Key words:** *Spermatogonial stem cells, PLLA Nano fibers, Cryopreservation.*

### P-129

#### Study of the relation between male infertility and rs11677451 polymorphic marker in JHDM2A gene

Hoghoughi N, Hojati Z.

*Department of Biology, Faculty of Sciences, University of Isfahan, Isfahan, Iran.*

**Email:** Z.hojati@sci.ui.ac.ir

**Introduction:** JHDM2A is a histone demethylase that specifically demethylates mono- and di-methylated histone H3 lysine 9. JHDM2A (JmjC-domain-containing histone demethylase 2A, also known as JMJD1A and KDM3A) is essential for spermatogenesis. JHDM2A also binds to and controls the expression of transition nuclear protein 1 (Tnp1) and protamine 1 (Prm1) genes, the products of which are required for packaging and condensation of sperm chromatin.

**Materials and Methods:** A Non-synonymous SNP, rs11677451, has been selected by Bioinformatics studies. Four primers were designed by using Oligo primer software. Genomic DNA was extracted from the blood of 50 control samples and 100 patients with azoospermia and oligozoospermia, then *jhd2a* gene was amplified by ARMS-PCR. Finally the samples analyzed by agarose gel.

**Results:** So far we have observed bands in considered length due to designed primers, for patient and control samples, and its relationship with male infertility is under investigation.

**Conclusion:** This study has focused on polymorphic marker of *jhd2a* gene to evaluate its association with male infertility. The association reported in this study will be necessary to confidently validate this SNP and identify novel SNPs associated with male infertility that can have therapeutic purposes.

**Key words:** *Histone demethylase, JmjC-domain-containing histone demethylase, Nuclear protein, Protamine.*

### P-130

#### Effect of sperm characteristics on the success of intrauterine insemination

Moghaddam A, Malekshah A.

*Department of Infertility, Imam Khomeini Hospital, Mazandaran University of Medical Sciences, Sari, Iran.*

**Email:** mog1339@gmail.com

**Introduction:** Intrauterine insemination (IUI) is often the first starting line and common method for the treatment of infertile couples with various indications, which one of them is male factor. The purpose of this study, was to evaluate the sperm characteristics such as sperm motility and normal morphology on the success of IUI.

**Materials and Methods:** This was included a total of 904 infertile couples who underwent 1294 IUI treatment cycles.

**Results:** The results showed that the number of pregnancies was 180, resulting in a pregnancy rate per cycle of 13.91% and a couple pregnancy rate of 19.91%. Although pregnancy occurred with motile sperm count  $1 < 3 \times 10^6$  (4.76%) and  $3 < 5 \times 10^6$  (10.78%), but there was a significant increase when the average total motile sperm count was more than  $5 \times 10^6$  (18.63%). There was significant difference between pregnancy rates with the percentage of motile sperm of less and more than 50% that were 3.91% and 18.11% respectively. There was no significant difference between normal morphology sperm of less and more than 30% groups when sperm motile count was either  $< 5 \times 10^6$  (5.84%, 10.41% respectively) or  $> 5 \times 10^6$  (18.54%, 18.65% respectively).

**Conclusion:** We concluded that the motile sperm count of more than  $5 \times 10^6$  and sperm forward progression of more than 50% after preparation are necessary for IUI success, but sperm morphology is not an independent factor influencing IUI-related pregnancy.

**Key words:** *Sperm motility, Sperm morphology, IUI.*

### P-131

#### Matrix metalloproteinase-9 gene and in vitro fertilization outcome in infertile women

Shabanipour S<sup>1</sup>, Mashayekhi F<sup>2</sup>, Bahadori M<sup>3</sup>, Zahiri Soruri Z<sup>4</sup>.

1. *Faculty of Pardis, University of Guilan, Guilan, Iran.*

2. *Department of Biology, University of Guilan, Guilan, Iran.*

3. *Department of Anatomy, Alzahra Hospital, Guilan University of Medical Sciences, Rasht, Iran.*

4. *Alzahra Hospital, Guilan University of Medical Sciences, Rasht, Iran.*

**Email:** shahin.shabanipour2012@gmail.com

**Introduction:** According to latest studies, about 50 to 80 million people are suffering from infertility in the world. Infertility is the inability to conceive a child. A couple may be considered infertile if, after two years of regular sexual intercourse, without contraception, the woman has not become pregnant. Infertility in women

has many reasons but one of the most significant is implantation deficiency. There are many molecular interactions in implantation process. Matrix metalloproteinase-9 (MMP9) is a family of zinc-containing endopeptidases capable of degrading all components of the extracellular matrix (ECM) of endometrium. The aim of this study was to demonstrate whether genetic polymorphism of MMP9 C-1562T is associated with IVF outcome.

**Materials and Methods:** This study included 50 patients with infertility and 50 healthy volunteers. Genomic DNA was extracted from peripheral blood leukocytes. Genotypes were determined by polymerase chain reaction (PCR) and restriction fragment length polymorphism (RFLP). Statistical analysis was performed by using the MedCalc program version 12. We used the Chi-square ( $\chi^2$ ) test to evaluate each allele and genotype frequency among the cases and controls. The associations between the polymorphisms and the risk of endometriosis were estimated by odds ratio and their 95% confidence intervals (CIs).

**Results:** There was a significant difference in genotypes and allele frequencies between control and patients.

**Conclusion:** It is concluded that the C-1562T polymorphism in MMP9 may be associated with the outcome of in vitro fertilization in infertile women in northern Iran.

**Key words:** Implantation, In vitro fertilization, MMP9.

### P-132

#### Effect of vaginal sildenafil (Viagra) on histological and histomorphometrical structure of reproductive system in female rat

Mohammadi T<sup>1</sup>, Ahmadi A<sup>2</sup>, Rezazade Y<sup>1</sup>.

1. Department of Basic Science, Faculty of Veterinary Medicine, Islamic Azad University, Urmia Branch, Urmia, Iran.
2. Department of Basic Science, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** dr.mohammadi82@yahoo.com

**Introduction:** The endometrium is one of the major factors in the reproductive human function, because it allows to embryo implantation. Endometrium growth is thought to depend on uterine artery blood flow and the importance of endometrial development on in vitro fertilization (IVF) outcome. The aim of this study was to investigate the effect of sildenafil on histological structure of the uterus and endometrium thickness.

**Materials and Methods:** 20 mature female Wistar rats were divided into two groups. Treatment group were given 0.5 mg/kg/day of vaginal application of Viagra 3 days in a week for 4 weeks and the other were given only glycerin. After cessation of treatment the hormonal state was checked by examining the vaginal smears, and the animals were euthanized and then the genital organs were obtained for assessment. Histological changes.

**Results:** This study showed that treatment with sildenafil increased the endometrium thickness and

blood vessels in the endometrium. In the morphometrical study between two groups in the factors of uterus revealed that epithelial height, thickness of endometrium, thickness of uterus and in the thickness of glands epithelium in treatment group in comparison to the control group increased significantly ( $p < 0.05$ ).

**Conclusion:** The importance of endometrial appearance as a predictor of outcome in patients with IVF is well established. NO is recognized as a mediator of vascular smooth muscle dilation in many areas of body and endometrial growth is thought to depend on uterine artery blood flow and the importance of endometrial development on in-vitro fertilization (IVF) outcome has been previously reported.

**Key words:** Endometrium, Viagra, Rat, Histological, Morphological.

### P-133

#### The effect of aloe vera on testosterone in adult male rats

Raisi Dehkordi Z<sup>1</sup>, Delaram M<sup>1</sup>, Najafi A<sup>2</sup>.

1. Department of Midwifery, School of Nursing and Midwifery, Shahrekord University of Medical Sciences, Shahrekord, Iran.
2. Department of Reproductive Biology, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** ziba758@gmail.com

**Introduction:** The pharmacological actions of Aloe Vera, as studied in vitro, include anti-inflammatory and anti-arthritic activities, as well as anti-bacterial and hypoglycemic effects. Aloe Vera contains 75 potentially active constituents: vitamins, enzymes, minerals, sugars, lignin, saponins, salicylic acids, and amino acids. This study investigates the validity and/or invalidity of Aloe Vera gel on enhancing the reproductive activity in male rats.

**Materials and Methods:** In this trial, 33 adult male rats were randomized into three groups. The experimental groups received Aloe Vera orally for 60 days in two different sublethal doses; 100 mg/kg as high dose and 50 mg/kg as low dose, whereas the control group received distilled water.

**Results:** Significant decline in serum testosterone level was observed in both of the treated groups when compared with the control group. The respective levels in the low and high dose-receiving groups was  $1.55 \pm 0.52$  ng/ml and  $1.26 \pm 0.34$  ng/ml, respectively as compared to  $4.23 \pm 1.03$  ng/ml in the control group ( $p < 0.001$ ).

**Conclusion:** Based on the findings of the present study, it can be concluded that Aloe Vera acts as an anti-fertility agent.

**Key words:** Aloe Vera, Testosterone, Rat, Male.

### P-134

#### Histone modification of embryonic stem cells produced by somatic cell nuclear transfer and fertilized blastocysts

Farifteh F<sup>1</sup>, Salehi M<sup>1</sup>, Bandehpour M<sup>1</sup>, Mosaffa N<sup>2</sup>, Ghaffari Novin M<sup>3</sup>, Hosseini T<sup>4</sup>, Nematollahi S<sup>5</sup>, Noroozian M<sup>3</sup>, Keshavarzi S<sup>6</sup>, Hosseini A<sup>6</sup>.

1. Cellular and Molecular Biology Research Center, Faculty of Medicine, Shahid Beheshti University of Medical Science, Tehran, Iran.
2. Department of Immunology, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Cell Biology and Anatomical Sciences, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
4. Department of Molecular and Cellular Biology, University of Guelph, Iran.
5. Department of Transgenic Animal Sciences, Stem Cell Technology Research Center, Iran.
6. Mehr Infertility Institute, Rasht, Iran.

Email: f.farifteh@gmail.com

**Introduction:** Nuclear Transfer Embryonic Stem Cells (NT-ESCs) are genetically identical to the donor's cells; provide a renewable source of tissue for replacement, and therefore decrease the risk of immune rejection. Trichostatin A (TSA) as a histone deacetylase inhibitor (HDACi) plays an important role in genome reorganization and epigenetic changes. In this study we examined whether TSA treatment after Somatic Cell Nuclear Transfer (SCNT) can improve the developmental rate of embryos as well as establishment of NT-ESCs, and also whether TSA treatment can improve histone modification in NT-ESCs.

**Materials and Methods:** Mature oocytes recovered from BDF1 mice and enucleated by micromanipulator. Cumulus cells were injected into enucleated oocytes as donor. Reconstructed embryos were activated in the presence or absence of TSA and cultured for 5 days. Blastocysts were transferred on inactive MEF and ESCs lines were established. ESCs markers were evaluated by RT-PCR. Histone modifications were analyzed by ELISA.

**Results:** Result of this study showed that TSA treatment after SCNT can improve developmental rate of embryos ( $21.12 \pm 3.56$  vs.  $8.08 \pm 7.92$ ), as well as establishment of NT-ESCs line (25 vs. 12.5). We established 6 NT-ESCs in 2 experimental groups, and 3 Embryonic Stem Cells (ESCs) lines as control group. TSA treatment has no effect in H3K4 acetylation and H3K9 tri-methylation in ESCs.

**Conclusion:** In conclusion, TSA plays a key role in developmental rate of embryos and establishment of ESC lines after SCNT, and in the regulation of histone modification in NT-ESCs, in a manner similar to that of ESCs established from normal blastocysts.

**Key words:** Somatic Cell Nuclear Transfer (SCNT), Nuclear Transfer Embryonic Stem Cell (NT-ESC), Trichostatin A (TSA), Histone modification, Histone modification.

### P-135

#### Effect of retinoic acid on spermatogonial stem cell differentiation from mouse embryonic stem cell

Makoolati Z<sup>1</sup>, Movahedin M<sup>2</sup>, Forouzandeh-Moghadam M<sup>3</sup>.

1. Department of Anatomical Sciences, Fasa University of Medical Sciences, Fasa, Iran.
2. Department of Anatomical Sciences, Tarbiat Modares University, Tehran, Iran.
3. Department of Biotechnology, Tarbiat Modares University, Tehran, Iran.

Email: zohreh1438@gmail.com

**Introduction:** An in vitro system that supports spermatogonial stem cell (SSC) differentiation is useful to employment of these cells for efficient transplantation in infertility disorders. For this purpose, we compared the effects of 3  $\mu$ M concentration of retinoic acid (RA) in STO co-culture system on the differentiation of SSC from mouse embryonic stem cells (ESCs).

**Materials and Methods:** One-day-old embryoid body (EB) was cultured for 4 days in the presence of 5 ng/ml BMP4 for primordial germ cell (PGC) induction. In the next stage, ESCs derived PGCs cultured for 7 days in the presence or absence of 3  $\mu$ M concentration of RA in the STO co-culture system in order to SSC differentiation. The inductive effects were investigated immunocytochemically with CDH1. Data analyses were done with ANOVA and Tukey posttest.

**Results:** The results of immunocytochemistry showed that the mean percentage of immunostaining cells of CDH1, the late premitotic germ cell marker, had no significant difference in 3  $\mu$ M CO-CR group compared with RA free group.

**Conclusion:** Our results demonstrated that fewer cells tended to express late premitotic germ cell markers, indicating that the employment of this inducer has no apparent effect on the SSC derivation.

**Key words:** Embryonic stem cell, Retinoic acid, Spermatogonial stem cell.

### P-136

#### Ratio of Piwil2 expression in germ cells differentiated in several culture conditions

Makoolati Z<sup>1</sup>, Movahedin M<sup>2</sup>, Forouzandeh-Moghadam M<sup>3</sup>.

1. Department of Anatomical Sciences, Fasa University of Medical Sciences, Shiraz, Iran.
2. Department of Anatomical Sciences, Tarbiat Modares University, Tehran, Iran.
3. Department of Biotechnology, Tarbiat Modares University, Tehran, Iran.

Email: zohreh1438@gmail.com

**Introduction:** The aim of this study was to evaluate the expression of Piwil2, the late premitotic germ cell-specific gene, in germ cells differentiated upon several culture conditions.

**Materials and Methods:** In order to primordial germ cell (PGC) induction, 1-day-old embryoid body (EB) was cultured for 4 days in the presence of 5 ng/ml BMP4. In the next stage, ESCs derived PGCs cultured for 7 days in the presence of 3  $\mu$ M concentration of retinoic acid (RA) in the STO co-culture system in order

to PGC enrichment. For SSC differentiation from ESCs derived PGCs, the cells were cultured in the 3 following groups for 2 days: 1) combination of LIF, bFGF, RA+Sertoli co-culture, 2) combination of LIF, bFGF, RA and 3) Sertoli co-culture. Expression of Piwil2 was evaluated using quantitative PCR.

**Results:** Analysis of gene expression showed higher significant expression of Piwil2 in combination of LIF, bFGF, RA+Sertoli co-culture group relative to Sertoli co-culture group.

**Conclusion:** This finding confirmed that differentiation of SSCs from ESCs-derived PGCs improved in the presence of LIF, bFGF, RA on top of the sertoli feeder layer cells.

**Key words:** Embryonic stem cell, Piwil2, Spermatogonial stem cell.

### P-137

#### Evaluating the effect of catalase as an antioxidant on suppression the deleterious effect of ROS on in vitro embryonic development

Ahmadi A<sup>1</sup>, Sadrkhanlou RA<sup>1</sup>, Mohammadi T<sup>2</sup>.

1. Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.
2. Department of Basic Sciences, Faculty of Veterinary Medicine, Islamic Azad University, Urmia, Iran.

Email: ahmadiabbas36@yahoo.com

**Introduction:** In the in vivo condition multiple mechanisms of embryo protection against ROS exist, and these have complementary actions. But in the in vitro condition these reagents are absent and the level of ROS is higher. The aim of this study is to survey the effect of catalase as an antioxidant in two different conditions such as normal and oxidative tension in vitro.

**Materials and Methods:** Following IVF the zygotes were cultured in HTF with 4mg/ml BSA and incubated. To survey the effect of oxidative stress, zygotes were cultured for one hour in medium containing different concentrations of H<sub>2</sub>O<sub>2</sub>. Then the zygotes were placed in HTF medium in each group. To study the antioxidant effect of Catalase in oxidative tension system, after culturing in 10μM H<sub>2</sub>O<sub>2</sub>, the zygotes placed in medium with different concentrations of Catalase.

**Results:** The results of this study have shown that embryonic development following exposure to H<sub>2</sub>O<sub>2</sub> was significantly decreased. And addition of catalase to medium has improved the embryo development, embryo quality, morphology and significantly increased percentage of two cell embryos, blastocyst and cleavage rate and also significantly decreased embryo arrest in two different conditions such as normal and oxidative tension in vitro.

**Conclusion:** Oxidative stress seems to have a major role in embryo arrest in embryos cultured in vitro. The present data has shown that supplementation of the embryo culture with catalase improved the embryo development and reduced the oxidative stress impairment.

**Key words:** Catalase, Antioxidant, ROS, In vitro, Embryo.

### P-138

#### T4216C mutation in NADH dehydrogenase I gene (ND gene) is associated with recurrent pregnancy loss (RPL)

Mosaieby E<sup>1</sup>, Hosseinzadeh Colagar A<sup>2</sup>, Houshmand M<sup>3</sup>.

1. Faculty of Basic Sciences, Molecular and Cell Biology; University of Mazandaran, Babolsar.
2. National Institute for Genetic Engineering and Biotechnology, University of Mazandaran, Babolsar.

Email: e.mosaieby@stu.umz.ac.ir

**Introduction:** Several genetic factors are involved with recurrent pregnancy loss (RPL). However, few attempts have been made to associate mitochondrial DNA (mtDNA) variations with RPL.

**Materials and Methods:** Therefore, we investigated the possible effect of the T4216C mutation in the mitochondrial NADH dehydrogenase I (ND1) gene of 33 women with RPL and 100 controls, using PCR amplification and DNA sequence analysis.

**Results:** Our results showed a statistically significant association of the T4216C mutation (p<0.05) between patients and controls, which are 30% and 11%, respectively.

**Conclusion:** In conclusion, more research is essentially needed to understand the effect and role of the T4216C mutation in the progress of RPL, which may vary among individuals and different ethnic groups.

**Key words:** Mutation, Mitochondria, Cancer, Recurrent pregnancy loss(RPL).

### P-139

#### Anti apoptotic effects of sphingosine-1-phosphate on pre implantation human two cell embryos

Aaghajani S<sup>1</sup>, Pilevariyan A<sup>1</sup>, Bahadori M<sup>2</sup>.

1. Isfahan Completing Education University, Faculty of Biology, Isfahan Center University, Isfahan, Iran.
2. Cellular and Molecular Research Center, Faculty of Medicine, Guilan University, Guilan, Iran.

Email: shahrzad\_taekwon@yahoo.com

**Introduction:** Fragmentation is a common phenomenon in preimplantation human embryos that some particles of cells are smaller than natural blastomeres. Its result of apoptosis that approximate be in 50 percent of IVF and ICSI embryos and in the following step of development often resulting be stop cleavage and damage embryos. Very soon after transferring this embryo decrease there's developmental potential and pregnancy. The goal of this study is inspection sphingosine-1-phosphate ability such as an antiapoptotic material on decreasing fragmentation degree in preimplantation human embryos until blastocyst.

**Materials and Methods:** In this study patient that instigated with long protocol with using from GnRh analog with pure FSH and hMG entered. After ejecting follicles and washing with culture follicles kept in Co2 6% incubator for 2-4 hours and then denuded for ICSI



and inject sperm and observing 2PN on next day and fertilization confirm put on incubator and embryos with 25-50% of fragmentation put on culture drop with sphingosine-1-phosphate (20 and 40 μmol/l) and instigate their growth until blastocyst step and compare with control group.

**Results:** Finding showed increasing sphingosine-1-phosphate caused expressive increasing arriving and grad of blastocyst in group with 25% fragmentation (45 oocyte) in compare with control group (60 oocyte) and in 50 percent group didn't have any expressive different but caused stopping fragmentation degree ( $p < 0.05$ ).

**Conclusion:** By attention to findings in this research showed sphingosine-1-phosphate can be effective on improving fragmentation degree and its necessary to instigate more in this connection on pregnancy degree in embryos.

**Key words:** Apoptosis, Fragmentation, Pre implantation embryos, Sphingosine 1 phosphate.

#### P-140

### Comparing pluripotent genes expression in differentiated and undifferentiated cells derived BMSCs during BMP-4 and 4mT SMF treatments

Javani Jouni F<sup>1</sup>, Zafari J<sup>2</sup>, Abdolmaleki P<sup>1</sup>, Movahedin M<sup>3</sup>, Behmanesh M<sup>4</sup>.

1. Department of Biophysics, Faculty of Biological Science, Tarbiat Modares University, Tehran, Iran.
2. Department of Toxicology, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.
3. Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.
4. Department of Genetics, Faculty of Biological Science, Tarbiat Modares University, Tehran, Iran.

**Email:** fa.javani@gmail.com

**Introduction:** Bone morphogenetic protein (BMP)-4 has a crucial role on Primordial Germ cells (PGCs) development in vivo which can promote stem cell differentiation to PG-like cells. Also, static magnetic field (SMF) can effect on the rate of differentiation of bone marrow stem cells to rat primordial germ cells. In this study, we investigate the profiling of pluripotent gene expression performed on Bone Mesenchymal Stem Cells (BMSCs) induced to differentiate by BMP-4 and SMF to identify genes which change in expression correlates with down regulation of pluripotency and up regulation of germ cell genes. This method could leads to a possible cell based therapy for infertility treatment and avoiding tumorigenic effects of BMSCs.

**Materials and Methods:** Passage4 rat BMSCs were characterized by CD90, CD29, CD11b and CD45 markers and osteo-adipogenic differentiation. The cells were simultaneously treated BMP4 and 4mT SMF (24 and 48h). Expression of Oct-4, C-Myc and Mvh genes were analyzed by qPCR in BMSCs and BMSCs derived PGCs.

**Results:** CD90+, CD29+, CD11b- and CD45-BMSCs were able to differentiate to osteo-adipogenic lineages.

QPCR results indicated that there was significant up regulation ( $p \leq 0.05$ ) in expression of Mvh with BMSCs. A significant down regulation ( $p < 0.05$ ) was observed in Oct-4 and C-Myc expression PGCs with BMSCs.

**Conclusion:** The outcomes of this study showed undifferentiated mesenchymal stem cells were tumorigenic because of over expression of oncogenic gene such as C-Myc. Also, treatment with BMP4 and 4mT SMF had a positive effect on early germ cell induction and caused down regulation in some of pluripotent genes expression in BMSCs derived.

**Key words:** Primordial germ cells, Tumorigenic, Pluripotency, BMP4, Static magnetic field.

#### P-141

### Frequency of the -397C/T and -351A/G polymorphisms in estrogen receptor alpha gene (ESR1) in Iranian women with recurrent pregnancy loss

Mahdavi pour M<sup>1,2</sup>, Zarei S<sup>2</sup>, Fatemi R<sup>3</sup>, Jeddi Tehrani M<sup>2</sup>, Rajaei F<sup>1</sup>, Idali F<sup>3</sup>.

1. Cell and Molecular Research Centre, Qazvin University of Medical Sciences, Qazvin, Iran.
2. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
3. Monoclonal Antibody Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.
4. Reproductive Immunology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

**Email:** F.Ideali@avicenna.ac.ir

**Introduction:** Recurrent pregnancy loss (RPL), recognized as an important clinical problem, is a multifactorial disorder as both genetic and environmental factors are involved. The current study investigates the association of estrogen receptor alpha gene (ESR1) polymorphisms with the risk of RPL in a population of Iranian women.

**Materials and Methods:** In this case-control study, one hundred and five women with a history of three or more consecutive pregnancy losses before 20th week of gestation and 74 healthy women with at least two live births and no history of pregnancy loss were included. Using Restriction Fragment Length Polymorphism (RFLP) analysis, we investigated the frequencies of ESR1 (-397C/T and -351A/G) gene polymorphisms in case and control subjects.

**Results:** The genotype and gene frequencies for each group were determined as follows: For -397C/T polymorphism, the genotype frequencies in the control group were: wild type (CC): 10.8%, heterozygote (CT): 52.7% and homozygote (TT): 36.5%, and, in the case group the CC, CT and TT genotypes frequencies were 13.3%, 53.3% and 33.3%, respectively. For -351A/G polymorphisms, the wild type (AA), heterozygote (AG) and homozygote (GG) genotypes frequencies in the control group were (40.5%, 51.4% and 8.1%) and those in the case group were 41%, 49.5% and 9.5%, respectively. The Chi-square and Man-Whitney U test analyses were used and no significant association between recurrent pregnancy loss and the ER-alpha

gene polymorphisms, -397C/T and -351A/G, were detected.

**Conclusion:** The present data suggest that the studied polymorphisms on ESR1 gene do not influence on the risk of recurrent pregnancy loss in the studied population.

**Key words:** Estrogen receptor, Polymorphism, RPL, RFLP.

### 3- Urology, Andrology

#### P-142

#### The effect of selective Cox-2 inhibitor in male rats' fertility (An experimental design)

Jahanpour N<sup>1</sup>, Jahanpour F<sup>2</sup>, Azodi P<sup>3</sup>.

1. Department of Education, Fars Province, Shiraz, Iran.
2. Nursing Faculty, Bushehr University of Medical Sciences, Bushehr, Iran.
3. Department of Anesthesiology, Pirapezeshki Faculty, Bushehr University of Medical Sciences, Bushehr, Iran.

Email: n.jahanpour@yahoo.com

**Introduction:** COX-2 selective inhibitor is a form of non-steroidal anti-inflammatory drug (NSAID) that directly targets COX-2, an enzyme responsible for inflammation and pain. It is the main feature of celecoxib. In some patients that used celecoxib for a long time, unusual effect of this drug may be seen. The goal of this survey is assess the effect celecoxib on male-reproductive system functions.

**Materials and Methods:** In This experimental survey we study on the effect of celecoxib on rat reproductive system, on spermatogenesis and the level of blood testosterone hormone. Histological studies and measuring of weight (testis, prostate, seminal vesicle and epididymis) and the level of blood testosterone are done. 50 rat with 200-230 gr. weight selected and compared in 5 groups. Control group (no drug given), sham group (solvent drug: Di- methyl sulfoxide), 3 cases group (orally celecoxib 10, 20 and 40 mg/kg given daily) for 15 days. In the end of 15 days heart blood sampling for measuring serum testosterone level accomplished after that reproductive systems separated and prepared for histological study.

**Results:** Result showed sertoli cells in control and case groups are differences. So that in case group (40 mg/kg) number of sertoli cells decreased due to decrease testosterone level. This can cause production of abnormal sperms. significant differences are seen in the mean weight of prostate per body weight in case group (40 mg/kg) in compared with control group.

**Conclusion:** Use of high doses of celecoxib can decreased size and number of Lydig cells and this is cause of decreased testosterone hormone.

**Key words:** Selective Cox-2 inhibitor, Infertility, Testosterone, Hormone.

#### P-143

#### The supplementation of reduced glutathione and superoxide dismutase antioxidants in freezing extender maintained maintained phrase replace to maintenance

Olfati Karaji R, Daghigh Kia H, Alijani S.

Department of Animal Sciences, Faculty of Agriculture of Tabriz University, Tabriz, Iran.

Email: eng\_rastegar2010@yahoo.com

**Introduction:** The cryopreservation steps induce biophysical and biochemical stresses on sperm and/or its organelles. This study was conducted to determine the effects of different levels supplementation of superoxide dismutase (SOD) and reduced glutathione (GSH) antioxidants before freezing on sperm quality parameters after thawing of Bull semen samples.

**Materials and Methods:** A total 20 ejaculates (5 ejaculates per bull) was collected from 4 Holstein bulls. SOD (100 and 150 IU/ml) and GSH (5 and 7.5 mM) antioxidants was added to Tris - egg yolk extender and frozen. After thawing samples, the total and progressive motility (TM and PGM), sperm viability and positive response to the hypo-osmotic swelling test (HOST) parameters were determined at zero and 2 hours of incubation.

**Results:** Adding SOD and GSH antioxidants did not reveal significant differences between treatments in semen parameters at the initial hour of incubation after thawing. But, in the 2 h incubation of post-thawed medium contains SOD (100 IU/ml) significantly improved sperm TM ( $p < 0.01$ ), viability ( $p < 0.05$ ) and membrane integrity ( $p < 0.05$ ) compared to control group. In samples containing SOD (150 IU/ml), sperm membrane integrity was maintained ( $p < 0.05$ ) than to freezing medium without any additives. In the semen samples with antioxidant GSH (5 mM), TM ( $p < 0.05$ ) and membrane integrity ( $p < 0.05$ ) of the sperm are considerably improved after thawing compared to control.

**Conclusion:** This research showed that supplementation of SOD and GSH antioxidants in freezing semen medium maintained the post-thawed bull semen quality.

**Key words:** Semen cryopreservation, Reduced glutathione, Superoxide dismutase, Sperm quality.

#### P-144

#### The effect of Superoxide dismutase plus reduced glutathione supplementation on sperm quality parameters of frozen-thawed bull semen

Olfati Karaji R, Daghigh Kia H, Moghaddam G.

Department of Animal Sciences, Faculty of Agriculture of Tabriz University, Tabriz, Iran.

Email: eng\_rastegar2010@yahoo.com

**Introduction:** The frozen-thawing process is known as inducing the oxidative stress that leads to reduced sperm function and fertility capacity. The aim of the present study was to determine the supplementation effect of superoxide dismutase (SOD) plus reduced glutathione (GSH) antioxidants on the diluted bull semen quality after freezing-thawing process.

**Materials and Methods:** 20 ejaculates (5 ejaculates per bull) were collected and pooled. The pooled semen

samples were diluted in the Tris-egg yolk based extender containing different GSH×SOD (mM×IU/ml) concentrations (5×100, 7.5×100, 5×150, and 7.5×150) and a control group, subsequently these treatments cooled to 5°C and then frozen in 0.5 ml French straws. The total and progressive motility (TM and PGM) determined by computer assisted sperm analysis (CASA), sperm viability were assessed by Eosine-Nigrosine stains and sperm membrane integrity was evaluated using the hypo-osmotic swelling test (HOST) at zero and 2 h of incubation (37°C) after thawing samples.

**Results:** Our results showed that GSH×SOD with 5×100 mM×IU/ml concentration have positive effects in sperm TM, viability and membrane integrity (p<0.05). Also, 7.5×100 mM×IU/ml concentration improved the sperm PGM percentage (p<0.01) and Membrane integrity (p<0.05) than the control group.

**Conclusion:** The current study showed that a combination of antioxidants GSH×SOD, particularly 5×100 and probably 7.5×100 concentrations have positive effects on quality of bull semen.

**Key words:** Semen Cryopreservation, Oxidative Stress, Reduced Glutathione, Superoxide Dismutase.

#### P-145

### The comparison of Rosemary (*Rosmarinus officinalis*) extracts and reduced glutathione antioxidant on biochemical assays after cryopreservation process of bull semen

Olfati Karaji R, Daghigh Kia H, Farshadiyan SH, Sadeghi S.

Department of Animal Science, Faculty of Agriculture of Tabriz University, Tabriz, Iran.

Email: eng\_rastegar2010@yahoo.com

**Introduction:** The over production of Reactive Oxygen Species (ROS) during semen cryopreservation induced the harmful damages on sperm membrane lipid composition. The purpose of the present study was to determine the effect of different concentrations of Rosemary extract (ROM) and its combination with reduced glutathione (GSH) as well as comparison these with GSH treatment in freezing extenders on sperm biochemical analyses of frozen-thawed bull semen.

**Materials and Methods:** 24 ejaculates (6 ejaculates per bull) were collected and pooled. Semen samples were diluted in an egg yolk-Tris -based extender containing GSH (5 mM) (Treatment I), ROM (5 and 10 g/100 ml) (Treatments II and III), and ROM with GSH (5 mM GSH+5 g/100 ml of ROM and 5 mM GSH+10 g/100 ml of ROM) (Treatments IV and V) and a control group (Treatments VI). Subsequently, these treatments cooled to 5°C during 2 h and then frozen in 0.5 ml French straws by semi-automatic freezing machine, using liquid nitrogen. The GPx and SOD activity and LPO value were evaluated after thawing samples.

**Results:** This study showed that, using rosemary extracts alone (III treatment) had positive effects on

reduction of LPO and increasing of GPx activity (p<0.05) compared to control group. Also, a reduction of LPO and increase of GPx activity was observed in GSH+ROM compared to the control group (p<0.05).

**Conclusion:** Our research revealed the adding of Rosemary extract has positive effects on some sperm biochemical parameters in bull semen freezing medium which is associated to its good fertility capacity.

**Key words:** Cryopreservation, Reduced Glutathione, Rosemary, Bull Semen.

#### P-146

### The survey of expression levels of microRNA-100 and microRNA-99a and their correlation with estrogen receptor alpha expression levels in infertile oligospermic patients

Abhari A<sup>1</sup>, Sadaghiani M<sup>2</sup>, Farzadi L<sup>2</sup>, Shahnazi V<sup>2</sup>, Zarghami N<sup>1</sup>, Nouri M<sup>1</sup>.

1. Department of Biochemistry and Clinical Laboratories, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran.

2. Infertility Center, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: abharial@tbzmed.ac.ir

**Introduction:** Infertility is one of the problems in society today. About 15% of couples are infertile, that male infertility accounts for 50% of total human infertility. Oligospermia is one of the problems with male infertility, which associated with decreases in sperm count and also sperm motility and morphology in many cases be impaired. Micro RNA (miRNA) has Sequences between 18-25 nucleotides which have a role in regulating levels of more than 70% of gene expression. Estrogen plays special role in the development and regulation of the male reproductive system. In male mice estrogen receptor alpha (ERα) knock-out (ER koα), these mice were infertile and severe impairment in spermatogenesis and seminiferous tubules was observed. It was proved that miRNA-100 and miRNA-99a is involved in the regulation of ERα gene.

**Materials and Methods:** In this study, change the expression levels of miRNA-100 and miRNA-99a and their correlation with ERα expression levels were evaluated in 43 oligospermic patients compared with 43 control subjects. After washing and separating, sperm's miRNA and RNA was isolated and then cDNA was synthesized.

**Results:** The expression levels of miRNA-100 and miRNA-99a and ERα were evaluated by real time PCR method. Mir-99a level was significantly higher than those in normal controls (p<0.05). Also, we have found that, both ERα and mir-100 levels significantly decreased in comparison with normal group (p<0.05).

**Conclusion:** The decreases of mir-100/mir-99a and ERα expression level in spermatozoa cells of oligospermic patients may be associated with the susceptibility and progression of infertility.

**Key words:** MicroRNA, Oligospermic, Estrogen receptor alpha, Infertility.

### P-147

#### Effect of chronic alcoholism on sperm quality

Shojazadeh S, Ahmadi A, Ghodrati Gholenji S.

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: dr.shojazade@gmail.com

**Introduction:** Prolonged alcohol abuse can lead to impotence, sterility and 'feminisation'. When alcohol is broken down in the body, it may also interfere with normal sperm structure and movement.

**Materials and Methods:** Twenty adult male mice were divided in 2 groups: control sham (salin normal) and test group received ethanol (3 g/kg body weight as 25%, v/v) was given by gastric intubation daily for 45 days. After 45 days all mice were sacrificed and cauda epididymis were removed and placed in 1ml HTF+BSA 4mg/ml and incubated for 30 min in CO<sub>2</sub> incubator (5% CO<sub>2</sub>, 37°C) to allow the spermatozoa to swim out (p<0.05). The spermatozoal suspension was analyzed for sperm motility, concentration in the cauda epididymis, viability and sperm chromatin quality and DNA integrity was assessed by Aniline Blue and Acridine Orange staining following sperm sample.

**Results:** This study showed that treatment with ethanol caused significant decrease in sperm concentration in cauda epididymis, motility, and viability, while abnormal sperms increased as compared to control. These changes were associated with significant increase in DNA damage and chromatin abnormality in the cauda epididymal spermatozoa as evidenced by Acridine Orange (AO) and Aniline Blue staining respectively (p<0.05).

**Conclusion:** The present study demonstrates that chronic consumption of ethanol has toxic effect on spermatozoa and impairs fertility in male mice. Although it is hypothesized that chronic consumption of ethanol induced testicular injury with adverse effect on sperm production, sperm DNA integration and nuclear maturation.

**Key words:** Alcohol, Sperm, Viability, DNA damage, Mouse.

### P-148

#### Effect of experimental alcoholism on sperm in vitro fertilization potential in mice

Shojazadeh S, Ahmadi A, Ghodrati Gholenji S.

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: dr.shojazade@gmail.com

**Introduction:** This study was designed to determine the effects of administration of alcohol on sperm fertilization potential. Alcoholics are often associated with fertility disturbances with low sperm count and impaired sperm motility. This study was designed to determine the

effects of administration of alcohol on sperm fertilization potential.

**Materials and Methods:** Twenty adult male mice were divided in 2 groups: control sham and test group received ethanol (3 g/kg body weight as 25%, v/v) was given by gastric intubation daily for 45 days. After 45 days all mice were sacrificed and cauda epididymis were removed and placed in 1ml HTF+BSA 4mg/ml and incubated for 30 min in CO<sub>2</sub> incubator (5% CO<sub>2</sub>, 37°C). For each male mouse, 3 female mice were superovulated, killed and oocytes collected by dissecting method. And collected oocytes were fertilized by fresh sperms of each groups. The rate of fertilization and embryology development was examined in period of 120 hours.

**Results:** The results from in vitro fertilization showed that experimental alcoholism have been decreased significantly the sperm fertilization potential, preimplantation embryo development, embryo quality, percentage of two cell embryos and blastocysts rate compared with control group and the rate of arrested embryos including lysis and degenerated blastomers and cytoplasmic vesicles has been increased significantly in ethanol treated group.

**Conclusion:** The present study demonstrates that chronic consumption of ethanol has toxic effect on spermatozoa and impairs fertility in male mice. Although it is hypothesized that chronic consumption of ethanol have adverse effects on birth outcomes.

**Key words:** Ethanol, In vitro fertilization, Mice.

### P-149

#### Effect of ethanol consumption on testis tissue in mice

Shojazadeh S, Ahmadi A, Ghodrati Gholenji S.

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: dr.shojazade@gmail.com

**Introduction:** Chronic exposure to ethanol may results in pathophysiologic changes in cellular function. The present work was designed to investigate the morphology of testis submitted to experimental ethanol ingestion.

**Materials and Methods:** Twenty adult male mice were divided in 2 groups: control sham (salin normal) and test group received ethanol (3 g/kg body weight as 25%, v/v) was given by gastric intubation daily for 45 days. After 45 days all mice were sacrificed. their testis were immediately removed, washed in normal saline and placed in fixative formalin. After routine histological processing and embedding in paraffin, sections of 10 m thickness were cut and stained by Hematoxylin-Eosin. Prepared specimens were examined and photographed by light microscopy.

**Results:** Abnormal testicular changes occurred and seminiferous tubules destructions were also observed.

The number of Leydig cell, spermatogonia cells, Sertoli cells were decreased.

**Conclusion:** The present study demonstrates that chronic consumption of ethanol has toxic effect on spermatozoa and structure of testis.

**Key words:** Ethanol, Testis tissue, Mice.

### P-150

#### Evaluation of sperm parameters in hyperprolactinemic adult male mice

**Mostafavi M, Ahmadi A.**

Laboratory of Embryology, Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

**Email:** aram.ahmadi82@gmail.com

**Introduction:** Hyperprolactinemia is a common endocrinological disorder that may be caused by several physiological and pathological conditions. High serum prolactin concentration affects on hypothalamus-pituitary axis and makes changes on LH and FSH plasma concentration and consequently testosterone that cause different effects on sperm production process. In this study, the effects of hyperprolactinemia on sperm count, motility and other parameters were investigated.

**Materials and Methods:** 12 adult male mice (age: 6-8 weeks) were divided in 2 groups. For hyperprolactinemia induction treatment group received 40mg/kg Sulpiride solution daily for 45 days IP. Control sham received sesame oil as drug carrier. After 45 days all mice were sacrificed by cervical dislocation and cauda epididymis were removed surgically and placed in 1 ml HTF + BSA 4mg/ml medium and incubated for 30 min in CO<sub>2</sub> incubator (5% CO<sub>2</sub>, 37°C). The spermatozoal suspension was analyzed for sperm concentration, motility and viability. Sperm chromatin quality and DNA integrity were assessed by Aniline blue and Acridine Orange staining methods.

**Results:** Significant decreased in sperm motility and count were showed in hyperprolactinemic group, while abnormal sperms increased as compared with sham. Studying of sperm viability and DNA maturation showed significant reduction and the rate of DNA damage increased so much in compare with control sham group.

**Conclusion:** Results proved that hyperprolactinemia has negative effects on sperm parameters by hypothalamus-pituitary axis impression and in some cases causes secondary infertility.

**Key words:** Hyperprolactinemia, Mouse, Sperm count, Sperm quality, DNA damage.

### P-151

#### Investigation of sperm mitochondrial DNA deletions, lipid peroxidation and total antioxidant levels in fertile and infertile smoker and non-smoker men

**Karimi F, Hosseinzadeh Colagar A.**

Department of Molecular and Cell Biology, Faculty of Basic Sciences, University of Mazandaran, Mazandaran, Iran.

**Email:** fatemekarimi2007@yahoo.com

**Introduction:** To determine the correlation between large scale deletion of mtDNA with two chemical biomarker of oxidative stress (TAC and MDA) as a one reason of idiopathic male infertility in seminal plasma of infertile and smoker men.

**Materials and Methods:** In this research 60 semen samples including fertile and infertile smoker-nonsmoker men were collected from IVF center. Seminal TAC and MDA levels in all specimen were measured by FRAP and TBA methods, respectively. Long PCR and primer-shift PCR techniques were used for multiple large scale mtDNA deletions.

**Results:** Our results showed that mean concentration ( $\pm$ S.D) of TAC in the seminal plasma of infertile and smoker men were significantly lower than fertile and non-smoker men. In contrast, seminal MDA levels of infertile and smoker men were significantly higher than fertile and non-smoker men. Analysis of PCR products was shown multiple deletions; 4977-bp, 7599-bp and 7491-bp of mtDNA in spermatozoa of all groups (fertile and infertile smoker and non-smoker men). However the frequency of multiple mtDNA deletions in infertile and smoker men were significantly higher than fertile and non-smoker men.

**Conclusion:** These results indicate that, antioxidant deficiency and increased LPO or their cytotoxic products such as MDA with oxidative damage to DNA may be fixed as large scale deletions of mtDNA. Therefore, we suggest that it is necessary to ascertain the molecular basis of these defects in infertile and smoker men with a history of infertility for better diagnostic and management of infertility treatment/assisted reproductive technique (ART).

**Key words:** Infertile men, Smoker men, Mitochondrial DNA Deletions, Lipid peroxidation, Total Antioxidant Capacity (TAC).

### P-152

#### Genotyping of Chlamydia trachomatis isolated from semen samples referred to Avicenna Infertility Center

**Hajikhani B, Rajabalinejad A, Bagheri R, Chamani Tabriz L.**

Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

**Email:** lchamani@avicenna.ac.ir

**Introduction:** Chlamydia trachomatis infection is one of the most prevalent sexually transmitted infections (STIs) worldwide which is currently classified into 15 genotypes: A, B, Ba (AP-2), C, D, E, F, G, H, I, J, K, L1, L2 and L3. The geographical distribution and prevalence of different genotypes give insights into the molecular epidemiology of C. trachomatis in a certain community. Since there is scarce data available referring to the distribution of C. trachomatis genotypes

in Iran, current study was performed to determine the prevalence of *C. trachomatis* genotypes in semen samples by genotyping.

**Materials and Methods:** 240 semen samples obtained from men referred to Avicenna Infertility Clinic were examined in this study. Preparation and DNA extraction was performed using standard methods. Semi nested PCR-based RFLP of the *omp1* gene were used to determine the genotype of these organisms.

**Results:** 20 out of 240 semen samples (8.3%) were positive for *Chlamydia trachomatis*. Performing Semi nested PCR-based RFLP on positive samples revealed that genotype E was the most prevalent with 45% followed by genotype F (25%), D/Da (20%), G (5%) and K (5%).

**Conclusion:** PCR-based RFLP analysis is a valuable method to increase the knowledge on genotype distribution of *Chlamydia trachomatis* in epidemiological surveys. In this study, predominate serovars were E and F which are similar to the results of most other studies. Further work will be necessary to evaluate the contribution of each genotype with different clinical manifestation or determining of predominate genotypes in other groups.

**Key words:** *Chlamydia trachomatis*, Semen, Genotyping, RFLP.

### P-153

#### Serology of herpes simplex virus 1 and 2 in infertile men and women referred to Avicenna Infertility Clinic, Tehran, Iran

Al-Mosawi M<sup>1</sup>, Hosseini S<sup>1</sup>, Hajikhani B<sup>2</sup>, Nasiri M<sup>2</sup>, Chamani Tabriz L<sup>2</sup>.

1. Department of Microbiology, Faculty of Biological Sciences, Shahid Beheshti University, Tehran, Iran.
2. Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran.

**Email:** lchamani@avicenna.ac.ir

**Introduction:** Herpes Simplex Virus (HSV) is a causative agent for creation of patches in oral or reproductive system. The virus has a global expansion of two kinds of 1 and 2 in human disease worldwide. The aim of this study was to assess the prevalence of HSV-1 and HSV-2 antibodies in infertile patients' samples conferring to Avicenna Infertility Clinic, Tehran.

**Materials and Methods:** After written consent, 50 serum samples were taken from infertile women. Similarly, 50 serum samples were obtained from infertile men. Type-specific enzyme linked immunosorbent assay Kits (EUROIMMUN) were used to assess HSV-1 and HSV-2 serum IgG and IgM antibodies.

**Results:** 41 (82%) and 10 (20%) out of 50 serum samples from infertile women were positive for HSV-1 IgG and IgM antibodies respectively. In the case of HSV-2, 9 (18%) and 2 (4%) of samples showed positive results for IgG and IgM respectively. In infertile men, these amounts were as follows: 41 (82%) positive for HSV-1 IgG and 9 (18%) positive for HSV-1 IgM. As well as 8 (16%) positive for HSV-2 IgG and 2 (4%)

positive for HSV-2 IgM. All people who infected with HSV-2 also were positive for HSV-1 in both groups.

**Conclusion:** The results of this study showed that the prevalence of HSV in infertile patients in Tehran city is high. Since both HSV-1 and HSV-2 can infect infertile patients, assessment of HSV infection in infertile patients will help for proper management of infection and will also be useful for epidemiological purposes.

**Key words:** ELISA, Herpes simplex virus, Infertile Persons, antibody, Serum.

### P-154

#### Expression of NOX5 in human teratozoospermia compared to normozoospermia

Ghani E<sup>1</sup>, Keshtgar S<sup>1</sup>, Habibagahi M<sup>2</sup>, Ghannadi AR<sup>3</sup>, Kazeroni M<sup>3</sup>.

1. Department of Physiology, School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran.
2. Immunotherapy laboratory, School of Medicine, Department of Immunology, Shiraz University of Medical Sciences, Shiraz, Iran.
3. Shiraz Infertility Center, Shiraz, Iran.

**Email:** esmaeel\_ghani@yahoo.com

**Introduction:** Spermatozoa are capable of producing small amounts of reactive oxygen species (ROS), and sperm in teratozoospermia generate more ROS than sperm in normozoospermia. The source of ROS production in ejaculated human sperm has not been fully clarified. Recently, NADPH oxidase 5 (NOX5) was detected in human sperm, and ROS generation by this enzyme was reported.

**Materials and Methods:** We investigated the magnitude of NOX5 expression in normozoospermic (n=12) and teratozoospermic (n=13) semen samples with different percentages of abnormal sperm. The existence of NOX5 enzymes in sperm was analysed by immunocytochemistry and flow cytometry and correlated with morphological abnormalities.

**Results:** Immunofluorescent studies identified NOX5 in acrosomal, equatorial, post-acrosomal regions, the body, and the tail of both normal and abnormal sperm. Teratozoospermic semen samples had higher percentages of NOX5-positive sperm, and expressed more NOX5 (based on higher mean fluorescent intensity) than normal semen samples. Positive correlations were observed between abnormal sperm morphology and both the percentage of NOX5-positive sperm, and the magnitude of NOX5 expression.

**Conclusion:** Based on these findings, we can assume that there is a positive correlation between ROS generation in teratozoospermia and that in NOX5 expression.

**Key words:** NADPH oxidase 5, Human, Teratozoospermia, normozoospermia, immunocytochemistry.

**P-155****The effect of date palm pollen on morphology of sperm parameters**

Rasekh Jahromi A<sup>1</sup>, Karimi Jashni H<sup>2</sup>, poorshojai S<sup>3</sup>, Pad N<sup>1</sup>.

1. Department of Obstetrics and Gynecology, Jahrom University of Medical Sciences, Jahrom, Iran.

2. Department of Anatomy, Jahrom University of Medical Sciences, Jahrom, Iran.

3. Rasekh Clinic, Jahrom University of Medical Sciences, Jahrom, Iran.

Email: drrasekhjahromi@gmail.com

**Introduction:** There are many ancient records of herbal medical plants. The phoenix dactylifera date palm pollen is used in the traditional medicine for male infertility. The aim of this study was to determine the effects of orally administered date palm pollen on sperm parameters of infertile men.

**Materials and Methods:** In this clinical trial, 30 nonsmoker infertile men whose problem could not be solved surgically were enrolled. They were treated by date palm pollen for 2 months. 7 gr of date palm pollen, was dissolved in drinking milk and administered 3 times a week during the study course. Semen analysis was done before and after the treatment and the results were compared.

**Results:** The mean sperm count was  $12.33 \pm 5.61 \times 10^6$ /mL at baseline and  $22.03 \pm 12.17 \times 10^6$ /mL after the treatment period ( $p < 0.05$ ). The mean percentage of sperm progressive motility was  $14.69 \pm 6.8\%$  before the treatment which increased to  $24.01 \pm 11.11\%$  thereafter ( $p < 0.05$ ). No significant increase was detected in sperm with normal morphology. Fertility rate is 16.6% in these patients. All pregnancies were resulted in term pregnancies.

**Conclusion:** date palm pollen seems to improve the sperm count and motility in infertile men. Pregnancy outcomes have been remarkable in this natural treatment. We believe further studies on larger sample sizes are needed to elucidate the potential role and mechanism of action of date palm Pollen in the treatment of male infertility.

**Key words:** Palm pollen, Sperm, Male, Morphology.

**P-156****Decreased motility rates of spermatozoa from infertile men by uropathogenic E. coli (UPEC)**

Rastgou Z<sup>1</sup>, Khoramabadi N<sup>2</sup>, Mohabati Mobarez A<sup>2</sup>, Movahedin M<sup>3</sup>.

1. Department of Biology, Islamic Azad University, Tehran, Iran.

2. Department of Bacteriology, Tarbiat Modares University, Tehran, Iran.

3. Department of Anatomy, Tarbiat Modares University, Tehran, Iran.

Email: rastgou.z@gmail.com

**Introduction:** Male urogenital tract and accessory sex glands infections are the most important causes of bacterospermia and a major risk factor of male infertility worldwide. Bacteria may affect sperm motility directly, e.g. bacterial adhesion or cytotoxins. *E. coli* as a most prevalent cause of urinary tract infection may play a significant role in decreased sperm motility, quality and cause infertility in infected male patients.

**Materials and Methods:** Clinical examinations of genital tract, spermiogram and microbiological culture for isolation and identification of the common bacteria that mostly colonize the patients' reproductive tract were performed for each patient. We used semen samples from ten men which their fertility was proven without anatomical problems or infections as control samples. EMB agar media were used for isolation of *E. coli* strain. Isolated strains were mannose sensitivity performed subsequently.

**Results:** Results for semen sample cultures proved 10 patients of Fifty four patients with *E. coli* infection ( $\geq 10^3$ CFU.ml<sup>-1</sup>). Mean value of total and progressive movement for these patients were  $23.70 \pm 1.25$  and  $10.60 \pm 1.71$  respectively compared to that of normal samples which were  $82.60 \pm 3.912$  and  $30.80 \pm 1.483$  respectively. Mannose sensitivity indicated the presence of type-1 pili in isolated *E. coli* strains and implies that they are Uropathogenic strains (UPEC).

**Conclusion:** *E. coli* attaches to the superficial structures of human spermatozoa via type-1 pili. All isolates were proven to be mannose sensitive implying that these patients were all infected with the uropathogenic *E. coli*. Total and progressive motility rates for patients were significantly lower than that of normal samples.

**Key words:** *E. coli*, Bacteriospermia, Infertility, Sperm motility.

**P-157****Evaluation of morphometrical and histomorphometrical changes of testes and sperm quality in mice treated with Aflatoxin**

Mohammadi T<sup>1</sup>, Ahmadi A<sup>2</sup>, Rezazade Y<sup>1</sup>, Namavar M<sup>1</sup>.

1. Department of Basic Sciences, Faculty of Veterinary Medicine, Islamic Azad University, Urmia Branch, Urmia, Iran.

2. Department of Basic Sciences, Faculty of Veterinary Medicine, Urmia University, Urmia, Iran.

Email: dr.mohammadi82@yahoo.com

**Introduction:** Aflatoxins (AFs) are among the major dietary toxins which contribute to deterioration of male reproductive health. The aim of this study was to investigate the effect of aflatoxin on histological structure of the testis and sperm characteristics and cellular targets in spermatogenic compartment and blood level of testosterone.

**Materials and Methods:** 40 male adult NMRI mice were divided in 4 groups. Test groups received 100, 300, 700 mg/kg Aflatoxin daily by gavage and control received solution of Aflatoxin. After 35 days all mice

were sacrificed and Blood samples were collected for analysis of testosterone level. Cauda epididymis were removed surgically then teased in 1 ml HTF+BSA 4mg/ml medium (pre-equilibrated) to obtain spermatozoa. The spermatozoal suspension was analyzed for sperm parameters and then the testis were removed for histopathological analysis. The data were analyzed by one way ANOVA ( $p < 0.05$ ).

**Results:** The results revealed that the the percentage of seminiferous tubules positive differentiation index (TDI) repopulation index (RI), spermiogenesis index (SPI) significantly increased, leydig cell and the sertoli cells significantly decreased in treated groups with aflatoxin B1. Sperm analysis revealed that sperm motility and viability and Sperm count remarkably decreased, more ever the percentage of sperm with DNA disintegrity, nuclear immaturity and morphologic immaturity Were significantly increased in treated mice. analysis for testosterone revealed that the serum testosterone significantly decrease in treated groups.

**Conclusion:** It is concluded that aflatoxin induced toxic effect on androgenesis and spermatogenesis with adverse effect on testes and sperm quality.

**Key words:** Aflatoxin, Mice, Testes, Sperm quality, Testestrone.

#### P-158

#### Men with idiopathic infertility and cytomegalovirus infection

Habibi M<sup>1</sup>, Morteza A<sup>2</sup>, Sadighi Gilani M<sup>3</sup>, Hassanzadeh Gh<sup>4</sup>, Ghadami M<sup>5</sup>, Choobineh H<sup>4,6</sup>.

1. Breast Cancer Research Center, Academic Center for Education Culture and Research, (ACECR), Tehran, Iran.
2. Tehran University of Medical Science, Tehran, Iran.
3. Department of Urology, Tehran University of Medical Science, Tehran, Iran.
4. Department of Anatomy and Reproductive Biology, Tehran University of Medical Sciences, Tehran, Iran.
5. Department of Medical Genetics, Tehran University of Medical Sciences, Tehran, Iran.
6. School of Allid Medical Sciences and Zoonosis Research Center, Tehran University of Medical Sciences, Tehran, Iran.

Email: hchobineh@tums.ac.ir

**Introduction:** Cytomegalovirus (CMV) is a prevalent infection in humans. Recent studies have shown the role of CMV infection in male infertility disorder. Here we aimed to study the role of CMV infection in men with idiopathic infertility.

**Materials and Methods:** We performed a case-control study of CMV serology in 200 patients attending male infertility clinic of a university hospital. There were 154 men diagnosed with infertility and 46 men without infertility. The patients were asked to donate their sperm, blood and urine. The presence of CMV infection was studied using quantitative polymerase chain reaction.

**Results:** There were 154 cases and 46 controls. CMV infection was present in 25 of all the studied participants. Controls had a higher sperm count and

sperm motility and sperm morphology compared to patients. There were no significant differences in the studied variables between those with and without CMV infection, nor in patients, neither in controls. Sperm morphology was negatively correlated with cigarette smoking ( $r = -0.15$ ;  $p < 0.05$ ). Even though the prevalence of CMV infection was higher in patients with infertility (5.46 vs. 20.154), this was not statistically significant.

**Conclusion:** We did not show a significant role for CMV infection in male infertility. Based on the previous studies, it could be assumed that CMV infection is an important part of the male infertility and its treatment would improve the sperm quality, however this was not confirmed by the present study.

**Key words:** Male infertility, Cytomegalovirus infection, PCR.

#### P-159

#### Salutary effects of ascorbic acid on teratozoosperm DNA integrity and acrosome reaction

Fanaei H<sup>1</sup>, Khayat S<sup>2</sup>, Azizi Y<sup>1</sup>, Rezaee F<sup>2</sup>, Kasaeian A<sup>3</sup>, Bakhshesh M<sup>4</sup>.

1. Department of Physiology, Medical School, Tehran University of Medical Sciences, Tehran, Iran.
2. Faculty of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
3. Department of Epidemiology and Biostatistics, Public Health School, Tehran University of Medical Sciences, Tehran, Iran.
4. Department of Physiology, Medical School, Tehran University of Medical Sciences, Tehran, Iran.

Email: fanaeih@yahoo.com

**Introduction:** Semen and sperm of fertile men have antioxidant system for neutralization of reactive oxygen species (ROS). Higher ROS generation and lower antioxidant capacity was reported in semen and sperm of teratozoospermic men compare to normozoospermia. We evaluated the effect of an antioxidant, ascorbic acid, on teratozoosperm DNA integrity and acrosome reaction (AR) in control condition and when AR induced by calcium ionophore A23187.

**Materials and Methods:** Teratozoospermic semen samples were obtained from 15 volunteers 20-30 years old after 3-5 days of sexual abstinence. Samples were washed, centrifuged and incubated in 37°C until sperms swimm-up. Sperms were counted in the supernatant and divided into two groups, each contained  $2 \times 10^6$  sperm/ml. Groups 1 and 2, were incubated for 1 hour with Ham's F-10 solution as control group and 600µM ascorbic acid, respectively. DNA damage was determined by TUNEL technology and evaluated with fluorescence microscopy. AR was assessed by FITC-PSA staining.

**Results:** Our results indicated that ascorbic acid prevented the effect of the oxidative stress, protecting teratozoospermic sperm against reactive oxygen species, and enhancing sperm DNA integrity during incubation. There were no ameliorative effect of ascorbic acid on acrosome reaction.



**Conclusion:** We conclude that ascorbic acid supplementation during teratozoospermic semen processing for assisted reproductive techniques could protect teratozoospermic sperm against oxidative stress, and it could improve outcome of teratozoospermia assisted reproductive techniques.

**Key words:** Ascorbic acid, Teratozoospermic sperm, Acrosome reaction, DNA integrity.

## P-160

### An invitro study of cytotoxicity of gossypol on GC1-SPG and SFTF-PI43 cell line derived from testicular tissue

Mahdinezhad Gorji N<sup>1</sup>, Zabihi E<sup>2</sup>, Jorsaraee SGhA<sup>3</sup>.

1. Department of Cellular and Molecular Biology, Faculty of Medical Sciences, Islamic Azad University, Damghan, Iran.
2. Department of Cellular and Molecular Biology, Faculty of Medical Sciences, University of Medical Science, Babol, Iran.
3. Al-Zahra Infertility Center, Babol University of Medical Sciences, Babol, Iran.

**Email:** n.mahdinejad@yahoo.com

**Introduction:** Gossypol is a yellow pigment from the cotton plant. Some studies indicate that the gossypol causes toxicity in human and animal and also effects on performance testis tissue. Today, this plant is used of as supplementary of feed for ruminants specially sheep. Since this substance can effect on germinal cells, so, in this study, we study about the effect of gossypol on the stem cell line of testicular tissue GC1-spg (mouse testis) and SFTF-PI43 (sheep testis).

**Materials and Methods:** The cells were cultured and solution of gossypol in four concentration expose with cells, Then get viability cells with MTT Assay and Trypan-blue dye exclusion and the IC50 was determined using the MTT Assay.

**Results:** The result of the research show that gossypol made toxicity in 2.5, 5, 10µm but we didn't any toxicity in 1.25 µm concentration. In this research we found out, Gossypol reduce stem cell line survival through inhibition of mitochondrial activity which the performance of this mechanism has dependent on the dose. This fact has been observed in SFTF-PI43 (sheep testis) more than GC1-spg.

**Key words:** Gossypol, Stem cell line, Toxicity, Testis.

## P-161

### Treatment of azoospermia by Iranian traditional medicine (Report of four cases)

Bios S<sup>1</sup>, Mokabberinejad R<sup>1</sup>, Tansaz M<sup>2</sup>, Sohrabvand F<sup>3</sup>.

1. School of Traditional Medicine, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran.
2. School of Traditional Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Infertility, Vali-Asr Hospital, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** so.bios@gmail.com

**Introduction:** Male factor is mostly characterized by impaired sperm parameters. Azoospermia is one of the most important disorders of male factor which usually has no specific treatment except using assisted reproductive techniques for achieving pregnancy. In Iranian traditional medicine resources, problems in semen have been mentioned as a reason for infertility. One of the treatment modalities for male infertility which have been repeatedly emphasized in traditional medicine is the use of "food" in order to increase the quality and quantity of sperm.

**Materials and Methods:** In a retrospective study on the treatment of severe oligoasthenozoospermia based on "food method" according to traditional medicine four patients were enrolled. A short report is going to be presented in this paper. Semen analysis was requested before starting and 85 days (the time span for spermatogenesis) after the treatment.

**Results:** Patient number one has already a two year old child. Patient number two, has two normal spermograms and his wife is undergoing infertility treatment. Patient number three did not show any change in the semen analysis. Patient number four had a spermogram with a count of 750000/ml and is under further treatment. This article explains the treatment modality which is used in these patients.

**Conclusion:** Traditional Iranian Medicine (TIM) which is one of the holistic medical schools has special recommendations for treating male infertility for improving sperm parameters which are usually simple, cheap and based on food and diet corrections. The abovementioned cases provide the necessity for performing clinical trials using this method in order to produce enough evidence for its application in male infertility.

**Key words:** Infertility, Male infertility, Sperm abnormalities, Iranian Traditional Medicine.

## P-162

### Demographic characteristics and factors affecting infertility in men

Chobineh H<sup>1</sup>, Sadighi Gilani MA<sup>2</sup>, Hassanzadeh G<sup>2</sup>, Dargahi H<sup>1</sup>, Saeepour N<sup>3</sup>, Babibi Fozoonabadi M<sup>2</sup>, Falah P<sup>1</sup>, Rezaeian F<sup>1</sup>, Heydari H<sup>1</sup>, Shams A<sup>4</sup>.

1. School of Allied Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran.
2. Department of Medicine, Tehran University of Medical Sciences Tehran, Tehran, Iran.
3. Department of Statistic and Epidemiology, Central Queensland University, Australia.
4. Department of Maternal and Child Health, Tehran University of Medical Sciences, Tehran, Iran.

**Email:** azarshams1@gmail.com

**Introduction:** This study examined demographic characteristics of men with infertility who were referred to the Shariati Hospital Infertility Clinic, Tehran, Iran.

**Materials and Methods:** This is a cross-sectional study. 200 eligible patients were enrolled with written consent. Face-to-face interviews were based on a

questionnaire that included variables on socio-demographic characteristics and sperm analysis test performed by all individuals. Their height and weight measurements were recorded.

**Results:** The mean age was 34.1±5.7 years. The average years of infertility after marriage was 3.6±1.3 years. BMI was 24.1±5.7 indicating obesity among studied men. Most of the men were self-employed, and the majority of them were dealing with chemicals in their jobs. However, this study found that the risk of diabetes disease, mumps, varicocele among workers who were worker. The sperm analysis showed that the most common problem is related to decreased sperm motility in infertile men. So that more than 162 participants in the study were 40% lower sperm motility.

**Conclusion:** In this study the relationship between factors such as obesity, smoking, BMI, occupational status and previous disease and sperm parameters in infertile men was not significant.

**Key words:** Semen analysis parameters, Infertility, Socio-demographic characteristics.

## 4- Nursing and Midwifery

### P-163

#### Comparison of sensitivity and specificity of transvaginal ultra sonography, saline infusion sonohysterography and hysteroscopy in evaluation of the women with abnormal uterine bleeding in Ahvaz Imam Khomeini and Razi Hospitals during 2008

Saadati N<sup>1</sup>, MohammadJafary R<sup>2</sup>, Shojaie K<sup>2</sup>.

3. Department of Community Medicine, School of Medicine, Jundishapur University of Medical Sciences, Ahvaz, Iran.
4. Department of Obstetrics and Gynecology, School of Medicine, Imam Khomeini Hospital, Jundishapur University of Medical Sciences, Ahvaz, Iran.

Email: nsaadaty@ajums.ac.ir

**Introduction:** Bleeding disorders are often a problem in daily practice especially in premenopausal women. The aim of this study is comparison of sensitivity and specificity of the transvaginal sonography with sonohysterography and hysteroscopy in evaluation of the women with abnormal uterine bleeding.

**Materials and Methods:** It was a cross-sectional study. Ninety nine women, who had AUB and came to two educational hospitals in Ahvaz during March 2008 to December 2008, were recruited for the study and underwent to diagnostic methods for AUB, namely: TVS, SIS and hysteroscopy. TVS, SIS and hysteroscopy were done for every patient separately. The biopsy was taken if it was necessary. The sensitivity, specificity, positive predictive and negative predictive values measured in TVS, SIS, and finally these two methods compared to hysteroscopy.

**Results:** The sensitivity and specificity of TVS was 74.2% and 49.7% respectively. The positive predictive value and negative predictive value of TVS was 71.9%

and 54.3% respectively. The sensitivity and specificity of SIS was 91.6% and 86% respectively. The positive predictive value and negative predictive value of SIS was 85.9% and 85.75% respectively. The sensitivity, specificity, the positive predictive and negative predictive values of SIS was more than TVS in patients affected by AUB, and it was similar to hysteroscopy.

**Conclusion:** This study showed that the SIS had a higher sensitivity, specificity, the positive and negative predictive values compared to TVS in patients with AUB. So the TVS with saline infusion can consider as a first step for diagnosis of AUB.

**Key words:** Abnormal uterine bleeding (AUB), Trans-vaginal sonography (TVS), Saline infusion Sonohysterography (SIS), Hysteroscopy.

### P-164

#### The study of the relationship between personality traits and pain intolerance and reaction to labor pain

Yadollahi P<sup>1</sup>, Makvandi S<sup>2</sup>, Hashemifard T<sup>3</sup>.

1. Department of Midwifery, Kazerun Branch, Islamic Azad University, Fars, Iran.
2. Department of Midwifery, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran.
3. Department of Nursing, Kazerun Branch, Islamic Azad University, Fars, Iran.

Email: yadollahi\_556@yahoo.com

**Introduction:** Labor pain is a personal experience and happens as a result of physiological, psychological and social influences. Studies indicate that personality traits influence people's experience of pain. Studying personality traits which affect pain can help in predicting labor pain and strategies reducing these pains. The present study has been carried out to consider the relationship between personality factors and pain intolerance and also the reaction to labor pain.

**Materials and Methods:** The present study is a correlational descriptive-analytic study. The cross-sectional data of which has been gathered using Goldberg's five main personality trait questionnaire and the researcher-constructed questionnaire which has been devised and controlled considering its reliability and validity. The subjects were 220 women admitted to have normal delivery in Kazeroun's obstetrics ward of ValiAsr hospital and had inclusion criteria. The simple sampling was based on purposeful sampling. The gathered data was analyzed using SPSS16 and Pearson's correlational descriptive analytic statistical tests.

**Results:** The results indicated that among personality traits there was a positive meaningful relationship between openness and the reaction to pain (p<0.01), and also between neuroticism and pain intolerance (p<0.01). Moreover, there was a positive meaningful relationship among neuroticism, openness and pain intolerance (p<0.01) statistically, there was no meaningful relationship among the three other personality factors (extraversion, agreeableness and conscientiousness).

**Conclusion:** The results show that some stronger personality traits prepare a person for pain tolerance and the reaction to this pain and can help in planning for labor pain control.

**Key words:** Labour pain, Personality trait, Pregnant women.

### P-165

#### Consideration of requiring to resuscitation of baby were born to mothers with high risk pregnancies (at pregnant women admitted to Imam Reza Hospital Delivery Center

**Bonakdaran Z<sup>1</sup>.**

Imam Reza Hospital, Mashhad Medical Sciences University, Mashhad, Iran.

**Email:** bonakdaranz1@mums.ac.ir

**Introduction:** Newborns can have apnea, thus, oxygen uptake and excretion of CO<sub>2</sub> is limited. There are numerous reasons for resuscitation of infants at birth such as pre-term infants and high risk pregnancies. Successful resuscitation in newborns can lead to spontaneous breathing and prevent the progressive hypoxia.

**Materials and Methods:** All pregnant admitted to Imam Reza Hospital at 3 months since April 2012 were studied and statistical analysis was performed with SPSS system.

**Results:** Total number of cases were 680 women. The number of patients with high-risk pregnancies (high blood pressure, diabetes, heart disease) was 197. The number of preeclampsia was 115. The number of diabetes was 52. The number of heart disease was 14 patients and with blood disease were 16. 5.2% of infants born to mothers with preeclampsia were DC. 5.7% of infants born to diabetic mothers were DC. 6.6% of infants born to mothers with heart and blood disease were DC. 46% of babies were born to mothers with preeclampsia need resuscitation. 50% of infants born to diabetic mothers need resuscitation. 36% of infants born to mothers with heart disease need to resuscitation. 44% of infants born to mothers who had blood disease need resuscitation.

**Conclusion:** Statistics indicate, with increasing the number of high risk pregnancies increase the probability of need to emergency resuscitation code for new born. So, to save the lives of newborns, it is need for trained personnel of delivery rooms.

**Key words:** EMS, CPR, Resuscitation Code, High risk pregnancy, Preeclampsia, Diabetes, Heart disease.

### P-166

#### The effect of foot reflexology on pain intensity and duration of labor on primiparous

**Moghimi Hanjani S<sup>1</sup>, Mehdizadeh Tourzani Z<sup>1</sup>, Shoghi M<sup>2</sup>, Ahmadi G<sup>1</sup>.**

1. Department of Midwifery, Nursing and Midwifery Faculty, Islamic Azad University, Karaj Branch, Alborz, Iran.
2. Department of Nursing, Nursing and Midwifery Faculty, Islamic Azad University, Karaj Branch, Alborz, Iran.

**Email:** somoghimi@yahoo.com

**Introduction:** The integration of reflexology as one of the non-pharmacological pain relief methods in to midwifery care has become more common in recent years. The aim of this study was to determine the effect of reflexology on pain intensity and the duration of labor in primiparous.

**Materials and Methods:** This clinical trial study was carried out on 80 primiparous women with low risk pregnancy that referring to Karaj Hospitals then randomized in two groups, intervention group received reflexology for 40 minutes and control group. Severity of labor pain was shown by visual analogue scale (McGill questionnaire), before, half, one and two hours after intervention. Moreover, the duration of labor was determined for both two groups.

**Results:** Severity of labor pain before and immediately after intervention foot reflexology did not vary between case and control groups ( $p>0.05$ ). But half, one and two hours after it, severity of labor pain in the intervention group was lower than the control group ( $p<0.001$ ). Duration of labor in the intervention group significantly was lower than the control group ( $p<0.001$ ).

**Conclusion:** Reflexology can lead to decrease in labor pain as well as duration of labor. Therefore, we can use this non-invasive technique for decrease of labor pain and encourage mothers to normal vaginal delivery that is one of the aims of midwifery.

**Key words:** Reflexology, Labor pain, Duration of labor, Primiparous.

### P-167

#### Stress and reproductive dysfunction

**Jannesari S.**

Department of Midwifery, Faculty of Nursing and Midwifery, Shahid Beheshti University of Medical Science, Tehran, Iran.

**Email:** shararehjannesari@gmail.com

**Introduction:** About 10 years ago Greil published a review and critique of the literature on the socio-psychological impact of infertility. He found at the time that most scholars treated infertility as a medical condition with psychological consequences rather than as a socially constructed reality. This article examines research published since the last review.

**Materials and Methods:** This Article is a review of recent literature conducted by library source and paper indexed in MEDLINE.

**Results:** Recent research tells us that stress boosts levels of stress hormones such as cortisol, which inhibits the body's main sex hormones GnRH and subsequently suppresses ovulation, sexual activity and sperm count. GnRH is responsible for the release of Luteinizing hormones and follicle-stimulating hormones by the pituitary, the suppression of testosterone, estrogens, and sexual behavior. Chronic stress may cause lack of libido as well as a decrease in general fertility. This has become such a common issue that they have created a name for it Stress Induced Reproductive Dysfunction.

**Conclusion:** Research has shown that the brain produces special molecules called neuropeptides, in response to emotions, and these peptides can interact with every cell of the body, including those of the immune system. In this view, the mind and the body are not only connected, but inseparable, so that it is hardly surprising that stress can have a negative influence on fertility.

**Key words:** Infertility, Stress, Dysfunction.

## P-168

### Relationship between smoking and male infertility

**Rahnavardi M, Naseri L, Mahdavi F.**

College of Midwifery, Shahid Beheshti Medical University, Tehran, Iran.

**Email:** mona.rahnnavardi@yahoo.com

**Introduction:** Smoking is now increasing rapidly throughout the world and is one of the biggest threats to current and future world health. Cigarette contains several compounds are known as chemical carcinogens and mutagenic in humans. In males, it has been suggested that cigarette smoking negatively affects every system involved in the reproductive process. Several studies have addressed the role of cigarette smoking on semen quality. Goal we have reviewed relationship between smoking and male infertility.

**Materials and Methods:** A review of published 20 articles was carried out, using PubMed, medical subject heading (MSH) databases and Scopus engine excluding the effects of smoking outside male infertility.

**Results:** There is increasing evidence that demonstrated smoking cause of changes in the seminal fluid components appear to be related to abnormal spermatozoal function and fertilizing capacity. For example, reduces sperms production, motility, normal forms and fertilizing capacity through increased seminal oxidative stress and DNA damage, lower acrosin activity, significantly increased seminal nicotine compared to the serum and decreased seminal plasma ascorbic acid. Also lead and cadmium in seminal plasma has been shown to be higher in infertile smokers compared with infertile nonsmokers. This negative impact of smoking on human semen parameters, correlated with cigarettes smoked/day and smoking duration.

**Conclusion:** Contracting and survey have done by review study that in the most literature there are significant relation between smoking and reduction of quality of Sperm parameters. Although Few papers reported nonsignificant differences. Cigarette smoking affects fertility by its main negative impact on semen parameters. It is concluded that although some smokers may not experience reduced fertility, men with marginal semen quality can benefit from quitting smoking.

**Key words:** Smoking, Semen, Male infertility, Sperm, Fertility.

## P-169

### Survival rate, maturation capacity and morphology assessments of mouse GV oocytes after vitrification and in-vitro maturation.

**Rezazadeh S<sup>1</sup>, Karimi H<sup>2</sup>, Mahjur A<sup>2</sup>.**

1. Department of Developmental Biology, Islamic Azad University, Jahrom Branch, Jahrom, Iran.

2. Department of Anatomy, Jahrom University of Medical Sciences, Jahrom, Iran.

**Email:** atefeh.rezazade@yahoo.com

**Introduction:** Fertility on estimated 10-15% of couple of reproductive age. The incorporation of oocyte cryopreservation of assisted reproduction long has been a goal of many practitioners. In general; %15 of oocyte collected in ART cycles are immature. These oocytes may be cryopreserved further for use in in-vitro maturation (IVM) program. To determine the survival and maturation rate and morphology of mouse GV oocyte after Fresh- IVM and vitrified-IVM.

**Materials and Methods:** 6-8 week old female mice selected and were stimulated by injection of 10 IU of PMSG. After 48 h the mice were killed and GV oocytes were obtained by puncturing of antral follicles. The GV oocytes were divided into two groups: (I) GV oocytes (n=100) that were directly matured in-vitro; and (II) GV oocytes (n=100) that were first vitrified, then matured in vitro. All oocytes underwent IVM in Ham' F10 supplemented with 0.75 IU LH and 0.75 IU FSH and 20% FBS. After 12-16 h of incubation, the oocyte survival rate, maturation capacity and morphology evaluation.

**Results:** Oocyte maturation rate were significantly reduced ( $p < 0.05$ ) when oocytes were vitrified at GV stage followed by IVM, 46% in comparison with, Fresh- IVM assess, 88%. Following morphologic assessment, abnormalities such as dark cytoplasm and changing the form of oocytes was observed in vitrified IVM oocytes.

**Conclusion:** Fresh- IVM was successful than vitrified-IVM group. This study demonstrated the vitrification has adverse effect on oocytes maturity and morphology.

**Key words:** GV oocyte, Vitrification, Maturation, Morphology.

## P-170

### Influence of gestational period on sexual behavior

**Jamali S.**

Jahrom University of Medical Sciences, Jahrom, Iran.

**Email:** safieh\_jamali@yahoo.com

**Introduction:** sexuality is an important part of women's health, quality of life, and general well-being. There are many factors influencing the female sexual function. Pregnancy plays an important role in the sexual function and behavior of women. This study aims to evaluate the sexual function and to determine

the prevalence of sexual dysfunction among women during pregnancy.

**Materials and Methods:** A cross-sectional study was conducted between April 20011 and September 20011 using 257 healthy pregnant women, aged 18-40 years, who attended the antenatal clinic, Paymaneh Hospital. The Female Sexual Function Index (FSFI) questionnaire was used for sexual function assessment.

**Results:** The mean age of respondents was 26.45±4.49 years. 143, 69 and 45 pregnant women were in their first, second and third trimester. The women sexual function showed a different pattern during the first and second and third trimesters; there was a significant difference in the scores of all FSFI domains when comparing the second and third trimesters. There was also a significant relationship between sexual desire (p=0.001), sexual arousal (p=0.002), lubrication (p=0.002), orgasm (p=0.004), sexual satisfaction (p=0.002) in different trimesters of pregnancy.

**Conclusion:** sexual dysfunction is high during pregnancy. Pregnant women and their partners need counseling about physical and psychological changes in pregnancy.

**Key words:** Sexual dysfunction, Pregnancy, Prevalence.

#### P-171

#### Pregnancy termination method in pregnant women of above 35 Years

**Jamali S.**

*Jahrom University of Medical Sciences, Jahrom, Iran.*

**Email:** safieh\_jamali@yahoo.com

**Introduction:** Cesarean section is the most common surgery in women and is a method of pregnancy termination. Several factors have been effective in the increase rate of cesarean delivery. One of them is increasing maternal age. The purpose of this study is evaluation of the effect of pregnancy termination method in above 35 years women who admitted to Paymaneh hospital in Jahrom city.

**Materials and Methods:** This study is descriptive cross-sectional. 2049 pregnant women referred to Paymaneh hospital for childbirth from March 2010 to February 2011. The variables were maternal age, type of delivery, number of cesarean cases. The data were analyzed by SPSS 16.

**Results:** Mean±SD age of women was 37.07±2.01 (35-44 range). In the study of 2049 file of pregnant women, 56.9% were above 35 years. 69.4% rural, 30.1% were urban. 87.2% samples were below high school diploma. 53.1% of women had normal vaginal delivery, 46.9% Cesarean section. Causes of cesarean section: repeat cesarean delivery 43 (21.9%), causes of Midwifery 18 (9.2%), elective cesarean section 15 (7.7%), Hypertension 7 (3.6%), meconium 6 (3.1%), Breech 3 (1.5%) were. 53 (27%) had a history of previous cesarean delivery and 39 (19.9%) samples were first cesarean delivery.

**Conclusion:** In this study, the incidence of cesarean section compared to international standards are very

high. The most common cause of Cesarean section is repeat cesarean section (21.9%). The application of Normal vaginal delivery after cesarean delivery, as well as Practical procedure for painless childbirth can prevent the repeated cesarean.

**Key words:** Pregnancy, Age above 35 years, Delivery, Safe delivery.

#### P-172

#### The effect of over 35 years age on pregnancy and fetal health

**Jamali S.**

*Jahrom University of Medical Sciences, Jahrom, Iran.*

**Email:** safieh\_jamali@yahoo.com

**Introduction:** Women's Health is trying to Priority health programs. Age factors are affecting the outcome of pregnancy. The aim of this study, evaluation of Complications of pregnancy above 35 years referred to Jahrom's Paymaneh hospital.

**Materials and Methods:** This is a descriptive study. Variables assessment is included: age, parity, gestational age, abortion, disease during pregnancy, birth weight, neonatal problems and congenital anomaly. Data were analyzed by SPSS 16 and Using descriptive statistics.

**Results:** File of 2049 pregnant women was studied. 9.56% were above 35 years. The average age of women was 37.07±2.01. Pregnancy complications include: 29.6% abortion, 3.1% bleeding in pregnancy, 15.3% post term delivery, 9.2% had preterm labor. Anemia 14.8%, Hypertension 7.7%, diabetes mellitus 6.7%, Gastrointestinal problems 3.1%, Pyelonephritis 1%, Previous history of disease 8.2%. Fetal Effects include: 8.2% low-birth weight (under 2500), 7.7% (over 4000 g), 7.7% neonatal genital problems, 0.5% skeletal disorders.

**Conclusion:** Health status during pregnancy depends on before pregnancy of health care. Prior pregnancy Care must be basic prenatal care as logically. According to the findings of this study it was found that pregnancy at inappropriate age and Suffering from some diseases, especially hypertension, diabetes, anemia were the most important health problems of pregnant women in this city.

**Key words:** Over 35 years age, Maternal health, Fetal complications, Identify high risk pregnancies.

#### P-173

#### The evaluation of relationship between marital satisfaction and depression in infertile couples

**Jamali S.**

*Jahrom University of Medical Sciences, Jahrom, Iran.*

**Email:** safieh\_jamali@yahoo.com

**Introduction:** Infertility is a common disease that about 15-25% of couples of reproductive age are affected. Some studies introduce depression, stress, and low self-

esteem from the psychological outcome of infertility. Infertility has different effects on various aspects of infertile couples. On the other hand, depression can be having a significant role in the life of infertile couples and follow the process of treatment and hope for the future. The purpose of this research is comparison of depression among fertile couples referred to Jahrom's Pymanyh hospital in 2011 year.

**Materials and Methods:** This is an analytical cross-sectional study. The sample of collecting tools was Beck questionnaire, demographic questionnaire, and self-formed marital satisfaction. Statistical analysis was performed by descriptive statistics test, Chi-square, correlation coefficient, t-test.

**Results:** 100 infertile couples participated in this research. Difference in depression scores was significant between men and women ( $p=0.001$ ). There was significant relationship between depression and age ( $p=0.001$ ). Between depression and age of wife ( $p=0.049$ ), the age difference between couples ( $p=0.006$ ), duration of marriage ( $p=0.004$ ), duration of infertility ( $p=0.003$ ), length of treatment ( $p=0.017$ ). But, there was no significant statistical relationship between jobs, education, occupational wife, husband's education, a history of unsuccessful treatment and female marital satisfaction.

**Conclusion:** The prevalence of depression was 53% in infertile people in this study that were 29% mild, 20% moderate, 4% severe. However, depression rates are 71% in women. According to the results, the presence of clinical psychologists is necessary in all infertility centers. Infertile couples require careful emotional and psychological care.

**Key words:** Depression, Infertile couples, Infertility, Beck Depression test.

#### P-174

##### The concept of quality in maternal and neonatal health care

**Azima S, Mousavi S.**

*Department of Midwifery, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran.*

**Email:** azimas@sums.ac.ir

**Introduction:** To review published papers and reports examining quality of care in maternal and newborn health to identify definitions and models of quality of care.

**Materials and Methods:** Electronic search of MEDLINE used in health care and maternal and newborn health care. Relevant papers and reports were reviewed and summarised.

**Results:** The multi-faceted nature of quality is widely acknowledged. In the literature quality of care is described: from the perspective of health care providers, managers and patients; dimensions within the health care system; using elements such as safety, effectiveness, patient-centeredness, timeliness, equity and efficiency; and through the provision of care and

experience of care. The importance of ensuring good quality of care for women and newborn babies is well recognised in the literature. Several models were identified, which can be combined to form a comprehensive framework to help define and assess quality of care or lack of quality. Approaches to quality of care that are specifically important for maternal and newborn health were identified and include a rights based approach, adopting care that is evidence-based, consideration of the mother and baby as interdependent and the fact that pregnancy is on the whole a healthy state.

**Conclusion:** A model of quality of maternal and newborn health care using perspectives, characteristics, dimensions of the system and elements of quality of care specific to maternal and newborn health is proposed, which can be used as a basis for developing quality improvement strategies and activities, and incorporating quality into existing programmes.

**Key words:** Quality, Maternal and neonatal health care, Midwifery.

#### P-175

##### Midwifery applied to trial of labor after a previous cesarean delivery

**Azima S.**

*Department of Midwifery, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran.*

**Email:** azimas@sums.ac.ir

**Introduction:** Women who undergo a trial of labor after a previous cesarean delivery (TOLAC) have special needs prenatally and during the intrapartum period.

**Materials and Methods:** Counseling about the choice of TOLAC versus an elective repeat cesarean delivery involves complex statistical concepts.

**Results:** Prenatal counseling that is patient centered, individualized, and presented in a way that addresses the health literacy and health numeracy of the recipient encompasses best practices that support patient decision making.

**Conclusion:** Evidence-based practices during labor that support vaginal birth and increase patient satisfaction are of special value for this population.

**Key words:** Midwifery, Cesarean, Vaginal delivery.

#### P-176

##### Sexual function of women with chronic renal failure undergoing hemodialysis and factors related to it

**Zeighami Mohammadi S.**

*Department of Nursing, School of Nursing and Midwifery Islamic Azad University, Karaj Branch, Karaj, Iran.*

**Email:** zeighami@kia.ac.ir

**Introduction:** Sexual function is one important aspect of quality of life. Chronic renal failure and its treatment

has effect on sexual function. The aim of this study was to investigate sexual function of women with chronic renal failure undergoing hemodialysis and factors related to it.

**Materials and Methods:** In this cross sectional study, One hundred women with chronic renal failure undergoing hemodialysis at four dialysis units in Karaj, 2011 were interviewed and also their medical records were investigated. Sampling method was census sampling. The instruments used included: demographic data form, The (CES-D) center for epidemiologic studies depression scale and Female Sexual Function Index (FSFI) and World Health Organization quality of life (WHOQOL-BREF) questionnaire .

**Results:** The findings indicated that mean score of female sexual function index was  $13.22 \pm 8.58$  (1.2-36 range) and 100% of women had score of female sexual function index  $< 28$ . 39% low sexual desire, 62% low sexual arousal, 52% low vaginal lubrication, 60% failure to orgasm, 33% sexual dissatisfaction and 54% dyspareunia were experienced .There were significant negative correlation between score of female sexual function index with creatinine level ( $p=0.016$ ), depression ( $p=0.016$ ) and positive correlation with hemoglobin level ( $p=0.001$ ) and total score of quality of life ( $p=0.006$ ). The presence of diabetes showed significant relationship with score of female sexual function ( $p=0.049$ ).

**Conclusion:** It seems that in order to provide holistic nursing care, assessment and planning for remedy it, is necessity.

**Key words:** Hemodialysis, Chronic Renal Failure, Female Sexual Function, Depression, Quality of Life.

### P-177

#### The effect of HBS vaccination on level of HBs antibody titers in Bahar Health Care workers

Moradi A<sup>1</sup>, Nazari M<sup>2</sup>, Hamidi Y<sup>3</sup>, Eskanderi Z<sup>1</sup>, Rostai M<sup>1</sup>.

1. Bahar Health Center, Hamadan University of Medical Sciences, Hamadan, Iran.
2. Research Center for Child and Maternity Care, Faculty of Nurse and Midwifery Hamadan University of Medical Sciences, Hamadan, Iran.
3. Department of Public Health, Faculty of Health and Medicine, Hamadan University of Medical Sciences, Hamadan, Iran.

**Email:** mozhgannazari2003@yahoo.com

**Introduction:** Hepatitis B is still a major health problem especially in developing countries. The prevalence of this disease in Iran is intermediate. Hence medical staffs are at risk of hepatitis, the aim of this study was to determine the effect of HBs vaccination on level of HBs antibody among health care workers.

**Materials and Methods:** The HBs antibody titers in 224 health care workers in Ayatollah Bahari Hospital and Health Centers in Bahar town were determined from January to February 2012. According to protocol of Ministry of Health and Medical Education of Iran, antibody titer was categorized in three categories.

Antibody titer  $< 10$  mIU/ml was considered as insufficient response, between 10-100 mIU/ml acceptable response and more than 100 mIU/ml adequate response.

**Results:** In present study only 66% of health care workers were immune against Hepatitis. There was relationship between level of HBs antibody with gender ( $p<0.002$ ), job ( $p<0.001$ ) and time of vaccination ( $p<0.030$ ) but there is no association between HBs antibody and dose of vaccination and Body Mass Index.

**Conclusion:** The level of HBs antibody in Behvarz and some health care workers was higher than physician, midwives and nurses. This finding maybe due to retraining in Behvarz and health care workers more than physicians, midwives and nurses. Our study showed that there is many considerable medical staff (33%) that had not acceptable level of HBs antibody.

**Key words:** Hepatitis B, Vaccination, Anti body, Health Care Worker.

### P-178

#### Psychosexual features of infertile patients

Mollaahmadi F<sup>1</sup>, Ezabadi E<sup>1,2</sup>.

1. Department of Endocrinology and Female Infertility, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.
2. Department of Epidemiology and Reproductive Health, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran.

**Email:** Mollaahmadi@royaninstitute.org

**Introduction:** A couple's sexual relationship is often the area of their life that is most negatively affected by infertility which represents a major challenge to the emotional balance and sexual life of couples, with long-lasting and gender-specific effects.

**Materials and Methods:** This article reviews the research related to reproductive medicine and psychosexual problems of infertile couples published from 2003.

**Results:** A strong correlation between male and female sexual function was observed in a cross-sectional study was conducted on couples with infertility problems attending the Medically Assisted Conception Center. Another Cross-sectional cohort study found Infertility can negatively impact sexual function and emotional well-being. In a survey study at two tertiary care medical centers Depression and sexual dysfunction were prevalent in female partners of infertile couples. Female sexual function was positively correlated with male partner sexual function in this population. Depression, erectile dysfunction and sexual relationship problems are prevalent among male partners of infertile couples. In a Prospective study Women reported greater anxiety and sexual infertility stress than men. However, men and women showed a similar pattern in the way anxiety symptoms were related to sexual infertility stress, with subjective anxiety and autonomic anxiety having the

strongest relationship. A cohort observational study indicates that some men may experience sexual dysfunction of a psychogenic nature in response to the diagnosis of infertility.

**Conclusion:** Infertile couples reported poor marital adjustment and quality of life in most studies; however, as sex is usually considered a private matter, this is rarely talked and consulted about.

**Key words:** Sexual relationship, Fertility treatments, Infertility, Anxiety, Depression.

#### P-179

### Correlation between sexual function and quality of life in postmenopausal women: a population-based study

Mohammad-Alizadeh-Charandabi S<sup>1</sup>, Rezaie N<sup>2</sup>, Montazerie A, Hakimi S<sup>1</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Midwifery, Faculty of Nursing and Midwifery, Ilam University of Medical Sciences, Ilam, Iran.

Email: alizades@tbzmed.ac.ir

**Introduction:** There have been limited population-based studies on sexual function and quality of life of postmenopausal women in Iran, even in the world, based on our knowledge. Therefore, this study was performed to examine sexual function and its dimensions among postmenopausal women and their relation with their quality of life in Ilam.

**Materials and Methods:** In this correlational study, 400 postmenopausal married women aged 50-59 years were interviewed about sexual function using McCoy female sexuality questionnaire (MFSQ) and about health-related quality of life using SF-36. The subjects selected from 80 randomly selected clusters in the city in 2011. Data was analyzed by Spearman in SPSS ver.13.

**Results:** 77 (19.3%) of the postmenopausal women reported "not having sex" during the past 4 weeks. From possible range score of 0-100, mean score of the women sexual function was 53.3 (SD=29.3). There was a significant relationship between score of total and all dimensions (sexual interest, satisfaction, lubrication and orgasm) of sexual function with score of all four studied dimensions (physical functioning, general health, mental health, vitality) of quality of life ( $p<0.001$ ). The correlation coefficient between score of score of total and all dimensions of sexual function with ranged from 0.62 to 0.78.

**Conclusion:** Based on the results of this study, sexual problems including not having sexual activity are common among postmenopausal women. There are strong correlation between sexual function and quality of life of the women. Therefore, sexual health promoting interventions are necessary for improving quality of life of menopausal women.

**Key words:** Sexual function, Quality of life, Menopause, Middle age.

#### P-180

### Correlation between sexual function and quality of life in postmenopausal women: a population-based study

Mohammad-Alizadeh-Charandabi S<sup>1</sup>, Rezaie N<sup>2</sup>, Montazerie A, Hakimi S<sup>1</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Midwifery, Faculty of Nursing and Midwifery, Ilam University of Medical Sciences, Ilam, Iran.

Email: alizades@tbzmed.ac.ir

**Introduction:** There have been limited population-based studies on sexual function and quality of life of postmenopausal women in Iran, even in the world, based on our knowledge. Therefore, this study was performed to examine sexual function and its dimensions among postmenopausal women and their relation with their quality of life in Ilam.

**Materials and Methods:** In this correlational study, 400 postmenopausal married women aged 50-59 years were interviewed about sexual function using McCoy female sexuality questionnaire (MFSQ) and about health-related quality of life using SF-36. The subjects selected from 80 randomly selected clusters in the city in 2011. Data was analyzed by Spearman in SPSS ver.13.

**Results:** 77 (19.3%) of the postmenopausal women reported "not having sex" during the past 4 weeks. From possible range score of 0-100, mean score of the women sexual function was 53.3 (SD=29.3). There was a significant relationship between score of total and all dimensions (sexual interest, satisfaction, lubrication and orgasm) of sexual function with score of all four studied dimensions (physical functioning, general health, mental health, vitality) of quality of life ( $p<0.001$ ). The correlation coefficient between score of score of total and all dimensions of sexual function with ranged from 0.62-0.78.

**Conclusion:** Based on the results of this study, sexual problems including not having sexual activity are common among postmenopausal women. There are strong correlation between sexual function and quality of life of the women. Therefore, sexual health promoting interventions are necessary for improving quality of life of menopausal women.

**Key words:** Sexual function, Quality of life, Menopause, Middle age.

#### P-181

### The relationship between preterm birth and language impairment in children

Hassanzadeh Rad A<sup>1,2</sup>, Hassanzadeh Rad Z<sup>3</sup>.



1. *Pediatrics Growth Disorders Research Center, 17 Shahrvivar Hospital, School of Medicine, Guilan University of Medical Sciences, Rasht, Iran.*
  2. *Department of Linguistics, Literature Faculty, Tehran University, Tehran, Iran.*
  3. *Payam Noor University of Guilan, Rasht, Iran.*
- Email: afaghrad@yahoo.com

**Introduction:** Preterm birth defined as delivery before 37 of gestational age. According to previous investigations it has negative impacts on a variety of important developmental outcomes even in the absence of significant cerebral damage and it seems that preterm children are at increased risk for atypical trajectories of cognitive development, language difficulties and poor school performance. Therefore, in this study we aimed to investigate the relationship between preterm birth and language impairment in children.

**Materials and Methods:** To get insight to this potential relation in this review article, we searched various valuable databases based on mentioned key words.

**Results:** Various studies suggested that preterm birth may well be a risk factor for the development of vocabulary, grammar and phonological awareness in which cross-sectional studies revealed that preterms do tend to have lags in lexical development as compared to full-terms. Also, results showed that Preterms with extremely low gestational age had a significantly smaller lexicon compared to preterms with very low gestational age. Beyond the lexicon, grammatical development also appears to be affected by preterm birth. Finnish VLBW preterms exhibit a shorter mean length of utterance at two years as compared to full-terms. However, in cross-sectional studies of Finnish and Italian infants, results demonstrated no significant difference in vocabulary size between preterms and terms at 2 years. Furthermore, number of research findings has suggested that preterm birth exhibit substantially heightened risk for Language acquisition during childhood.

**Conclusion:** According to negative impact of preterm birth on children's language acquisition and high costs for treatment which impose on society, it seems that mapping prevention programs could help to promote language acquisition.

**Key words:** Preterm birth, Language impairment, Children.

## P-182

### **The effects of immediate and continues post-birth mother-infant skin to skin contact on Breastfeeding experience of mothers**

Karimi A<sup>1</sup>, Khadivzadeh T<sup>2</sup>.

*Department of Reproductive Health, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran.*

*Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran.*

Email: mscmidwife@yahoo.com

**Introduction:** This study aimed to determine the effects of immediate and continues post-birth mother-infant skin to skin contact on Breastfeeding experience of mothers.

**Materials and Methods:** 92 pairs of primi-gravid women and their neonates were randomly divided into two groups, in Iran. In "routine care" group first contact and reastfeeding were initiate after repairing mother's perineum and performing neonatal primary care. In "intervention" group, mother-infant skin to skin contact performed in the first two hours post-birth and feeding was started as soon as the infant's pre-feeding behaviors were appeared. Mothers in both groups were interviewed at 28th days post partum to determine the Breastfeeding problem. The Breastfeeding Experience Scale (BES) experience was used to measure Breastfeeding problem.

**Results:** The rate of Breastfeeding experience of mothers at 28th days post partum was  $31.66 \pm 1.66$  in intervention and  $31.86 \pm 2.13$  in control group.

**Conclusion:** Research demonstrates that breastfeeding provides many health benefits for both mothers and infants. However, many mothers stop breastfeeding in the early postpartum period due to problems such as sore nipples, engorgement, mastitis, and insufficient milk supply and so. Mothers of infants were suckling more competently during their first breastfeeding post birth had fewer breastfeeding problems during the first month post birth and continues skin-to-skin contact in the first two hours post-birth eases the first experience of successful breastfeeding that can promote suckling. So, immediate and continues skin to skin contact between mother and infant and continuing it during repair of mother's episiotomy, is recommended.

**Key words:** Skin to skin contact, Infant, Mother, Breastfeeding experience.

## P-183

### **Knowledge and awareness of midwives about human papilloma virus**

Ziyadi S, Asgari A, Mohammadi M.

*Department of Midwifery, Nursing and Midwifery Faculty, Tabriz University of Medical Sciences, Tabriz, Iran.*

Email: s.ziyadi@yahoo.com

**Introduction:** Persistent infection with high-risk types of human papillomavirus (HPV) is a prerequisite for the development of cervical cancer. Increasing trend of Sexual transmitted disease (STDs) and potential link between a common STD Human papilloma virus and cervical cancer makes it necessary to search for public knowledge and awareness especially midwives as health workers.

**Materials and Methods:** A total of 36 Midwives of Tabriz University of Medical sciences were interviewed and Knowledge, awareness and informational behavior of them were evaluated using a prepared questionnaire (55 questions arranged in 5 parts) in July 2011. Data

obtained from the study were analyzed using SPSS-17 software using One Way ANOVA test,  $\chi^2$  test or Fisher's exact test and logistic regression model. In this study,  $p < 0.05$  was regarded statistically meaningful.

**Results:** 15% of the midwives had a master's degree. 84% of them had adequate knowledge about HPV and 64% of them knew all transition routes in details. Midwives attitude about this disease was not positive. There was considerable statistic difference between midwives' knowledge and awareness about the virus contamination ( $r_s = 0.78$ ,  $p = 0.001$ ).

**Conclusion:** Despite high knowledge of midwives about HPV, their unfavorable awareness about this viral disease may affect their performance while dealing and working with such patients; so increasing their awareness and acceptance seems to be the core of health programs in HPV education campaigns.

**Key words:** Knowledge, Awareness, Midwife, HPV.

### P-184

#### Quality of life in infertile couples in Fatemiyeh Hospital in Hamedan

Masoumi S<sup>1</sup>, Mousavi S<sup>2</sup>, Keramat A<sup>3</sup>, Poorolajal J<sup>4</sup>, Rabiee S<sup>5</sup>, Mohammadpour N<sup>6</sup>, Ramezani N<sup>6</sup>.

1. Department of Midwifery, Mother and Child Care Research Center, Hamedan University of Medical Science, Hamedan, Iran.
2. Department of Psychology, Faculty of Medicine, Gorgan University of Medical Sciences, Gorgan, Iran.
3. Department of Reproductive Health, Faculty of Nursing and Midwifery, Shahroud University of Medical Sciences, Shahroud, Iran.
4. Department of Epidemiology and Biostatistics, Research Center for Health Sciences, Hamadan University of Medical Sciences, Hamadan, Iran.
5. Department of Obstetrics and Gynecology, Fatemiyeh Hospital, Hamadan University of Medical Sciences, Hamedan, Iran.
6. IVF Center, Fatemiyeh Hospital, Hamadan University of Medical Sciences, Hamedan, Iran.

**Email:** zahramid2002@yahoo.com

**Introduction:** Infertility can be a life crisis, identity crisis, chronic disease and the combination of these. Infertility and treatment for it has a negative impact on quality of life in infertile couples. Due to the nature of infertility, the importance of quality of life in infertile couple's equivalent to treatment.

**Materials and Methods:** 385 infertile couples referred Fatemiyeh infertility research center affiliated to Hamedan University of medical sciences, enrolled in such cross-sectional study. Data were gathered by three specific questionnaires of demographic characteristics, infertility-specified quality of life (FertiQoL) and general quality of life (WHO).

**Results:** In this study  $M \pm SD$  in psychiatric ( $60.86 \pm 17.27$ ) and environment ( $59.27 \pm 16.58$ ) domain of general quality of life and emotional ( $50.96 \pm 21.80$ ) and mind/body ( $58.56 \pm 22.78$ ) domain of specific quality of life was lower than the other domains.

**Conclusion:** supporting and counseling of infertile couples that have more problems in the quality of their lives, especially in emotional and physical domain are necessary, to improve their quality of life.

**Key words:** Infertility, Quality of life.

### P-185

#### Prevalence of depression among infertile couples in Iran: a meta-analysis

Masoumi S<sup>1</sup>, Poorolajal J<sup>2</sup>, Mousavi S<sup>3</sup>, Keramat A<sup>4</sup>, Khodakarami B<sup>5</sup>.

1. Department of Midwifery, Mother and Child Care Research Center, Hamadan University of Medical Sciences, Hamedan, Iran.
2. Department of Epidemiology and Biostatistics, Research Center for Health Sciences, Hamadan University of Medical Sciences, Hamedan, Iran.
3. Department of Psychology, Faculty of Medicine, Gorgan University of Medical Science, Gorgan, Iran.
4. Department of Reproductive Health, Faculty of Nursing and Midwifery, Shahroud University of Medical Sciences, Shahroud, Iran.
5. Department of Midwifery, Faculty of Nursing and Midwifery, Hamadan University of Medical Sciences, Hamedan, Iran.

**Email:** zahramid2002@yahoo.com

**Introduction:** Several studies have been conducted in Iran in order to investigate prevalence of depression among infertile couples. However, there is a remarkable diversity among the results. This meta-analysis was conducted to estimate an overall prevalence rate of depression among infertile couples in Iran.

**Materials and Methods:** International and national electronic databases were searched to June 2011 including MEDLINE, Science Citation Index Expanded, Scopus, SID, MagIran, and IranMedex as well as conference databases. Reference lists of articles were screened and the studies' authors were contacted for additional references. Cross-sectional studies addressing the prevalence of depression among infertile couples were included in this meta-analysis. We assessed 12 separate studies involving overall 2818 participants of which 1251 had depression.

**Results:** Results indicate that the overall prevalence rate of depression among infertile couples was 0.47 (95% CI: 0.40, 0.55). The prevalence rate of depression was 0.44 (95% CI: 0.32, 0.56) during 2000-2005 and 0.50 (95% CI: 0.43, 0.57 during 2006-2011). The prevalence rate of depression was 0.46 (95% CI: 0.39, 0.53) among women and 0.47 (95% CI: 0.40, 0.54) among men.

**Conclusion:** The result showed that not only the prevalence of depression in infertile couples was high but also had increasing growth in recent years. In addition, despite many studies had been conducted addressing the prevalence of depression in infertile couples, there is however remarkable diversity between the results. Thus, one can hardly give a precise estimation of the prevalence rate of depression among infertile couples in Iran at the moment.

**Key words:** Depression, Infertility, Meta-analysis, Cross-section, Prevalence.

**P-186****Impact of maternal body mass index (BMI) on pregnancy outcome**Sharifi N<sup>1</sup>, Sharifi F<sup>2</sup>.

1. Department of Health Education and Promotion, Faculty of Public Health, Tehran University of Medical Sciences, Thran, Iran.
2. Department of Midwifery, Islamic Azad University, Kazerun Branch, Kazerun, Iran.

Email: nadersharifi81@yahoo.com

**Introduction:** Maternal body mass index has an impact on maternal and fetal pregnancy outcome. Aim of our study was to investigate the impact of maternal BMI on maternal and fetal pregnancy outcome.

**Matetrials and Methods:** This study was a review on four researches. Data were collected from scientific sites.

**Results:** In the study by Alijahan *et al* as association of maternal body mass index with adverse maternal and prenatal outcomes, obese women were at increased risk for macrosomia, unwanted pregnancy, pregnancy induced hypertension, preeclampsia, and still birth. However, the risk of low birth weight delivery in underweight women were 1.6 times higher than the normal cases. In a same study by Vellanki *et al* as high body mass index in pregnancy, Its effects on maternal and fetal outcome compared to women with normal BMI, the following outcomes were significantly more common in obese pregnant women for BMI>30 gestational diabetes mellitus, pre-eclampsia, macrosomia, caesarean section, and infections. In a same study by Schrauwers *et al* as maternal and perinatal outcome in obese pregnant patient's outcome, women with high body mass index were at increased risk at Pregnancy hypertension, gestational hypertension, gestational diabetes, caesarean section, macrosomia, a longer overall hospital stay, mental health issues, less likely to have a spontaneous onset of labour

**Conclusion:** Considering high prevalence of abnormal maternal body mass index and associated adverse maternal and prenatal outcome; consultation before pregnancy is recommended in order to achieve normal body mass index and reduce the relevant complications.

**Key words:** Maternal body mass index, Pregnancy, Pregnancy outcome.

**P-187****Relation of maternal body mass index (BMI) and adverse maternal outcomes**Sharifi F<sup>1</sup>, Sharifi N<sup>2</sup>.

1. Department of Midwifery, Islamic Azad University, Kazerun Branch, Kazerun, Iran.
2. Department of Health Education, Shahrekord Branch, Islamic Azad University, Shahrekord, Iran.

Email: f\_sharifi44@yahoo.com

**Introduction:** Maternal body mass index has an impact on maternal and fetal pregnancy outcome. The present

study aimed to determine association between abnormal maternal body mass index and adverse maternal outcomes.

**Materials and Methods:** In this review article, A number of researches studied. Electronic searching of Medline, Sid, google scholar was performed during 2009-13.

**Results:** The results showed that increased maternal BMI were at increased risk for unwanted pregnancy, pregnancy induced hypertension, pre-eclampsia, peripheral edema, gestational diabetes mellitus, caesarean section, infections, a longer overall hospital stay, mental health issues, less likely to have a spontaneous onset of labour.

**Conclusion:** Considering high prevalence of abnormal maternal body mass index and associated adverse maternal outcomes; consultation before pregnancy is recommended in order to achieve normal body mass index and reduce the relevant complications.

**Key words:** Maternal body mass index, Pregnancy, Maternal outcomes.

**P-188****Effect of weight loss on insulin resistance and sex hormone levels in women with polycystic ovary syndrome**Kamali Z<sup>1</sup>, Rousta F<sup>2</sup>.

1. Deputy of Research, Faculty of Nutrition Sciences and Food Technology, National Nutrition and Food Technology Research Institute, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
2. Center of Midwifery, Tehran University of Medical Science, Tehran, Iran.

Email: zkamalee@yahoo.com

**Introduction:** The prevalence of Polycystic ovary syndrome (PCOS) is about 4-8% so this syndrome is considered to be the most common endocrine disorder in women of reproductive age. PCOS with Impaired Glucose Tolerance (IGT), obesity, type II diabetes increases risk factors for cardiovascular disease, hypertension, elevated inflammatory factors, infertility, pregnancy, diabetes, breast and endometrial cancer is associated. This study examined the effect of weight loss on insulin resistance and serum sex hormones in women with ovarian syndrome.

**Materials and Methods:** Several studies of nutritional interventions have been conducted in women with polycystic ovary syndrome. The effect of low-calorie but high protein diet carbohydrate with low glycemic load, physical exercise, weight loss drug on sex hormones, Insulin Resistance (IR) in overweight or obese women with PCOS were studied.

**Results:** Results show that even with a weight loss of 5-7% of initial body weight, all index of IR was significantly improved. Dietary intervention with physical exercise and weight loss drugs leads to increased levels of Sex Hormone Binding Protein (SHBG), Luteinizing Hormone (LH) and Anti-Mullerian (AMH) and decreased Free Androgen Index (FAI) and Testosterone.

**Conclusion:** In women with PCOS diet weight-reducing effects of sex hormones, anthropometric measures and insulin sensitivity. Further studies about the long term effects of these factors on fertility are recommended.

**Key words:** Polycystic ovary syndrome, Weight loss, Hypocaloric diet, Insulin Resistance.

## P-189

### One-to-one midwife model in labor: Challenges and recommendations

Mohamadirizi M<sup>1</sup>, Mohamadirizi Sh<sup>2</sup>, Mohamadirizi S<sup>3</sup>.

1. Department of Management, Baghbahadoran University, Isfahan, Iran.
2. Department of Nursing, Isfahan University of Medical Sciences, Isfahan, Iran.
3. Department of Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

Email: m\_shahlaa@yahoo.com

**Introduction:** The roots of midwifery lie in the support given by one woman to another around the time of birth. One-to-One Midwifery was based on the way independent midwives provide midwifery care.

**Materials and Methods:** This study performance systematically reviewed from 2002 to 2012 in electronic sources MDSCAP, JAMA, PROQUEST, BMJ, COCHRANELIBRARY, SCIENCEDIRECT, GOOGLESCHOLAR, PUBMED, NCBI. About 34 articles were obtained from the search close to 9 articles for writing this text was used.

**Results:** The results show that one-to-one care lead to a reduction in the use of epidural, analgesia and a 56% reduction in risk of total cesarean Deliveries and the rate of unnecessary operative interventions such as episiotomy. As well as the length of second stage of labor and less stimulate with oxytocin was reduced in women served in the One-to-One care program. Psychological outcomes, including enhanced confidence and positive emotional well-being following birth. There were real challenges in adapting to this role and style of practice may not suit all midwives. In particular, the changes in time-management and personal orientation it required. In many ways, these challenges forced the midwives to re-assess and re-conceptualise their role, but it produced strong perceptions of the meaning of being a midwife. Finally, Health practitioner have recommended that women in labor and postpartum should receive continuous professional support. Also recommendation that in Iran this care model should be performed to reduction many complications and maternal mortality rate.

**Key words:** Midwife, Labor, Challenges, Recommendation.

## P-190

### The effect of intravenous Tranexamic acid on hemoglobin and hematocrit levels after vaginal delivery

Mohammad-Alizadeh-Charandabadi S<sup>1</sup>, Mirghafourvand M<sup>1</sup>, Abasalizadeh F<sup>2</sup>, Shirdel M<sup>3</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Obstetrics and Gynecology, Tabriz University of Medical Sciences, Tabriz, Iran.
3. Student Research Comitte, International Branch of Aras, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: shirdelmina@gmail.com

**Introduction:** Postpartum hemorrhage (PPH) may cause or worsen anemia or deplete iron stores in women, causing weakness and fatigue in severe cases. This study aimed to investigate the effect of intravenous tranexamic acid on the hemoglobin and hematocrit level after vaginal delivery in women referring to two educational hospitals of Tabriz University of Medical Sciences.

**Materials and Methods:** This double blind randomized controlled trial was carried out on 120 pregnant women. We used block randomization with block sizes of 4 and 6 stratified by center to assign subjects into two equal groups. Both groups got routine measures including oxytocine. After delivery of the anterior shoulder, subjects in the intervention group received one gram intravenous tranexamic acid and in the control group received one gram placebo in 200 ml normal saline over 10 minutes. Hemoglobin and hematocrit levels were measured before and 12-24 hours after delivery. The data were analyzed with independent t-test and chi-square test.

**Results:** The mean of hematocrit loss in the intervention group was significantly less than the control group ( $3.76 \pm 2.31$  vs.  $4.83 \pm 3.03\%$ ,  $p=0.03$ ). Also, less hemoglobin loss was observed in the intervention group compared with the control group ( $1.43 \pm 0.89$  vs.  $1.71 \pm 1.02$  g/dl). However, the difference was not significant ( $p=0.11$ ). No side event was reported.

**Conclusion:** This study confirms the effects of tranexamic acid in reducing bleeding and its safety of use in vaginal delivery. This matter is particularly important for reducing the rates of maternal mortality and morbidity in regions where anemia is a constant problem.

**Key words:** Vaginal delivery, Tranexamic acid, Randomized clinical trial, Hemoglobin, Hematocrit.

## P-191

### The effect of combination of calcium and magnesium on amount of menstrual bleeding in women with dysmenorrhea: a randomized controlled trial

Mohammad-Alizadeh-Charandabadi S<sup>1</sup>, Mirghafourvand M<sup>1</sup>, Nezamivand S<sup>2</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Student Research Comitte, International Branch of Aras, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: nezamivandsalime@yahoo.com

**Introduction:** There are some evidence on relation between deficiency of calcium and magnesium with dysmenorrhea and increased menstrual bleeding. However, we found no trial in this area. Therefore, we aimed to investigate the effect of combined calcium and magnesium on amount of menstrual bleeding in students with dysmenorrhea residing in dormitories, Tabriz.

**Materials and Methods:** In this triple blind trial, 41 students with moderate or severe dysmenorrhea were randomly assigned to intervention (20 people) and control (21 people) groups. Subjects in the intervention group received combined 600 mg calcium carbonate and 300 mg magnesium stearate and in the control group received placebo daily from 15th cycle day until the 3rd day on the following cycle. The amount of menstrual bleeding was quantified using Higham pictorial chart for two months before and two months after intervention. The data were analyzed using one-way ANOVA and ANCOVA tests.

**Results:** Baseline characteristics including amount of menstrual bleeding before intervention were similar between the two groups. After intervention, the amount of menstrual bleeding in the intervention group was significantly less than the control group (38.4 vs. 47.7 cc; Adjusted difference -11.9, 95% confidence interval -19.6 to -4.2). No side event was reported.

**Conclusion:** Based on results of this study, combination of calcium and magnesium reduces amount of menstrual bleeding in women with dysmenorrhea. However, the result may not be generalized to women with no dysmenorrhea and more studies are needed in this area.

**Key words:** Menstrual bleeding, Calcium-magnesium, Randomized controlled trial.

#### P-192

### The effects of *Matricaria Chamomilla* (MC) and *Mefenamic Acid* (MA) on the premenstrual syndrome (PMS) symptoms

Sharifi F<sup>1</sup>, Simbar M<sup>2</sup>, Mojab F<sup>3</sup>, Alavi Majd H<sup>4</sup>, Nouraei S<sup>5</sup>.

1. Department of Midwifery, Kazerun Branch, Islamic Azad University, Kazerun, Iran.
2. Department of Midwifery and Reproductive Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Pharmacognosy, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
4. Department of Biostatistics, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
5. Department of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, International Branch, Tehran, Iran.

**Email:** f\_sharifi44@yahoo.com

**Introduction:** Some clinical trials have revealed the effects of MC on PMS. This study aimed to the effects of MC and MA on the PMS symptoms.

**Materials and Methods:** A randomized, double blind clinical trial was conducted on 90 students of Kazerun Islamic Azad University, living in the dormitory. The participants completed daily rating form for the diagnosis of PMS and its severity for two consecutive

cycles. After verification, they were randomly divided into two groups of 45 students. The participants received one 100 mg capsule of MC or 250 mg MA three times daily from day 21 of menstrual cycle till the beginning of the menstruation. They completed daily symptom rating form at the same time.

**Results:** General severity reduction of symptoms was significantly greater among MC Extract-users (25±13.8 and 28±14.5 percent) than that among MA-users (14.8±18.5 and 16.2±18.2 percent) after 1st and 2nd cycles (p<0.05). Severity of emotional symptoms was significantly higher among MC Extract-users (30.1±26.6 and 33.4±25.3 percent) than that among MA-users (11.6±25.7 and 10.7±26.8 percent) after two cycles intervention (p>0.05). Severity reduction of physical symptoms was not significantly different (p>0.05) among MC Extract-users (30.1±26.6 and 33.4±25.3 percent) and among MA-users (11.6±25.7 and 10.7±26.8 percent). Data were analyzed using SPSS version 18 by independent T, repeated measures, Mann-Whitney and Wilcoxon tests.

**Conclusion:** MC reduces the severity of symptoms of PMS during treatment. MC effect on the severity of general and emotional symptoms of PMS is greater than that of MA. However, their effects on the physical symptoms are similar.

**Key words:** *Matricaria Chamomilla*, *Mefenamic Acid*, *Premenstrual syndrome*.

#### P-193

### Prevalence, clinical observations and risk factors of Trichomoniasis in women supported by selected health centers of Tabriz

Shafaie F<sup>1</sup>, Namazi A<sup>2</sup>.

1. Department of Midwifery, Faculty of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Department of Midwifery, Faculty of Nursing and Midwifery, Mazandaran University of Medical Sciences, Mazandaran, Iran.

**Email:** fahimehsehhatie@yahoo.com

**Introduction:** It is estimated that 180 million people are infected by trichomoniasis annually worldwide, making it one of the most common STDs. Up to 50% of infections may be asymptomatic. The key to successful and practical management of STIs lies in the accurate diagnosis and appropriate treatment for conditions.

**Materials and Methods:** This is a cross-sectional study, in which 1000 women who had the inclusion criteria were selected by random sampling from 12 selected health centers of Tabriz. A questionnaire was used to obtain their personal and reproductive information, check list for clinical observations and Wiff test, direct observation, and Diamond culture methods were used for diagnose vaginal infections. PH of their vaginal discharges was determined. Data were analyzed by using SPSS version 13.5, frequency, mean standard deviation,  $\chi^2$  and fisher exact test.

**Results:** The prevalence of trichomoniasis was 9.2%. The findings showed that the majority of clinical observations were abnormal discharge volume, no homogeneity consistency of discharge, clear appearance and yellow-green color of discharge and PH of over 5.5. The appearance and color of discharges had statistically significant relationship with trichomoniasis ( $p < 0.01$ ). Marriage age, personal health, Coitus health and PH of vagina were risk factors of this infection.

**Conclusion:** According to high prevalence of trichomoniasis infection and important role in infertility after chronic cervicitis it seems necessary to pay more attention to these infections. Midwives have an important role in giving more information to women about infections and risk factors.

**Key words:** Trichomoniasis, Clinical observations, Prevalence, Risk factors.

#### P-194

### The effects of Fluconazole-Oral Protexin combination and Fluconazole on the vulvovaginal candidiasis

Nouraei S<sup>1</sup>, Amir Ali Akbari S<sup>2</sup>, Sharifi F<sup>3</sup>, Jorjani M<sup>4</sup>, Ghafourian A<sup>5</sup>, Alavi Majd H<sup>6</sup>.

1. Department of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, International Branch, Tehran, Iran.
2. Department of Nursing and Midwifery, Faculty of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. Department of Midwifery, Kazerun Branch, Islamic Azad University, Kazerun, Iran.
4. Department of Pharmacology, Faculty of Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
5. Department of Gastroenterology, Taleghani Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
6. Department of Biostatistics, Faculty of Paramedical, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

**Email:** soheilanouraei@yahoo.com

**Introduction:** According to the limited studies reporting new treatments for Vulvovaginal candidiasis, this study was designed to compare the effects of fluconazole-oral protexin combination and fluconazole on the Vulvovaginal Candidiasis.

**Materials and Methods:** A double-blind clinical trial was conducted, involving 90 women who were referred to the gynecology clinic. Vulvovaginal candidiasis was diagnosed with itching, cheesy vaginal discharge, and any one of the following: dysuria, pH < 4.5, dyspareunia, vulvar erythema, or vulvar edema and if branched hyphae and *Candida* buds were visible after addition of KOH 10% in the culture and the result of cultivation in Sabouraud's dextrose agar medium was positive. Patients were randomly classified into two groups. Absence of discharge, itching, and negative culture results 5-7 days after completion of treatment indicated treatment success.

Data in this study were analyzed using the SPSS ver. 17.0 software.

**Results:** The combinations, fluconazole-oral protexin and fluconazole-placebo, were equally effective in reduction of complaints and symptoms, but treatment with fluconazole-oral protexin had a stronger effect on dysuria than fluconazole-placebo ( $\chi^2=4.86$ ,  $p=0.02$ ); the fluconazole-oral protexin combination elicited a better therapeutic response ( $\chi^2=0.01$ ,  $p=6.7$ ). In addition, fluconazole-oral protexin combination treatment demonstrated better recovery time ( $t=-2.04$ ,  $p=0.04$ ).

**Conclusion:** This study demonstrated that complementary treatment with probiotic *Lactobacillus* increased the efficacy of fluconazole in treatment of vulvovaginal candidiasis. Further research is recommended.

**Key words:** Probiotic, Vulvovaginal candidiasis, Fluconazole, Complementary treatment.

#### P-195

### Pregnancy outcomes among hospitalized patients infected with 2009 H1N1 influenza virus in Qom, Iran, in Oct-Nov 2009

Jafarbegloo E, Dadkhah Tehrani T, Abedini Z, Reisie M.

Department of Midwifery, Faculty of Nursing and Midwifery, Qom University of Medical Sciences, Qom, Iran.

**Email:** hossein\_jbu@yahoo.co.uk

**Introduction:** Pandemic H1N1 influenza A 2009 (H1N1/09) virus has been identified as a leading cause of febrile respiratory diseases world-wide and pregnant women constitute a high risk group. To determine the clinical characteristics and outcomes of pregnant women with H1N1 influenza A hospitalized in university hospitals of Qom city in Iran.

**Materials and Methods:** This descriptive retrospective study using existed data was conducted in October and November 2009. All pregnant women with influenza manifestations were admitted to the hospitals to undergo nasopharyngeal culture. H1N1 virus was confirmed in 11 cases. Data including demographic characteristics, clinical manifestations, laboratory test results and pregnancy complications were extracted from medical records and analyzed by descriptive statistics.

**Results:** The mean age of the women was  $28.1 \pm 4.7$  years with a mean gestational age of  $28.7 \pm 10.9$  weeks. The most common clinical manifestations included coughing (100%), fever (87.5%), dyspnea (75%). The most common abnormal test was anaemia (88%). Pregnancy complications included preterm delivery (36.3%), low birth weight (18%), oligohydramnios (9%), gestational diabetes (9%) and fetal distress (9%). One (12.5%) wound dehiscence happened.

**Conclusion:** Vaccination seems necessary to prevent this potentially fatal infectious disease. Furthermore, timely prescription of antiviral medications is recommended to decrease the risk of severe complications.

**Key words:** Pregnancy, H1N1 influenza A, Outcome, Iran.

## 5- Psychology

### P-196

#### **The complications of atmospheric pollution in pregnant women, fetus, family and suggestion to prevent them**

**Jahdi F.**

*Department of Midwifery, Tehran University of Medical Sciences, Tehran, Iran.*

**Email:** jahdi\_fr@yahoo.com

**Introduction:** Atmospheric pollution is a factor threatening the health of mothers and babies who are the most prevalent group in the society and form of the pollution in the world. The chemical factors produce by the pollution enter in the life such as water, Earth and food material can stay and change in the natural center and Enter body of mother and baby Through varies ways and cause long and short term complication.

**Materials and Methods:** The present data was gather to international web center from 1990 until 2012 year and other References.

**Results:** The result show that using addictive drug cause cardiac and Respiratory disease, cancer, abortion, Preterm labour in mother, Intra uterine death , Varies congenital abnormality, personality problem, Anemia, neonatal death, further more noise pollution can increase fetal heart beat, the lead and mercury in the polluted air can cause lack of concentration, imbalance and instability Reversible epilepsy and quick mutation can cause some of disease such as breast cancer, uterus, ovary other cancer and infertility in women.

**Conclusion:** The result of epidemiologic study about the chemical material cigarette, addict drug and air pollution show that these can cause complication in the fetus and mother. So that in the present it is Essential to ask for the help of every women in the society to offer suitable solution and planning to overcome, these financial health, cultural and social problem.

**Key words:** Atmospheric Pollution, Pregnant women, Fetus, family, Prevent complication.

### P-197

#### **Psychological complications of infertility: a systematic review**

**Salehiniya H.**

*Students' Scientific Research Center, Tehran University of Medical Sciences, Tehran, Iran.*

**Email:** alesaleh70@yahoo.com

**Introduction:** Infertility is one of the main medical problems that 10-15% of people suffering from it. Infertility is known as a cause of severe psychological and interpersonal stressors. So infertile couples, issues, problems and hurt a lot of mental, marital, family and social experience. This study aimed to investigate the psychological Complications of infertility.

**Materials and Methods:** This study is a systematic review. We use reference books and more than 26 articles through the Iran medex, Magiran, Google; Pubmed, and Sid databases using key words: infertility, complications, and psychosocial effect.

**Results:** Cognitive problems such as; (lack of perfection in adulthood, loss of self-esteem, self blame, sense of loss of personal control, negative attitude towards the future, etc.), emotional problems such as; (feelings of anger, feelings of inferiority and helplessness, lower life satisfaction, anxiety, depression, reduction in life expectancy, etc.), and behavioral problems are common in infertile couple.

**Conclusion:** According to the results, and the high prevalence of emotional and cognitive problems in infertile couple we recommend preventive services, consulting services and implementing psychological interventions in them.

**Key words:** Infertility, Complications, Psychosocial effect.

### P-198

#### **Evaluation of the effectiveness of self-regulation couple therapy (SRCT) on the public health and marital satisfaction in infertile couples**

**Kazemian S.**

*Allameh Tabatabaee University, Tehran, Iran.*

**Email:** kazemian\_somaye@yahoo.com

**Introduction:** Infertility is a complex issue that affects individuals and groups; also it has serious implications for the mental and social well-being of those involved. The aim of this review was to assess the effects of self-regulation couple therapy (SRCT) on the public health and marital satisfaction in infertile couples.

**Materials and Methods:** Population included all participants attending the Mashhad Montaserie Infertility Center in winter 2012. A sample set of 30 infertile couples was selected by using sample method based on availability. They were randomly divided into two experimental and control groups. General health questionnaire GHO-28 and marital satisfaction Enrich form questions, was used for couples that applying for participation in meeting of a group and androgynous couples who have achieved the quorum in the questionnaires, put randomly into experimental and control groups-each have 15 members. Furthermore, the research methodology was carried in quasi-experimental method and the examination of Analysis of covariance was used in data analyses as well.

**Results:** The findings show that the self-regulation couple therapy is effective significantly ( $p < 0.0001$ ) in improving general health and increase marital satisfaction, but there was not any significant difference in pretest-posttest scores of control group.

**Conclusion:** The results of this study clearly stated that the self-regulation couple therapy especially in infertile couples who are facing critical situations, can help them confront and solve their problems. Furthermore the results showed that the self-regulation couple therapy in women and men has equal effect.

**Key words:** *Self-regulation couple therapy, Marital satisfaction, General health, Infertile couples.*

### P-199

#### **The effectiveness of realistic self-talk technique in increasing marital satisfaction of infertile women**

**Bahmani N.**

*Allameh Tabatabaee University, Tehran, Iran.*

**Email:** kazemian\_somaye@yahoo.com

**Introduction:** The purpose of this study was to evaluate the effectiveness of realistic self-talk technique in increasing marital satisfaction of infertile women.

**Materials and Methods:** This study uses an experimental design so 20 infertile women were selected by using sampling method based on "available" from those referring to Ebne Sina Clinic and assigned randomly in two "experimental" and "control" groups. Those in experimental group received the technique of realistic self-talk while infertile women in control group did not received any technique. The scale used in this research to measure the marital satisfaction was Enrich questionnaire. In order to analyze the variables, covariance test were employed to study the significance relationships between experimental and control groups averages.

**Results:** The analysis of the data proved the effectiveness of realistic self-talk technique in increasing marital satisfaction. Research hypothesis for three components of, "communication", "conflict" and "sexual relationship" were justified.

**Conclusion:** The results of this study clearly stated that the realistic self-talk technique especially in infertile couples who are facing critical situations, can help them confront and solve their problems.

**Key words:** *Realistic self, Talk technique, Marital satisfaction, Infertile women.*

### P-200

#### **Efficacy of life review therapy with emphasis on Islamic ontology on decreasing depression symptoms**

**Esmaily M.**

*Allameh Tabatabaee University, Tehran, Iran.*

**Email:** kazemian\_somaye@yahoo.com

**Introduction:** Life review therapy has been used for reducing PTSD symptoms in infertile women. Using life review therapy with elements of religious ontology, this study introduces an intervention for decreasing depression symptoms in infertile women.

**Materials and Methods:** The study population included clients referred to the two counseling centers in Tehran during 2010 and 2011. The sample consisted of 18 infertile women who referred for treatment with depression diagnosis by their psychiatrist and were willing to participate in the study. After completion of diagnosis process and a pre-test, infertile women were

randomly assigned to the two groups of intervention and control. Depression symptoms were assessed by depression questionnaire (Beck, 1998) before and after the intervention. The intervention group received ten sessions of life review therapy and the control group was invited to attend treatment sessions after the study and the post-test. None of the members of the two groups took any medication during the study period and they were followed up three months later to check the persistence of the effects.

**Results:** Analysis of data by t-test showed a significant decrease in depression symptoms in the experimental group ( $p=0.01$ ). Findings showed that life review therapy with emphasis on Islamic ontology was effective in reducing depression symptoms ( $p<0.000$ ).

**Conclusion:** Using elements of religious ontology for infertile women who believe with a process of life review therapy can be effective in reducing depression symptoms.

**Key words:** *Life review therapy, Islamic ontology, Depression, Infertile women.*

### P-201

#### **Assessing the effect of mindfulness therapy on reducing anxiety**

**Kazemian S, Esmaily M.**

*Allameh Tabatabaee University, Tehran, Iran.*

**Email:** kazemian\_somaye@yahoo.com

**Introduction:** Mindfulness therapy is a cognitive therapy. This study aimed to find the effects of mindfulness therapy on reducing anxiety in clients who referred to counseling centers in Tehran, Iran.

**Materials and Methods:** It was an experimental study using pre- and post-test on two groups of case and control. With simple random sampling, 20 male and female in age range of 20-35 years were selected out of 29 clients who were referred to two counseling centers in Tehran from April 2009 to March 2010. The subjects were randomly divided into two groups of case and control. State-Trait Anxiety Inventory for Adults (STAI) was used for data collection. Data were analyzed using the nonparametric method of Mann-Whitney U test.

**Results:** The results showed that mindfulness therapy was effective in reducing infertile women's anxiety ( $p<0.0001$ ).

**Conclusion:** The results of this study clearly stated that mindfulness therapy especially in infertile couples who are facing critical situations, can help them confront and solve their problems.

**Key words:** *Mindfulness therapy, Anxiety, Cognitive therapy.*

### P-202

#### **Mind body therapies and infertility**

**Moradan S.**

*Department of Obstetric and Gynecology, Semnan University of Medical Sciences, Amir Hospital, Semnan, Iran.*

**Email:** sm42595@yahoo.com



**Introduction:** Mind-body medicine refers to the connection between the mental health and body's health. Infertility leads to tremendous stress, which may lead to depression, anxiety or other mental illnesses. Mind-body medicine offers a way to cope better with the stress of infertility. Some studies have reported improved pregnancy rates and emotional well-being by mind-body programs.

**Materials and Methods:** In this review article it was decided to search the internet about the role of different mind body therapies on body and fertility. Therefore, the search was performed and the newer researches in regard to this subject were surveyed.

**Results:** There are many different mind-body therapies, some more popular are: Yoga: combines physical postures and breathing practices to create a relaxing exercise. Acupuncture: this may be the most commonly used mind-body therapy of IVF patients. Some studies have found improved pregnancy rates. Prayer and spirituality: some studies have found that people who engage in religious belief and activities have lower rates of depression and anxiety. Hypnosis: there has been some preliminary research and one study found that hypnosis done during embryo transfer led to increased treatment success rates. Laugh and humor therapy: researches found it can help raise mood, lower stress hormone and blood pressure and improve immunity.

**Conclusion:** Most of the mind body therapies act on body by reducing of anxiety, stress and depression. There are little scientific findings about their direct effect on fertility. Because there are high prevalence psychological diseases in infertile cases, to use them as an adjuvant therapy in these cases are very important.

**Key words:** Mind body therapy, Infertility.

### P-203

#### Prediction incidence and bio-psycho-socio-cultural risk factors of post-partum depression immediately after birth in Iranian population

Abdollahi F<sup>1</sup>, Zarghami M<sup>2</sup>, Lye M<sup>3</sup>.

1. Department of Public Health, Faculty of Health, Mazandaran University of Medical Sciences, Mazandaran, Iran.
2. Department of Psychiatry, Psychiatry and behavioral Sciences Research Center, Mazandaran University of Medical Sciences, Mazandaran, Iran.
3. Department of Community Health, Faculty of Medicine and Health Sciences, University of Putra, Malaysia.

**Email:** abdollahizagh@gmail.com

**Introduction:** Post-partum depression (PPD) is the most prevalent mental problem associated with childbirth. The purpose of the present study was to determine the incidence of early PPD and possible relevant risk factors among women attending primary health centers in Mazandaran province, Iran for the first time.

**Materials and Methods:** A longitudinal cohort study was conducted among 2279 eligible women during 32-42 weeks of pregnancy to determine bio-psycho-socio-

cultural risk factors of depression at two weeks post-partum using Iranian version of Edinburgh Postnatal Depression Scale (EPDS). Univariate and hierarchical multiple logistic regression models were used for data analysis.

**Results:** Among 1,739 mothers whose EPDS scores were  $\leq 12$  during 32-42 weeks of gestation and followed up the study, the cumulative incidence rates of depression was 6.9% (120/1,739) at two weeks post-partum. In the multivariate model the factor that predicted depression symptomatology at 2-weeks post-partum was having a psychiatric distress in pregnancy based on General Health Questionnaire (GHQ) [OR=1.06, (95% CI: 1.04-1.09)]. The risk of PPD also decreased with sufficient parenting skills [OR= 0.78, (95% CI: 0.69-0.88)], increased marital satisfaction [OR=0.94, (95% CI:0.9-0.99)], those with increased frequency of practicing rituals [OR=0.94, (95% CI:0.89-0.99)] and in those whose husbands had better education [OR=0.03, (95% CI:0.88-0.99)].

**Conclusion:** Findings indicated that combination of demographic, sociological, psychological and cultural risk factors can make mothers vulnerable to PPD.

**Key words:** Post-partum depression, Risk factors, Incidence, Longitudinal.

### P-204

#### The relationship between marital conflict, negative emotion, physical health and sexual function in infertile women

Khorram S<sup>1</sup>, Naziry G<sup>2</sup>, Ghareshi F.

1. Fars Sciences and Research Branch, Islamic Azad University, Fars, Iran.
2. Department of Clinical Psychology, Fars Sciences and Research Branch, Islamic Azad University, Fars, Iran.

**Email:** shima\_khorram@yahoo.com

**Introduction:** Infertility is one important problem of reproductive health. As the fertility phenomenon has also the psycho-social aspects and it is located in the territory of behavioral and social sciences materials. The aim of this study was to investigate the relationship between marital conflict, negative emotion, physical health and sexual function in infertile women.

**Materials and Methods:** In order to investigate 350 samples of the infertile women from Yazd were selected by available sampling. The participants answered four scales: "marital conflict", "depression, anxiety, stress", "quality of life" and "sexual function". The collected data were analyzed by SPSS. Present research was from correlation type, and data were analyzed by using Pearson correlation and stepwise regression at the meaningful level ( $p < 0.0001$ ).

**Results:** Results showed that there was meaningful negative relationship between marital conflict, physical health and sexual function. However, there was meaningful positive relationship between marital conflict and negative emotion. Also, regression analysis showed that is marital conflict best predictor of dysfunction sexual function.

**Conclusion:** In order to help infertile couples psychological consoling considered. Future studies are recommended to determine depression and anxiety in infertile couples.

**Key words:** Marital conflict, Negative emotion, Physical health, Sexual function, Infertile women.

## P-205

### Women's desire to have sexual relationship during engagement period

Ahmari Tehran H<sup>1</sup>, Dadkhah Tehrani T<sup>1</sup>, Oveisi H<sup>2</sup>, Abedini Z<sup>1</sup>, Jafarbegloo E<sup>1</sup>.

1. Department of Nursing and Midwifery, Qom University of Medical Sciences, Qom, Iran.

2. Tehran University of Medical Sciences, Tehran, Iran.

Email: ahmari9929@yahoo.com

**Introduction:** Healthy sexual relationship is one of the most effective and profound enjoy that partner's can give to each other. In a healthy sexual relationship both partners are able to enjoy profoundly as well as control their sexual behaviour without any feeling of fear, shame, guilt and wrong believes. Having sexual relationship during engagement period is negatively influenced by socioeconomic, cultural and ethnical factors so maybe unhealthy sexual relationship patterns are replaced. The present study is aimed at determining the desire of engaged women to have sexual relationship.

**Materials and Methods:** This descriptive analytical study was conducted on 900 engaged women (13-36 years old) selected by cluster sampling method. The data was gathered by a standard questionnaire.  $P < 0.05$  was considered statistically significant.

**Results:** The results showed that, most of couples had sexual relationship during engagement period. 46.2% of samples were quite demanding and satisfied to have sexual relationship, 45.4% were sometimes demanding to have it, 4.3% did not accept it unless as a wife's duty, 4.3% were neutral and 0.6% hated it. Highest level of sexual desire was found in samples aging from 20-24 yr, and among those who had high school diploma, householders during 31-36 month of beginning period of their marriage.

**Conclusion:** In order to negative tendencies against sexual relationship during engagement period, caused by cultural and ethnical differences, it is suggested that health staffs and family health consultants to train healthy sexual relationships especially in engaged couples.

**Key words:** Women's desire, Sexual relationship, Engagement.

## P-206

### An investigation of the causal model of the relations between the marital conflict, physical health and sexual function in infertile women

Khorrām S, Naziry G.

Islamic Azad University, Science and Research Branch, Fars, Iran.

Email: shima\_khorrām@yahoo.com

**Introduction:** The purpose of present study was to investigate causal model of marital conflict, physical health and sexual function.

**Materials and Methods:** In order to investigate the given model, 350 samples of the infertile women from Yazd were selected by available sampling. Data collected by Kensas Marital Conflict Scale, physical health dimension of quality of life questionnaire (SF36) and Female Sexual Function Index. The validity and reliability of the instruments was estimated by factor analysis and cronbach alpha coefficient, respectively. The structural equation analysis was employed to test the model.

**Results:** The results of the study indicate that the given model has appropriate fitness Index and explain significant variance of sexual function. According to this model, physical health mediates relation between marital conflict and sexual function.

**Conclusion:** Sexual function is complex phenomenon that affective, physical health and behavioral factors interact therefore in the sexual dysfunction prevention; all these variables should be taken into consideration and also mediation.

**Key words:** Marital conflict, Physical health, Sexual function, Infertile.

## P-207

### The causal model of the marital conflict, negative emotions, and sexual function in infertile women

Khorrām S, Naziry G, Ghareishi F.

Science and Research Branch, Islamic Azad University, Fars, Iran.

Email: shima\_khorrām@yahoo.com

**Introduction:** The purpose of present study was to investigate causal model of marital conflict, negative emotions and sexual function.

**Materials and Methods:** In order to investigate the given model, 350 samples of the infertile women from Yazd were selected by available sampling. Data collected by Kensas Marital Conflict Scale, Depression anxiety stress scale, and Female Sexual Function Index. The validity and reliability of the instruments was estimated by factor analysis and cronbach alpha coefficient, respectively. The structural equation analysis was employed to test the model.

**Results:** The results of the study indicate that the given model has appropriate fitness Index and explain significant variance of sexual function. According to this model, negative emotions mediate relation between marital conflict and sexual function.

**Conclusion:** Training of coping strategies with negative emotions should be an important part of treatment programs.

**Key words:** Marital conflict, Negative emotions, Sexual function, Infertile.

## P-208

### Mediation role of negative emotions on the relationship between marital conflict and physical health in infertile women

**Khorram S, Naziry G, Ghareshi F.**

*Science and Research Branch, Islamic Azad University, Fars, Iran.*

**Email:** shima\_khorram@yahoo.com

**Introduction:** The purpose of present study was to investigate Mediation role of negative emotions on the relationship between marital conflict and physical health in infertile women.

**Materials and Methods:** In order to investigate the given model, 350 samples of the infertile women from Yazd were selected by available sampling. Data collected by Kensas Marital Conflict Scale, Depression anxiety stress scale, physical health dimension of quality of life questionnaire (SF36). The validity and reliability of the instruments was estimated by factor analysis and chronbach alpha coefficient, respectively. The structural equation analysis was employed to test the model.

**Results:** The results of the study indicate that the given model has appropriate fitness Index. According to this model, negative emotions mediate relation between marital conflict and physical health.

**Conclusion:** Training of coping strategies with negative emotions and physical health improvement should be an important part of treatment programs.

**Key words:** *Marital conflict, Negative emotions, Physical health, Infertile.*

## P-209

### The relationship between marital satisfaction, resiliency, anxiety and sexual function in infertile women

**Khorram S<sup>1</sup>, Rezaee Z<sup>2</sup>.**

*1. Sciences and Research Branch, Islamic Azad University, Fars, Iran.*

*2. Tarbiat Moalem University, Tehran, Iran.*

**Email:** shima\_khorram@yahoo.com

**Introduction:** Infertility is one important problem of reproductive health. The aim of this study was to investigate the relationship between resiliency, marital satisfaction, anxiety and sexual function in infertile women.

**Materials and Methods:** In order to investigate 350 samples of the infertile women from Yazd were selected by available sampling. The participants answered four scales: "marital satisfaction", "anxiety", "resiliency" and "sexual function". The collected data were analyzed by SPSS. Present research was from correlation type, and data were analyzed by using Pearson correlation and stepwise regression at the meaningful level ( $p < 0.0001$ ).

**Results:** Results showed that there was meaningful negative relationship between anxiety, resiliency,

marital satisfaction and sexual function. However, there was meaningful positive relationship between marital satisfaction, resiliency and sexual function. Also, regression analysis showed that is marital satisfaction best predictor of sexual function.

**Conclusion:** In order to help infertile couples psychological consoling considered. Future studies are recommended to determine depression and anxiety in infertile couples.

**Key words:** *Marital satisfaction, Resiliency, Anxiety, Sexual function, Infertile.*

## P-210

### The role of coping strategies in predicting infertility stress among a group of infertile women in Shiraz

**Aflakseir A, Kazerani A.**

*Department of Clinical Psychology, School of Psychology, Shiraz University, Shiraz, Iran.*

**Email:** aafalakseir@shirazu.ac.ir

**Introduction:** Infertility is a condition that individuals have less control on it. Studies have shown that individuals with infertility problems experience psychosocial problems including anxiety, depression, social isolation, loneliness, social stigmatization, sexual dysfunction and low self-esteem. The use of various ways of coping seems to have different impact on women's infertility stress. The aim of this study was to examine the role of coping strategies (active-avoidance, passive-avoidance, active-confronted and meaning based) in predicting infertility stress among a group of women seeking infertility treatment in Shiraz.

**Materials and Methods:** One hundred twenty infertile women were recruited from several infertility clinics in Shiraz using convenience sampling method. The participants completed research measures including the Infertility Problem Stress Inventory and the Ways of Coping Scale (passive-avoidance, active-avoidance, active-confronted, meaning-based).

**Results:** Findings showed that participants had highest score on passive-avoidance coping strategies followed by meaning-based coping, active-confronted coping and active-avoidance coping. The findings also indicated that women who utilized more active-avoidance coping reported less infertility stress. Furthermore, the results of regression analysis demonstrated that two coping strategies including active-avoidance ( $\beta = -0.36$ ,  $p < 0.001$ ) and meaning-based coping ( $\beta = -0.50$ ,  $p < 0.001$ ) predicted low infertility stress significantly. Moreover, meaning-based coping strategy was the strongest predictor of low infertility stress.

**Conclusion:** The present study showed that infertile women who perceived their infertility problem as meaningful and those who used active-avoidance coping strategies had low infertility stress.

**Key words:** *Infertility stress, Coping strategies, Passive avoidance, Active avoidance, Active confronted, Meaning based.*

## P-211

### Coping style strategies in reliving anxiety emotions in patients with recurrent spontaneous abortion

Binaafar S<sup>1</sup>, Ghorbani B<sup>1</sup>, Olyae S<sup>2</sup>, Ghoojani A<sup>1</sup>.

1. *Reproductive Biotechnology Research Center, Avicenna Research Institute, ACECR, Tehran, Iran*
2. *Science and Research Branch, Islamic Azad University, Tehran, Iran.*

Email: S.Binaafar@avicenna.ac.ir; B.Ghorbani@avicenna.ac.ir

**Introduction:** Recurrent spontaneous abortion (RSA), as a heterogeneous condition, affected approximately 1-3% of women in reproductive ages. In about 40-50% of cases the etiology is often unexplained. The unclear etiology makes it so distressing and frustrating for the couples. Studies showed that these women are involved with adverse emotions like anxiety, lowered self-esteem, depression, anger, guilt, isolation and grief. We aimed to study the anxiety level and stress management roll in these patients.

**Materials and Methods:** For this purpose we ask 50 women with history of RSA who referred to Avicenna Infertility Clinics to complete the "Cattell anxiety questionnaire" and "Lazarus coping questionnaire". The study approved by Avicenna Research Institute's Ethics and Human Rights Committee. The statistical analysis was performed by SPSS (version 13) using independent Student's t-test, Pearson correlation coefficient and ANOVA analysis and  $p < 0.01$  were considered significant.

**Results:** Student's t-test revealed that there was a significant difference between anxiety level and pregnancy outcome (CI=0.567, 4.017). Also Pearson correlation coefficient with  $R=0.597$  emphasized this findings. Using Independent Student's t-test analysis showed significant correlation between Coping style strategies and anxiety level ( $p=0.01$ ).

**Conclusion:** RSA as a traumatic event could be followed by psychological sequelae. Emotion recovery, alongside with investigation and medical treatment should be planned for these women particularly in patients with fragile personality traits. It seems that learning and applying relevant coping strategies impact in emotional recovery is deniable.

**Key words:** Recurrent spontaneous abortion, Emotion, Anxiety, Coping strategies.

## P-212

### Comparison of marital satisfaction between fertile and infertile mates referred to Infertility Center of Shariati Hospital (Tehran)

Afzali M, Mirhashemi M, Behzadi S.

*Department of Psychology, Islamic Azad University, Roodehen Branch, Roodehen, Iran.*

Email: m\_afzali73@yahoo.com

**Introduction:** Infertility can affects on different aspects of life quality because having children is a universal dream. According to the main hypothesis there is not

significant difference between fertile and sterile couples for marital satisfaction. Study was conducted in order to comparison the marital satisfaction between fertile and infertile couples selected randomly at Infertility Center of Shariati Hospital (Tehran).

**Materials and Methods:** 400 samples including 200 fertile and 200 infertile couples selected randomly at Shariati Hospital. The Marital satisfaction test (Enrich Questionnaire) with 47 questions was performed on all samples. A t-test procedure was applied between two groups using SPSS software.

**Results:** There was a significant difference between fertile and infertile couples for marital satisfaction score ( $\alpha < 0.01$ ) such that the marital satisfaction score was higher in infertile couples ( $185.20 \pm 26.12$ ) rather than infertile couples ( $177.85 \pm 24.16$ ). On the other hand this parameter had not significant difference between men and women groups ( $\alpha > 0.05$ ). The satisfaction score was  $184.64 \pm 22.36$  and  $185.20 \pm 26.12$  for men and women respectively.

**Conclusion:** Our major new findings showed that infertility can have a positive effect on the marital satisfaction and increase it significantly. These results are in agreement with results reported by Lee et al (2001), Pasch, Dunkel (2002) and Drosdzol, Skrzypules (2009) but are in conflict with Kalkhoran et al (2012). Finally we can claim that infertility, contrary to what people think, can make closer couples in addition to changes in cultural attitude to infertility conditions!

**Key words:** Fertility, Infertility, Marital Satisfaction, Enrich Questionnaire.

## P-213

### Study of depression, anxiety, happiness and life satisfaction in women undergoing assisted reproductive technology in an Iranian infertility treatment center

Bakhtiari M, Seyedi Asl S.

*Faculty of Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran.*

Email: teymur.psychology@gmail.com

**Introduction:** Most studies showed that attention to the psychological aspects during assisted reproductive treatment is strongly advisable. The aim of this study was to determine the levels of depression, anxiety, happiness and life satisfaction in infertile women of Kermanshah infertility treatment center in Mo'tazedi Hospital.

**Materials and Methods:** In this descriptive-analytic study, a total of 130 women that visited our center between April and December 2012 were selected by using of convenience sampling. Depressive and anxious symptoms were assessed with Beck depression inventory (BDI) and Beck anxiety inventory (BAI). For happiness and life satisfaction assessment we used Oxford happiness inventory (OHI) and satisfaction with life scale (SWLS).

**Results:** Our results showed that 45 women (34.6%) were not depressed and 41 women (31.5%) had mild to severe depression. Also 20 women (15.4%) were not anxious and 74 women (56.9%) had anxiety. Mean score of happiness in infertile women was 30/98 and the mean score of life satisfaction in infertile women was 20.10, that these scores are significantly lower than common people scores ( $t=9.59$ ,  $p<0.001$ ) ( $t=3.94$ ,  $p<0.001$ ).

**Conclusion:** According to these results, depressive and anxious symptoms in many infertile women undergoing infertility treatment were worthy of note. While their happiness and life satisfaction is lower than the general population. This study showed that these women are at risk of psychological problems and even improvement in their mental health could affect on their infertility treatment. For this reason, the women with a history of infertility might benefit from psychological intervention.

**Key words:** Infertility, Depression, Anxiety, Happiness, Life satisfaction.

#### P-214

### Medical treatment of infertility in traditional Iranian Medicine

Ardekani MA, Hashemi M.

Reproductive Biotechnology Research Center (ACECR), Avicenna Research Institute, Tehran, Iran.

Email: iranhealth@hotmail.com

**Introduction:** It is known that between 8% and 12% of couples around the world have difficulty conceiving a child at some point in their lives. Modern therapies are expensive and depend on sophisticated instrumentation and equipments. Although the etiology and treatment of fertility in "Persian Traditional Medicine" is different from that of modern medicine, the use of therapeutics (medicine) is a common base for treatment in both modern and traditional approaches. Studying the contents of traditional drugs can lead to producing novel drugs and methods for treatment of infertility disorders. Traditional drugs can be cheaper and less expensive than the technology-based modern drugs.

**Materials and Methods:** The plants selected for treatment of infertility were chosen from the books Al-Hawi (Rhazes, 9<sup>th</sup> century A.D.), the Canon in medicine (Avicenna, 9<sup>th</sup>-10<sup>th</sup> Century A.D.), Makhzan-Al Advieh (Aghili Khorasani, 18<sup>th</sup> century A.D.), and Ikhtiyarat-e-Badi'ei (Ansari Shirazi, 14<sup>th</sup> century A.D.). These four books are the main sources of Persian Traditional Medicine in Iran.

**Results:** More than 400 mineral, herbal, and animal drugs were found for treatment of fertility disorders involving menstrual cycle, uterine and sexual functions.

**Conclusion:** The large number of drugs effective for treatment of infertility disorders in the Persian Traditional Medicine approach for infertility treatment is of great importance and could potentially be the topics of new investigations and clinical trials in the future.

**Key words:** Infertility, Persian Traditional Medicine, Fertility Disorders, Herbs.

#### P-215

### Impact of gender infertility diagnoses on marital relationship in infertile couple: a couple based study

Vizheh M<sup>1</sup>, Pakgohar M<sup>2</sup>, Safdarian L<sup>3</sup>.

1. Faculty of Midwifery, Islamic Azad University, Mahabad Branch, Mahabas, Iran.
2. Department of Reproductive Health, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran.
3. Department of Obstetrics and Gynecology, School of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

Email: maryamvizheh@yahoo.com

**Introduction:** Infertility has a deleterious impact on marital relationships. This study was conducted to determine the effect of a gender-specific infertility diagnosis on the response of infertile couples.

**Materials and Methods:** A cross sectional analysis of 123 infertile couples (123 wives and 123 husbands) who were visited at 3 Vali-Asr, Mirzakuchak Khan, and Shariati reproductive health centers of Tehran University of Medical Sciences, Tehran, Iran. Subjects completed 3 questionnaires include Demographic characteristics, marital satisfaction questionnaire and sexual satisfaction questionnaire through interviews. Higher scores in questionnaires inspecting marital and sexual satisfaction indicates lower satisfaction. The outcomes, including differences in marital satisfaction and sexual satisfaction in wives and husbands based on infertility diagnosis.

**Results:** In infertile couple, wives expressed less marital and sexual satisfaction than their husbands. No differences in total scores of marital and sexual satisfaction questionnaires were found between wives and husbands with others factors (male, unexplained, mix). Husbands with female factor have less marital satisfaction and with male factor show significantly less sexual satisfaction than husbands with other factors ( $p<0.05$ ).

**Conclusion:** Infertility diagnosis has a significant impact on infertile couple's in marital and sexual satisfaction. Acknowledge of Health care professionals working with infertile Couples, of this matter and explain to infertile couples, may lead to positive changes in couple communication about infertility and to a more positive effect of marital and sexual satisfaction.

**Key words:** Infertility, Infertility diagnosis, Marital relationship, Marital satisfaction, Sexual satisfaction.

#### P-216

### Three levels of sexual problems among women with multiple sclerosis

Qaderi K<sup>1</sup>, Merghati Khoei E<sup>2,3</sup>.

1. Health Center, Kermanshah University of Medical Science, Kermanshah, Iran.

2. Department of Public Health, Tehran University of Medical Sciences, Tehran, Iran.
3. Sexual Health Promotion, PhD Drug Treatment and Prevention Fellow, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina (MUSC), South Carolina, USA.

Email: kowsar.qaderi@gmail.com

**Introduction:** Sexual problems (SP) are commonly experienced by people with multiple sclerosis (MS). As women with MS are 2-3 times more than men, the aim of this quantitative study is to investigate three levels of sexual problems in female patients with MS and to examine relationships between sexual problems and demographic and clinical variables.

**Materials and Methods:** 132 married women with MS in Iranian MS society filled out demographic and clinical history questionnaire. Sexual problems were quantified by Multiple Sclerosis Intimacy and Sexuality Questionnaire-19 (MSISQ-19), which includes items for primary (direct physical), secondary (indirect physical) and tertiary (psychosocial) causes of sexual problems. Data were analyzed by using SPSS-18 software and Pearson's correlation coefficients were used to examine relationships between sexual problems and demographic and clinical variables.

**Results:** At least one of the primary sexual problems was reported by 110 (83.3%) patients. Delayed orgasm (75.7%), pain (61.4%) and concern about partner's sexual satisfaction (48.5%), were the most frequent symptoms of primary, secondary and tertiary sexual problems respectively. The MSISQ-19 total score was correlated with age ( $p=0.002$ ), disease duration ( $p=0.010$ ), marriage duration ( $p=0.001$ ), fatigue ( $p<0.001$ ), number of children ( $p=0.006$ ), physical ability ( $p<0.001$ ), education ( $p=0.006$ ), economic status ( $p=0.002$ ), number of times having sexual intercourse in the last 30 days ( $p=0.007$ ).

**Conclusion:** Sexual problems were prevalent among our participants. Our findings suggest appropriate management of SP depends on understanding the disturbed level. Incorporating sexual counseling in the currently delivered care for people with MS can reduce sexual dysfunctions and accordingly marital discords.

**Key words:** Multiple Sclerosis, Sexual Problems.

## P-217

### Comparison of the effect of two educational methods, e-learning and painted booklet on primigravida women's knowledge about preparation of delivery in prenatal care

Mohamadirizi S, Fahami F, Bahadoran P.

Department of Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.,

Email: mohamadirizi@yahoo.com

**Introduction:** E-learning is to enhance knowledge in patient that it can provide an efficient way to enhance the personnel-patient interaction and provide patient-specific education materials. So the aim of this study

was to Comparison of the effect of two educational methods, e-learning (multimedia) and painted booklet on Primigravida Women's Knowledge about preparation of delivery in prenatal care.

**Materials and Methods:** This was a quasi-experimental study based on pre- and post- tests that it was carried on 100 primigravida women (50electronic, 50painted booklet) refer to Navab Safavi health-center of Isfahan University of Medical Science in the year 1391. Participants were divided into two groups of e-learning or painted booklet learning, randomly. Participants' knowledge score were collected via a researcher-made questionnaire. SPSS version 14 was used to conduct statistical tests such as independent t-test and paired t-test for analyzing the data. The significant level was considered less than 0.05.

**Results:** Before training, the mean score (out of 10) of knowledge e-learning education was  $5.21\pm 1.1$  and  $5.1\pm 1.1$  in painted booklet group; the difference between mean scores was not significant. At the end of the study, the score was  $8.3\pm 1.3$  for e-learning group and  $7.1\pm 1.3$  for pamphlet group which showed a statistically significant difference ( $p<0.01$ ).

**Conclusion:** This study showed that passing e-learning training course could more improve knowledge of pregnant women depend on painted booklet. So, different aspects of e-learning, including computer literacy, infrastructure of telecommunications should be revisited.

**Key words:** Electronic, Learning, women, Knowledge.

## 6- Ethics and miscellaneous

### P-218

#### A cytogenetic and molecular study of 68 infertile Iranian men

Akbari M<sup>1,2</sup>, Asgari N<sup>2</sup>.

1. Department of Medical Genetics, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran.
2. Tehran Medical Genetics Laboratory, Department of Medical Genetics, Tehran, Iran.

Email: mtakbari@modares.ac.ir

**Introduction:** Cytogenetic abnormalities and gene alterations in the from of AZF microdeletion contribute greatly to male infertility. In this study, we determined genetic component in the etiology of Iranian infertile men.

**Materials and Methods:** 68 infertile men were karyotype with standard G-banding and screened for AZF microdeletions by PCR.

**Results:** Cytogenetic study revealed chromosomal abnormality in 10 subjects (14.7%) and 8 subjects (11.8%) were detected to have Y chromosome microdeletions. The chromosomal abnormalities observed were: 46, XY (t15;Y), 46, XY, del (Y) (q12), mos45, X/46, XY, 46, XY,-10,+der (1p10), t(1;10) (q10;p15::q26), 46,XY(t13;21), 47,XXY. The AZF microdeletions were observed either solely in AZFc (5

out of 8 equal to 62.5%) or in both AZFb and AZFc loci concurrently (3 out of 8 to equal 37.5%). In four individuals both chromosomal abnormality and AZF microdeletion was detected. Therefore, in total 14 cases (20.5%) showed genetic abnormality.

**Conclusion:** At least 20.5% of infertile men in this study group showed genetic abnormality. Considering the fact that karyotyping, is a low resolution approach and gene level scan by means of AZF microdeletion focuses only on a fraction of the genome, and consequently the genomic gains and loss which is quite widespread was not studied in this group, one can envisage that genetic contribution in male infertility is far more common than what has been inferred in this study. Therefore, genetic contribution to male infertility is quite substantial. As a result, cytogenetic and molecular study is integral to the workup of the infertile men to obtain reliable genetic information for the genetic counseling and better use of ART.

**Key words:** Male infertility, Chromosomal abnormalities, Genetic factors, Y chromosome, Microdeletions.

### P-219

#### Effect of Honey bee venom on changes anti Mullerian hormone levels of polycystic ovary syndrome in Wistar rat model

Nabiuni M<sup>1</sup>, Nasri S<sup>2</sup>, Pouyanmanesh F<sup>2</sup>, Nazari Z<sup>1</sup>.

1. Department of Cell and Molecular Biology, Faculty of Biological Sciences, Kharazmi University, Tehran, Iran.
2. Department of Biology, Faculty of Basic Sciences, Payam Noor University, Tehran, Iran.

Email: poyan\_8311@yahoo.com

**Introduction:** Polycystic Ovarian Syndrome (PCOS) is an inflammatory disease characterized by hyperandrogenemia, hyperthecosis, hyperglycemia and chronic anovulation. This hormone of family growth factor B (TGFB). This hormone is substance inhibiting Mullerian in women. That in Women of granulosa cells follicles small and in men of Sertoli cells the testes expressed and Causing regression of the Mullerian duct. anti Mullerian hormone is inhibitory role of during folliculogenesis and to people with PCOS helps not ovulating hormone. Honey bee venom (HBV) contains a variety of biologically active components like peptides (Melittin and Apamin), enzymes and biologically active amines. It has shown that HBV has analgesic, anti-cancer and anti-inflammatory activity.

**Materials and Methods:** Experiments were performed on Female Wistar rats (170±20g). Induction of PCOS was administered using 1mg/100gr B.W intramuscular injection of EV. After verifying the induction of PCOS, experimental group was divided into two groups: PCOS group and PCOS+BV group. PCOS+BV received 0.5 mg/kg BV sc for 14 days, continuously. trunk blood was collected and the serums were separated using 6000 RPM centrifuge for 5 min. Serologic tests were performed to evaluate changes in serum AMH Elisa method.

**Results:** Anti mullerian hormone levels in rats with polycystic Polycystic significant but increase in the group treated with bee venom fell \*\*\* p<0.01.

**Conclusion:** Anti Mullerian is produced by cells granulosa in the ovaries and has positive effects on the follicular sheath. Over Anti Mullerian hormone in rats with polycystic is reduced but the group of rats treated with honey bee venom is caused a significant decrease in anti Mullerian hormone.

**Key words:** Polycystic ovarian syndrome, Honey bee venom, Anti mullerian hormone, Estradiol valerate.

### P-220

#### The effect of Luteolin on gonadal hormones and abortion

Toushih M<sup>1</sup>, Soltani Z<sup>2</sup>.

1. Electrophysiology Research Center, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran.
2. Nutrition Group, Brain and Spinal Cord Injury Research Center, Imam Khomeini Hospital, Tehran University of Medical Sciences, Tehran, Iran.

Email: m\_toushih@yahoo.co.uk

**Introduction:** There are many plants that are involved in abortion such as, absinthium, rosemary, anise, nettle, thyme, and ajowan. The effects of each of these compounds differ on abortion, some cause change sex hormones, some disturb ovule implanting in the uterine wall and affect fetal growth and fetal death. In this study, the effect of chamomile extract luteolin on Rat and sex hormone concentrations were investigated. Luteolin cause disturbances axis hypothalamus-pituitary- gonadal and causes change in sex hormones secretion. In the other hand, it causes uterine wall contractions.

**Materials and Methods:** In this work, regarding previous studies on various herbal extracts of matricaria chamomilla, and assessment of sex hormones estrogen and progesterone levels and ovarian development, we worked on luteolin, gonadal hormones and abortion. In this research, first, under local anesthesia, the dose of 20 mg/kg luteolin chamomile extract was injected into the peritoneum of pregnant rats. Blood samples were sent to the lab to measure clinical parameters. Also myometrium uterine apparatus used for rating of muscle contractions in the uterine wall.

**Results:** After IP injection of 20 mg / kg of luteolin from extracts of chamomile into pregnant rats it was showed that levels of sex hormone such as estrogen and progesterone, along with hormones LH and FSH levels significantly p<0.001 has increased.

**Conclusion:** This indicates that this combination is capable of secreting hormones fluctuate and causes abortion.

**Key words:** Luteolin, Gonadal hormones, Abortion.

### P-221

#### Effectiveness of nutrition education program in preventing excessive weight gain during pregnancy

Sharifi N<sup>1</sup>, Sharifi F<sup>2</sup>.

1. Department of Health Education and Promotion, Faculty of Public Health, Tehran University of Medical Sciences, Thran, Iran.

2. Department of Midwifery, Islamic Azad University, Kazerun Branch, Kazerun, Iran.  
Email: nadersharifi81@yahoo.com

**Introduction:** Abnormal BMI of mother and weight gain play very important role in the outcome of pregnancy. Weight gain considered as one of the valid indicators of proper nutrition during pregnancy which is evaluated by Body Mass Index (BMI). The aim of this study was assessment of effectiveness of nutrition education program in preventing excessive weight gain during pregnancy in pregnant women in Shiraz.

**Materials and Methods:** In this quasi-experimental controlled study, 100 pregnant women referred to health centers in Shiraz were selected randomly and in both cases and controls were randomly. Information about weight and body mass index was extracted from their medical records. Two three-hour program of nutrition education for the case group was administered a month apart. Post-test data was collected in the last pregnancy care visit. Obtained data analyzed by SPSS software.

**Results:** The findings of the study according to the Independent T test before the training differences between cases and controls in terms of weight and body mass index did not exist ( $p=0.44$ ). After training, significant differences in weight gain and body mass index cases and controls was observed ( $p=0.001$ ).

**Conclusion:** Findings of the effect of nutrition education on prevention of excessive weight gain during pregnancy was revealed.

**Key words:** Nutrition education, Body Mass Index, Pregnancy.

## P-222

### Reproductive history of 20-40 years old Iranian women

Ranjbar F<sup>1</sup>, Kamali K<sup>1</sup>, Shirzad M<sup>1</sup>, Behjati Ardakani Z<sup>1</sup>, Shafeghati S<sup>1</sup>, Ghoojani A<sup>1</sup>, Aliyazdi S<sup>1</sup>, Akhondi MM<sup>1</sup>, Mohammad K<sup>2</sup>.

1. Reproductive Biotechnology Research Center, Avicenna Research Institute (ACECR), Tehran, Iran.
2. Department of Epidemiology and Biostatistics, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran.

Email: hamedvala@gmail.com

**Introduction:** Reproductive health needs of women in developing countries are growing and they may face different reproductive health risks. Iranian women act as the main axis of the family; therefore, understanding their requests for improving the provision of services is very important.

**Materials and Methods:** This study was conducted in 2010-2011 by Avicenna Research Institute. Cluster sampling was done using the postal codes in Iran. The reproductive history of 17, 187 married women aged 20 to 40 in rural and urban areas from marriage until the date of interview was recorded. The statistical analysis of the data was performed using SPSS software (SPSS Inc. Chicago, USA Version 13.00) and  $p<0.05$  revealed to be significant.

**Results:** Average age of women in their first pregnancy was 21.10 (4.193). 20.6% of women reported a history of unplanned first pregnancy. The average age of women with first planned and unplanned pregnancy was 21.30 (4.20) and 20.33 (4.03) respectively. 21.9% of all pregnancies were occurred at the age of 18 or less, 77.61% between 35-18 and only 0.5 % were at age of 35 and older. Chi-square test showed significant relationship between the date of marriage and number of children ( $p<0.001$ ). Mean age of women in their first pregnancy is significantly different between different groups of education levels ( $p<0.001$ ).

**Conclusion:** Fertility behavior of Iranian women and their reproductive needs are changing nowadays and consequently for providing good services, it is critical to monitor their reproductive experience which is a subject for consideration at national level.

**Key words:** Fertility history, Fertility behavior, Reproductive history, Iran.

## P-223

### Relationships between total homocysteine level and anthropometric variables in infertile women with polycystic ovary syndrome

Pourteymour Fard Tabrizi F<sup>1</sup>, Mehrzad Sadaghiani M<sup>2</sup>.

1. Nutrition Research Center, Nutrition Faculty, Tabriz University of Medical Sciences, Tabriz, Iran.
2. Infertility Center, Alzahra Hospital, Tabriz University of Medical Sciences, Tabriz, Iran.

Email: Fateme.pourteymour@gmail.com

**Introduction:** Polycystic ovary syndrome (PCOS), as a common endocrine disease among reproductive aged women, causes ovulation disturbances and infertility. Recent studies, have suggested that elevation in total homocysteine (tHcy) level is important marker for the development of atherothrombosis and atherosclerotic changes in PCOS women. This study was carried out to evaluate tHcy level in PCOS women and note any relationships with anthropometric variables and adiposity.

**Materials and Methods:** This cross-sectional study investigated 185 infertile women with PCOS; 39 normal weight, 40 overweight as 38 women as obese grade I, 35 as obese grade II and 33 as obese grade III. Body mass index was defined as weight in kilograms divided by the square of the height in meters. Serum level of homocysteine was measured in the blood sample of the 5<sup>rd</sup> day of their menstrual cycle. Independent-samples T-test and linear regression test were utilized to analyze the obtained data.

**Results:** There was a positive and significant correlation between serum homocysteine level and waist circumference in the normal ( $r=0.52$ ,  $p=0.006$ ) overweight ( $r=0.61$ ,  $p=0.01$ ) obese I ( $r=0.50$ ,  $p=0.01$ ) obese II ( $r=0.51$ ,  $p=0.01$ ) and obese III ( $r=0.41$ ,  $p=0.03$ ) groups, respectively. We found a positive and significant correlation between homocysteine and waist to hip ratio in individuals of the Obese I, Obese II and Obese III groups ( $p<0.05$ ).



**Conclusion:** In infertile women with PCOS, serum levels of homocysteine increase with increasing grades of obesity.

**Key words:** Polycystic ovary syndrome, Infertility, Homocysteine, Obesity.

#### P-224

##### **Indomethacin suppository for post operative pain relief after cesarean section**

**Karimi A<sup>1</sup>, Tara F<sup>2</sup>.**

1. Department of Reproductive Health, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran.
2. School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

**Email:** scmidwife@yahoo.com

**Introduction:** The aim of this investigation was to assess the effectiveness of rectal Indomethacin for reducing post operative pain after cesarean section. The aim of this investigation was to assess the effectiveness of rectal Indomethacin for reducing post operative pain after cesarean section.

**Materials and Methods:** A double-blind randomized controlled clinical trial of 60 pregnant women randomly allocated to receive either Indomethacin (30 patients) or placebo (30 patients) suppositories. All women were scheduled for repeat cesarean delivery. The first dose was given immediately before induction of anesthesia in operative room, while the second dose was given 6 hours post partum. Pain assessment considering the severity and pain scores was based on visual analogue scales (VAS). Pain assessments by VAS were made 3 and 24 hours after surgery. Pain scores were analyzed using the x2 and man- withny test.

**Results:** Sixty women were enrolled in this study mean age of group1 subjects was 27.7 years and that of group2 was 27.1 years ( $p>0.05$ ) The Baseline characteristics were similar in the two study group. (There was no statistical significant difference between the two groups in pain scores at 3 hours after surgery. Pain scores at 6 and 24 hours for women in the Indomethacin group were significantly lower compared with women in the placebo group (6.4 and 2.3 vs 18.4 and 5.5;  $p<0.001$ ). No side effects with Indomethacin were found.

**Conclusion:** Rectal Indomethacin is effective, safe and inexpensive for reducing post operative pain after cesarean section.

**Key words:** Indomethacin suppository, Pain, Cesarean.

#### P-225

##### **Premenstrual syndrome and herbal drugs in Iran**

**Sharifi F<sup>1</sup>, Sharifi N<sup>2</sup>.**

1. Department of Midwifery, Islamic Azad University, Kazerun Branch, Kazerun, Iran.
2. Department of Health Education, Islamic Azad University, Shahrekord Branch, Shahrekord, Iran.

**Email:** f\_sharifi44@yahoo.com

**Introduction:** Premenstrual syndrome is a set of physical, mental and behavioral symptoms with different severity that causes disorders in individual and social relationships. This syndrome occurs during luteal phase of menstrual cycle with complicated reasons. It is one of the most common disorders of childbearing ages. Because of unclear and complicated causes of this syndrome, different treatment methods have been presented. This study aimed to review the outcome and efficacy of clinical trials done in Iran on using herbal drugs to relieve PMS.

**Materials and Methods:** In this review article, A number of researches studied. Electronic searching of Medline, Sid, Irandoc, Magiran, Journals of herbal drugs sciences was performed during 2010-13.

**Results:** The results showed that Hypericum perforatum, Saffron, Oenothera Lamarkiana, Lavandula, Fennel and Chamomile, Vitex Agnus Castus, Ginkgo biloba were effective to relieve the PMS symptoms.

**Conclusion:** Among the above-mentioned measures, there is much evidence to support the use of herbal drugs to reduce PMS symptoms.

**Key words:** Herbal drugs, Premenstrual syndrome, Iran.

#### P-226

##### **Effectiveness of nutrition education program in preventing excessive weight gain during pregnancy**

**Sharifi N<sup>1</sup>, Sharifi F<sup>2</sup>.**

1. Department of Health Education, Islamic Azad University, Shahrekord Branch, Shahrekord, Iran.
2. Department of Midwifery, Islamic Azad University, Kazerun Branch, Kazerun, Iran.

**Email:** nadersharifi81@yahoo.com

**Introduction:** Abnormal Body Mass Index (BMI) of mother and weight gain play very important role in the outcome of pregnancy. Weight gain considered as one of the valid indicators of proper nutrition during pregnancy which is evaluated (BMI). The aim of this study was assessment of effectiveness of nutrition education program in preventing excessive weight gain during pregnancy in pregnant women in Shiraz.

**Matetrials and Methods:** In this quasi-experimental controlled study, 100 pregnant women referred to health centers in Shiraz were selected randomly and in both cases and controls were randomly. Information about weight and body mass index was extracted from their medical records. Two three-hour program of nutrition education for the case group was administered a month apart. Post-test data was collected in the last pregnancy care visit. Obtained data analyzed by SPSS software.

**Results:** The findings of the study according to the Independent T test before the training differences between cases and controls in terms of weight and body mass index did not exist ( $p=0.44$ ). After training, significant differences in weight gain and body mass index cases and controls was observed ( $p=0.001$ ).

**Conclusion:** Findings of the effect of nutrition education on prevention of excessive weight gain during pregnancy was revealed.

**Key words:** Nutrition education, Body Mass Index, Pregnancy.

#### P-227

### The effect of e-Learning (multimedia) education on primigravida women's satisfaction about breastfeeding in prenatal care

Mohamadirizi S<sup>1</sup>, Bahadoran P<sup>2</sup>, Fahami F<sup>3</sup>.

Department of Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

Email: mohamadirizi@yahoo.com

**Introduction:** E-learning is to enhance knowledge in patient that it also can provide an efficient way to enhance the personnel-patient interaction and provide patient education materials. So the aim of this study was to determination of effect of e-learning education on Primigravida Women's Satisfaction about breastfeeding in prenatal care.

**Materials and Methods:** In a quasi-experimental study, 100 Primigravida Women were selected by census method in Navab Safavi health-center of Isfahan University of Medical Science in the year 2012. Participants received education using e-learning or painted booklet for 4-6 weeks. Satisfaction of Breastfeeding in Prenatal Care questionnaire was completed by both groups before and 4-6 weeks after the test. The collected data was analyzed using SPSS v14 and descriptive statistics and independent t-test and paired test. The significant level was considered less than 0.05.

**Results:** The findings of independent t test did not show any significant difference between satisfaction scores of e-learning and control group before intervention while a statistically significant difference was observed in 4 weeks after intervention between the scores of two groups ( $p=0.004$ ). Paired t test showed a statistically significant difference in satisfaction score in two group after intervention e-learning and control group respectively ( $p=0.001$ ,  $p=0.034$ ). Also rate of satisfaction increased in e-learning group and control group was 100 percent and 150 percent ( $p=0.034$ ).

**Conclusion:** E-learning program can be increased satisfaction levels in Primigravida Women. So, the conduction of this learning is recommended as an effective, less time, less charge learning which did not require any special equipment.

**Key words:** Electronic, Learning, Breastfeeding, Prenatal, Satisfaction.

#### P-228

### Pre implantation genetic diagnosis in viewpoint of international guidelines

Alamolhoda M<sup>1</sup>, Savari H<sup>2</sup>, Fazaeli M<sup>1</sup>, Movahedin M<sup>3</sup>.

1. Department of International Law, Faculty of Law, Qom University, Qom, Iran.

2. International Law Department, Human Sciences Faculty, Tarbiat Modares University, Tehran, Iran.

3. Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, Tehran, Iran.

Email: malamolhoda@yahoo.com

**Introduction:** New medical techniques have many ethical consequences and Pre implantation Genetic Diagnosis (PGD) is not exceptional. Aim of this study is to investigate the challenges of human rights considering PGD and also to study this technique from the viewpoint of human dignity.

**Materials and Methods:** Existence of moral guidelines at levels of national (human rights commission in New Zealand and Human Fertilization and Embryology Authority (HFEA) in the UK), regional [The European Society of Human Reproduction and Embryology (ESHRE)] and international (Universal Declaration on the Human Genome and Human Rights and report of the IBC on PGD) was investigated.

**Results:** Human rights commission in its proposed guidelines for PGD, identified 7 ethical issues include discarding affected embryos and PGD for HLA typing. HFEA doesn't allow use of PGD for sex selection, except for avoiding sex-linked genetic diseases. ESHRE considers sex selection for social reasons as an issue of human rights which entails non-discrimination on grounds of sex. The declaration in articles 2 and 6, considers essential for everyone the right to respect for their dignity and emphasizes that shouldn't reduce individuals to their genetic characteristics. IBC in the conclusion of its report recommended that PGD limits to medical indications.

**Conclusion:** Generally, presented views show that there are some controversies in acceptance or non-acceptance and ethical or unethical of PGD. In addition, some of the experts express violation of human dignity in considering pre-embryo as a human. Although others have suggested that PGD is preferred method in comparison with elective abortion.

**Key words:** PGD, Guideline, International, Ethics, Dignity.

#### P-229

### Reproductive health indicators in the I.R. Iran; results of the Multi-Indicator Demographic and Health Survey (IrMIDHS)

Ebrahimi Tavani M, Khosravi A.

Technical Group for Health Information System, Secretariat for Health Applied Research, Center for Health Network Management, Deputy for Public Health, Ministry of Health and Medical Education, Tehran, Iran.

Email: ebrahimi.mas@gmail.com

**Introduction:** Reproductive Health Indicators (RHI) are one of the most important health Impact indicators in country health profile status. Recently, national study of Iran Multi-Indicator Demographic and Health Survey (IrMIDHS) has been designed and implemented with international standards of both DHS6 and MICS4

studies in collaboration with the Iran's National Institute of Health Research (NIHR) and the Deputy for Public Health; Ministry of Health & Medical Education in order to determine Population and Health Statistics, at both provincial and national levels for the I.R.Iran.

**Materials and Methods:** The IrMIDHS has been conducted in 1389 (2010) with sample of 31350 households using three type questionnaires; household, women and children. Based on considering the important role of RHI in health, the published report of this study and other related documentation are used.

**Results:** The results of survey showed that many of RHI have improved. Sex Ratio of children born to women 15-54 years old was 105.4 and Contraceptive Prevalence among married women was 77.42%. The rates of Normal Vaginal Delivery (NVD) and Cesarean Section Delivery (CSD) in the country were 54.45% and 45.55% respectively. Maternal Health Indicators such as Antenatal Care Coverage and Postpartum Care Coverage with 96.92% and 73.94% indicated considerable progress.

**Conclusion:** Considering the RHI is an important input to evidence-based health decision-making and planning in reproductive and sexual health care management. IrMIDHS' findings can be used to evaluate the National Developmental Plan and the Millennium Development Goals (MDGs) regarding to reproductive health promotion programs and quality of services.

**Key words:** *Reproductive Health Indicators, Multi-Indicator Demographic and Health Survey (IrMIDHS), Iran.*

### P-230

#### **Predictor chemical biomarkers of preterm labor (cervicovaginal $\beta$ HCG and salivary estriol)**

**Tehrani N, Mosavi S, Ranjbar M.**

**Email:** tehranin@modares.ac.ir

**Introduction:** To evaluate the diagnostic accuracy of measuring cervicovaginal BHCG and salivary estriol levels to identify women undergoing preterm labor (PTL) who will deliver preterm.

**Materials and Methods:** A hospital-based prospective cohort study of 43 women undergoing spontaneous PTL between 24 and 33 weeks+6 days of pregnancy was conducted. Measurement of cervicovaginal BHCG and salivary estriol levels were performed to find the best model to predict preterm delivery (PTD). Optimal cut-off values were calculated by receiver operating characteristic (ROC) curve analysis. Pearson correlation tests were also performed.

**Results:** The mean $\pm$ SE salivary estriol levels and cervicovaginal BHCG in 31, 32, 33 and 34 weeks gestational in case group was higher than control group, respectively. ROC curve analysis showed, the level of BHCG  $\geq$ 22.5 mIU/ml and salivary estriol  $\geq$ 0.18 ng/ml levels were associated with occurrence of preterm delivery (97% sensitivity, 76% specificity, 81% positive

predictive value, 96% negative predictive value), (68% sensitivity, 57% specificity, 62% positive predictive value, 63% negative predictive value).

**Conclusion:** Cervicovaginal BHCG value in compare to salivary estriol levels is more effective to identify women undergoing symptomatic PTL who are at increased risk of PTD.

**Key words:** *Preterm Labor, cervicovaginal BHCG, salivary estriol.*

### P-231

#### **Effects of acupuncture on rates of pregnancy and live birth among women undergoing IVF: systematic review and meta-analysis**

**Alamolhoda H.**

*Department of Reproductive Health and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran.*

**Email:** alamolhoda.h@gmail.com

**Introduction:** To evaluate whether acupuncture improves rates of pregnancy and live birth when used as an adjuvant treatment to embryo transfer in women undergoing in vitro fertilisation.

**Materials and Methods:** Systematic review and meta-analysis was performed. Data sources were gathered from Medline, Cochrane Central, Embase, Chinese Biomedical Database, hand searched abstracts, and reference lists. Eligible studies were randomized controlled trials that compared needle acupuncture administered within one day of embryo transfer with sham acupuncture or no adjuvant treatment, with reported outcomes of at least one of clinical pregnancy, ongoing pregnancy, or live birth. Two reviewers independently agreed on eligibility; assessed methodological quality; and extracted outcome data. For all trials, investigators contributed additional data not included in the original publication (such as live births). Meta-analyses included all randomized patients.

**Results:** Seven trials with 1366 women undergoing in vitro fertilization were included in the meta-analyses. There was little clinical heterogeneity. Trials with sham acupuncture and no adjuvant treatment as controls were pooled for the primary analysis. Complementing the embryo transfer process with acupuncture was associated with significant and clinically relevant improvements in clinical pregnancy (odds ratio 1.65, 95% confidence interval 1.27-2.14; number needed to treat (NNT) 10 (7-17); seven trials), ongoing pregnancy (1.87, 1.40-2.49; NNT 9 (6-15); five trials), and live birth (1.91, 1.39-2.64; NNT 9 (6-17); four trials). Because we were unable to obtain outcome data on live births for three of the included trials, the pooled odds ratio for clinical pregnancy more accurately represents the true combined effect from these trials rather than the odds ratio for live birth. The results were robust to sensitivity analyses on study validity variables. A prespecified subgroup analysis restricted to the three trials with the higher rates of clinical pregnancy in the control group, however, suggested a smaller non-significant benefit of acupuncture (odds ratio 1.24, 0.86-1.77).

**Conclusion:** Current preliminary evidence suggests that acupuncture given with embryo transfer improves rates of pregnancy and live birth among women undergoing in vitro fertilization.

**Key words:** Acupuncture, Pregnancy, Live birth, IVF, Systematic review, Meta-analysis.

### P-232

#### Making childbirth “pleasant” and medical ethics

**Keramat A.**

*Department of Reproductive Health, Shahroud University of Medical Sciences, Shahroud, Iran.*

**Email:** keramt1@yahoo.com

**Introduction:** Efforts for making childbirth an enjoyable and pleasant experience for women may play an important role for increasing acceptance of vaginal delivery and decreasing caesarean section rate in the community. In the other hand, it seems that to achieving an enjoyable childbirth, it is necessary; to pay attention to pregnant women’s right and medical ethics. Thus in this study we aimed to explain the enjoyable and non enjoyable experiences of women from childbirth.

**Materials and Methods:** The present study was carried out using Focus Group Discussion for interviewing women who were clients of urban and rural health centers from Shahroud area. The sample selection was done among women with experience of normal delivery who were interested to participation the study. Each group included 6-8 women that were similar in educational level. We continued interviewing in different groups using Focus Group Discussion until information saturation. Content analysis was used in this study.

**Results:** The enjoyable and non enjoyable experiences of women from childbirth in this study were categorised in two groups: A) factors that are related to nature of childbirth (physiological and/or pathological process of delivery), B) factors that are related to management and conduction of normal delivery. The factors that were depended to management of normal delivery were mostly related to ethical issues that were classified in following subcategories: the right to recognise and selection of health provider for conduction of delivery and choosing the suitable position and situation (place) for normal childbirth, the right to have privacy, the right to have necessary information about normal delivery and the right to be respected.

**Conclusion:** in the based on the recent study results and also the previous reports, it is necessary to pay attention to making childbirth enjoyable and pleasant, not only for increasing acceptance of vaginal delivery but also for importance of pregnant women’s right and medical ethics. Thus we suggest making more studies in this area and planning for improving the quality of normal delivery management.

**Key words:** Enjoyable Childbirth, Pleasant Childbirth, Medical ethics.

### P-233

#### Midwife's rights and responsibilities

**Hadipour Jahromy L.**

**Email:** jahromyl1@yahoo.com

A midwife has a range of responsibilities, including the care of mother and baby, adhering to hospital policy and maintaining an awareness of issues such as health and safety. “A practising midwife is responsible for providing midwifery care in accordance with such standards as the Council may specify from time to time to a woman and baby during the antenatal, intranatal and postnatal periods,” Responsibility:

- Each caregiver is responsible for the quality of care she or he provides.
- Maternity care practice should be based not on the needs of the caregiver or provider, but solely on the needs of the mother and child.
- Each hospital and birth center is responsible for the periodic review and evaluation, according to current scientific evidence, of the effectiveness, risks, and rates of use of its medical procedures for mothers and babies.
- Society, through both its government and the public health establishment, is responsible for ensuring access to maternity services for all women, and for monitoring the quality of those services.
- Individuals are ultimately responsible for making informed choices about the health care they and their babies receive.

#### Statement of Rights and Responsibilities

The Midwife's Rights and Responsibilities:

11. The midwife has the right to clearly state her expectations of the client's responsibility concerning her prenatal care, in labor and postpartum.
12. The midwife has the right to decline to participate in activities she is morally opposed to.
13. The midwife has the right to refuse, transfer or discontinue care and to determine and define the conditions appropriate for doing so.
14. The midwife has the right and responsibility to gather information regarding client conditions and concerns for which a midwife may need to consult, refer or transfer the client to another health care professional.
15. The midwife has the responsibility to clearly state and document when a woman’s choices fall outside the midwife’s practice guidelines.
16. The midwife has the right to honest financial information and appropriate compensation.
17. The midwife has the responsibility to assist the client in activities that promote the woman’s well being.
18. The midwife respects the client’s right to decline treatments or procedures.
19. The midwife has the right to a client signature on refusal of recommendation documents.
20. The midwife has the responsibility to document the client’s refusal of the midwife’s recommendations in

writing and to retain the documents in the client's records.

The Client's Rights and Responsibilities:

8. The midwife recognizes, informs and supports the woman's right as primary decision maker regarding her health care and that of her infant.
9. The client has the responsibility to educate herself as primary decision maker regarding her health care and that of her infant.
10. The client has the responsibility of participating in her education concerning the potential benefits and risk of treatments and procedures.
11. The client has the right to informed consent prior to any procedure and/or prescribed medication to be given to her and her newborn, including risks, benefits, options and alternatives.
12. The client has the right to accept or refuse the midwife's recommended care.
13. The client accepts the responsibility for outcomes of refusing recommended care.
14. The client has the responsibility to truthfully and fully inform the midwife of all matters concerning her own health care history.

#### **P-234**

#### **Application of a collaborative reproductive healthcare model in counseling of infertile women: The role of Midwives**

**Latifnejad Roudsari R.**

*Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran.*

**Email:** latifnejadr@mums.ac.ir, rlatifnejad@yahoo.com

Infertility and its treatment are psychologically stressful with virtually hundreds of articles published on this issue. The goal is to accomplish a thorough investigation to treat any abnormalities that are uncovered, to educate the couple about reproductive system, to inform the couple about their fertility potential, to counsel for ART and alternative family forms, to provide emotional support and in sum, to acquire a holistic perspective. But the question is who should do the counseling. The truth is that counseling needs issues such as having a thorough working knowledge of the medical aspects of the infertility, familiarity with procedures, medications, and various treatment protocols, and having up-to-date information on the rapidly developing infertility treatment techniques and their psychological consequences. While there is no clear international agreement of who can or should provide infertility counseling services, Covington (2006) developing a collaborative reproductive healthcare model commented that all infertility healthcare providers, from physicians, midwives and nurses to laboratory technicians and administrative assistants, have the opportunity to counsel patients going through reproductive medical diagnosis and treatment. In this sense, psychosocial care is the responsibility of all members of the treatment team as it entails 'treating the patient, not the disease.' I argue that midwives due to their holistic perspective towards women's life issues could do this responsibility meticulously; although increasing specialization and collaboration in all fields of healthcare practice have brought the need for psychological services to the reproductive medical practice.



## Authors Index:

Aaghajani S.	P-117, P-139	Amanloo M.	P-68
Abasalizadeh F.	P-190	Amini M.	O-39
Abbasi M.	O-76	Aminlou M.	O-12, O-22, O-24
Abdi S.	P-69	Amir Ali Akbari S.	P-194
Abdollahi F.	P-203	Amiri I.	P-27
Abdollahi Fard S.	O-7, P-26, P-48	Amiri Yekta A.	O-57
Abdollahi M.	O-15, O-45	Amirshahi T.	P-113
Abdollahian P.	O-25	Amooee S.	O-9
Abdolmaleki P.	O-36, P-140	Anvari SM.	O-16, P-40
Abed F.	O-6	Arabipoor A.	O-20, O-38
Abedi R.	O-42, P-61	Aramesh S.	O-9, O-21
Abedini Z.	P-195, P-205	Ardekani MA.	P-214
Abedpour N.	P-96	Asadi M.	O-32, P-77
Abhari A.	P-146	Asadi N.	O-9
Abolahrar N.	P-16	Asem A.	P-21, P-22
Absalan F.	P-58	Asgari A.	P-183
Aflakseir A.	P-210	Asgari N.	O-35, P-218
Aflatoonian A.	O-8, O-11, P-50	Asghari-Jafarabadi M.	O-70
Afzali M.	P-212	Asgharnia M.	P-15
Aghahosseini M.	O-17, O-53	Ashrafi M.	O-20, O-38, P-18
Aghsa M.	O-18	Askarijahromi M.	P-68
Ahadi A.	P-55	Atashkhoyi S.	P-47
Ahamdi A.	P-149	Ayyoubiyan M.	O-32
Ahangarpoor A.	P-105, P-106, P-107	Azargoon A.	O-13, P-49
Ahani A.	P-122, P-125	Azedi Tehrani F.	P-54, P-60
Ahmadi A.	P-57, P-83, P-85, P-86, P-87, P-89, P-97, P-98, P-100, P-101, P-102, P-132, P-137, P-147, P-148, P-150, P-157	Azhar H.	K-5
Ahmadi F.	P-28	Azima S.	P-174, P-175
Ahmadi G.	O-66, P-166	Azimirad A.	O-33
Ahmadi Rastegar D.	P-55	Azimirad M.	O-33
Ahmari Tehran H.	P-205	Azizi B.	P-84, P-90
Akbari Asbagh F.	P-3	Azizi H.	P-33
Akbari E.	O-12, O-22	Azizi P.	P-120
Akbari H.	O-58	Azizi Y.	O-56, P-159
Akbari Kamrani M.	O-35, P-104, -P 218	Azodi P.	P-142
Akbari M.	P-28	Babaei M.	P-108
Akhbari F.	O-38	Babamohammadi G.	O-35
Akhond M.	P-42, P-60, P-222	Babibi Fozoonabadi M.	P-162
Akhondi M.	O-12, O-22, O-24, O-44, P-29, P-42, P-54, P-60, P-70, P-222	Bagheri M.	O-18
Akhondi MM.	P-18	Bagheri R.	P-152
Akhoond MR.	O-48	Bahadoran P.	P-217, P-227
Alaee Jahromi S.	P-231	Bahadori M.	P-15, P-109, P-110, P-111, P-117, P-124, P-131, P-139
Alamolhoda H.	P-228	Bahadori MH.	O-29
Alamolhoda M.	P-9, P-10	Bahari Asl Z.	P-93
Alamolhoda S.	P-36, P-39	Bahmani N.	P-199
Alavi F.	P-192, P-194	Bahmanpour S.	O-31
Alavi Majd H.	O-2, O-9, O-33, P-13, P-14	Bakhshesh M.	O-56, P-159
Alborzi S.	O-17	Bakhtiyari M.	P-213
Aleyasin A.	P-34, P-35	Bakhtiyari M.	O-32, P-59, P-128
Aliabadi E.	P-143	Bamohabat Chafjiri S.	P-57
Alijani S.	O-74	Banaei M.	P-35
Alimanesh N.	P-222	Bandehpour M.	O-41, P-134
Aliyazdi S.	P-20	Baradaran B.	P-70
Allahveisi A.	P-153	Barchinegad M.	O-5
Al-Mosawi M.	O-53	Basirat Z.	P-11
Alyasin A.		Batooli H.	P-68
		Bazarganipour F.	O-3
		Bazri Z.	O-1, P-30, P-31
		Behboodi Moghadam Z.	O-69, O-74
		Behdin S.	O-21
		Behjati Ardakani Z.	P-42, P-54, P-60, P-222
		Behmanesh M.	P-140

Behnam B.	P-59	Farzadi L.	P-26, P-91, P-92,
Behnia H.	K-3		P-93, P-94, P-146
Behzadi B.	O-44, P-70	Fatehi R.	O-46
Behzadi S.	P-212	Fatemi R.	O-30, P-141
Behzadnia M.	P-6	Fayez D.	P-125
Bigdeli M.	P-61	Fazaeli M.	P-228
Binaafar S.	P-211	Fazelnasab N.	O-10, P-32
Bios S.	P-43, P-161	Forootan Jahromy F.	P-71
Bohlouli M.	O-49	Foroozanfard F.	O-3
Bohlouli Oskoi S.	P-127	Forouzandeh-Moghadam M.	P-135, P-136
Bonakdaran Z.	P-8, P-165	Ganji R.	O-29, P-109, P-110,
Borjian S.	P-29		P-111
Bozorgnia A.	P-56	Ghadami M.	P-158
Chamani Tabriz L.	P-152, P-153	Ghaderi A.	O-33
Chehrizi M.	O-52, O-54	Ghaderi L.	P-38
Choobineh H.	P-158, P-162	Ghaderi Pakdel F.	P-102
Choobineh K.	O-40	Ghafari Novin M.	P-134
Dadkhah F.	O-52	Ghaffari M.	O-58
Dadkhah Tehrani T.	P-195, P-205	Ghaffari Novin M.	O-58, P-20, P-134
Dadras N.	O-21, P-13, P-14	Ghafoorian A.	P-194
Daghigh Kia H.	O-49, P-143, P-144,	Ghafourian Borojerdnia M.	P-114
	P-145	Ghanbari M.	P-123
Danaii S.	P-26	Ghani E.	P-71, P-154
Dargahi H.	P-162	Ghannadi AR.	P-58, P-154
Davar R.	O-8, O-11	Ghareshi F.	P-204, P-207, P-208
Davari Tanha F.	O-18	Ghasemi F.	O-27, P-25
Davoudi A.	O-37, P-41	Ghasemian F.	P-15
Dehghani Firouzabadi R.	O-8, O-11	Ghasemiboron M.	P-105, P-106, P-107
Delaram M.	P-133	Ghasemzadeh A.	P-26, P-93, P-94
Delkhosh-Kasmaie F.	O-47	Ghattan N.	O-3
Ebrahimi B.	O-46, P-61	Ghavami H.	P-21, P-22
Ebrahimi M.	P-3, P-74	Ghavami M.	P-62, P-63
Ebrahimi Tavani M.	P-229	Ghazizadeh S.	P-51
Ebrahimi-mameghani M.	O-70	Ghodrati Gholejji S.	P-147, P-148, P-149
Ebrahimipoor M.	P-64, P-116	Ghodrati S.	P-97, P-98, P-100
Edalatkhah H.	P-122, P-125	Gholizadeh M.	O-41
Eftekhari H.	O-67	Ghoodjani A.	O-12, P-211, P-222
Eftekhari Yazdi P.	O-38, O-42, P-19	Ghoraeian P.	P-126
Eimani H.	O-42, P-61, P-119	Ghorbani B.	P-211
Erfanian Ahmadpoor M.	O-10, P-32, P-33	Ghorbani R.	P-49
Eskanderi Z.	P-177	Ghorbanian MT.	O-28, O-40, P-118
Eslahi darehgorgi N.	O-32	Gifani M.	P-70
Esmaeilpour T.	O-31	Golkar Narenji A.	P-61
Esmaeily M.	P-200, P-201	Golsorkhtabar-Amiri M.	P-11
Etebary S.	O-14	Goodarzi MT.	P-27
Ezabadi E.	P-178	Goushegir A.	O-59
Ezabadi Z.	O-73	Habibagahi M.	P-154
Fadavi Islam M.	O-1, P-30, P-31	Habibi M.	P-158
Fahami F.	P-217, P-227	Hadipour Jahromy L.	O-63, P-233
Falah P.	P-162	Hadjighassem M.	O-32, O-39, P-128
Fallahi P.	P-126	Hafizi L.	P-37
Fanaei H.	O-56, P-159	Hagani H.	O-69
Farahani M.	P-42	Hajikhani B.	P-152, P-153
Faraji R.	P-15	Hakimi S.	P-179, P-180
Faraji Z.	P-49	Halvaei I.	O-51
Farajkhoda T.	O-76	Hamdi K.	P-26
Faramarzi A.	P-64, P-116	Hamidi Y.	P-177
Fardiazar Z.	P-91	Hamta A.	P-121
Farhoudian A.	O-39	Harizi M.	P-105
Farifteh F.	P-134	Harounabadi A.	O-16
Farimani M.	P-52	Hasan Zadeh Kiabi B.	O-57
Farokhi F.	O-43, P-72, P-75,	Hasani F.	O-38
	P-78, P-79, P-80,	Hasanzadeh S.	P-67
	P-95, P-103	Hashemi M.	P-214
Farrahi F.	O-52	Hashemifard T.	P-164
Farrokhi A.	O-46	Hassanzadeh G.	P-162
Farshadiyan SH.	P-145	Hassani F.	P-12



Hassanzadeh Gh.	P-158	Kalantari A.	P-86
Hassanzadeh Rad A.	P-181	Kalantari Hesari A.	P-87, P-89
Hassanzadeh Rad Z.	P-181	Kamali K.	O-24, P-42, P-54, P-60, P-125, P-222
Hatami H.	P-63		P-188
Hatami Mardani P.	P-47	Kamali Z.	P-188
Hatami S.	O-28	Kamalifard M.	O-70
Heidari B.	O-44, P-29, P-70	Kameli SM.	P-65, P-88
Heidari M.	O-58, P-99	Karami M.	P-12
Heidari R.	P-108	Karami N.	P-105, P-106, P-107
Hemmat Pour Z.	P-27	Karimi A.	P-182, P-224
Heydari H.	P-162	Karimi F.	P-34, P-151
Heydarian F.	P-80	Karimi H.	P-25, P-169
Hoghoughi N.	P-129	Karimi Jashni H.	P-155
Hojati Z.	P-129	Karimi Y.	O-67
Homami S.	O-67	Karimian L.	O-38
Hoseini H.	P-103	Karimi-Zarchi M.	O-8
Hoseinmirzaei S.	P-17	Karimzadeh-Meibodi MA.	K-2, O-8
Hossain Khani A.	O-49	Kasaeian A.	O-56, P-159
Hosseini Khani S.	P-69	Kazemi A.	O-19
Hosseini G.	P-29	Kazemi Damaneh B.	O-41
Hosseini A.	O-25, O-31, O-41, P-102, P-134	Kazemian S.	P-198, P-201
	O-52, P-153	Kazerani A.	P-210
Hosseini S.	P-55	Kazeroni M.	P-154
Hosseini Salekdeh G.	P-134	Keramat A.	O-62, P-184, P-185, P-232
Hosseini T.	O-52, O-54, O-55	Keramati P.	O-2
Hosseinfar H.	O-4, O-68	Keshavarzi S.	P-134
Hosseinoor M.	P-138, P-151	Keshtgar S.	P-71, P-154
Hosseinzadeh Colagar A.	P-138	Khadiivzadeh T.	P-182
Houshmand M.	O-30, P-124, P-141	Khafri S.	O-16
Idali F.	P-125	Khaki A.	P-91, P-92, P-93, P-94
Irani S.	O-59		K-1
Isfahani M.	P-50	Khalil S.	O-14, O-51
Izadpanah F.	P-50	Khalili MA.	O-1, P-30, P-31
Izadpanah M.	O-31	Khalilifar H.	P-56
Jaberipour M.	O-24	Khanbabaee R.	P-65, P-88
Jaberipour P.	P-195, P-205	Khanehzad M.	O-43, P-72, P-73, P-75, P-76, P-82
Jafarbegloo E.	O-60	Khaneshi F.	P-99
Jafarbeik Irvani N.	P-92		P-62, P-63
Jafari Shobeiri M.	P-46	Khatami M.	P-123
Jahangiri N.	P-18, P-46	Khatamsaz S.	O-56, P-159
Jahanpour F.	P-142	Khavanin A.	P-123, P-127
Jahanpour N.	P-142	Khayat S.	P-185
Jahdi F.	O-65, P-196	Khazaei M.	P-156
Jalali Nadoushan MR.	P-12	Khodakarami B.	P-122, P-125
Jalilian N.	P-38	Khoramabadi N.	P-204, P-206, P-207, P-208, P-209
Jamali S.	O-72, P-5, P-170 P-171, P-172, P-173	Khorram Khorshid H.	P-78, P-79
		Khorram S.	P-78, P-79
Jamshidimanesh M.	O-74		P-229
Janbaz-Acyabar H.	O-47	Khosravanian H.	P-114
Jangkhah M.	O-52	Khosravanian N.	P-16
Jannat Alipour F.	O-54	Khosravi A.	P-66, P-67
Jannesari S.	P-167	Khosravi N.	P-105, P-106, P-107, P-114
Javadi Taklimi A.	O-37	Khosravi S.	P-114
Javadzadeh H.	P-6	Kianifard D.	O-32, O-39, P-59, P-128
Javani Jouni F.	O-36, P-140	Kooti W.	O-33
Javanmardy S.	P-77		O-60
Jazayeri H.	O-16	Koruji M.	P-12
Jeddi Tehrani M.	O-30, O-44, P-124 P-141		O-28
	O-32, O-39, P-128	Kumar P.	O-64, O-76, P-234
Joghataei M.	P-33	Lakpour N.	P-203
Joneidi E.	P-30, P-31	Lakzaei F.	P-36, P-39
Joodi F.	P-194	Lashkarboluki M.	O-1
Jorjani M.	P-160	Latifnejad Roudsari R.	
Jorsaraee SGhA.	O-1	Lye M.	
Joudi F.	P-80	Maalhigh M.	
Kaffash Farkha N.		Mahboob S.	

Mahdavi F.	P-168	Mosavi S.	O-61, P-230
Mahdavi pour M.	O-30, P-141	Moshki M.	O-67
Mahdinezhad Gorji N.	P-160	Moslemi F.	O-7, P-48
Mahjur A.	P-169	Mostafavi M.	P-86, P-87, P-89, P-101, P-150
Mahmoodi M.	P-119		
Mahouti T.	P-11	Mousavi S.	P-174, P-184, P-185
Makoolati Z.	P-135, P-136	Movahed E.	P-83, P-85
Makvandi S.	P-164	Movahedin M.	O-50, P-68, P-77, P-135, P-136, P-140, P-156, P-228
Malekinejad H.	O-47, P-87, P-89		
Malekshah A.	P-53, P-130		
Malekzadeh M.	O-33	Mowla S.	O-50, P-68
Mansori E.	P-105	Mozdarani H.	O-34, P-126
Mansouri Torshizi M.	O-1, O-10, P-30, P-31, P-32, P-33	Nabi A.	O-51
		Nabiuni M.	P-109, P-110, P-111, P-219
Mansourian AA.	O-67		
Mashayekhi F.	P-131	Naderi E.	P-115
Masoumi S.	P-184, P-185	Naderi MM.	P-29
Mazaheri Z.	P-68	Naghavi M.	P-40
Mehdizadeh Tourzani Z.	O-66, P-166	Naghavizadeh M.	O-1, O-10, P-30, P-31, P-32, P-33
Mehrabipour F.	O-4, O-68		
Mehrafza M.	O-25	Najafi A.	P-64, P-113, P-116, P-133
Mehrzaad Sadaghiani M.	P-223		
Merghati Khoei E.	P-216	Najafi G.	P-84, P-90, P-108, P-113
Mirabi P.	P-9, P-10, P-23, P-24		
		Namavar Jahromi B.	K-1
Mirfeizi Z.	P-37	Namavar M.	P-157
Mirghafourvand M.	P-190, P-191	Namazi A.	P-193
Mirhashemi M.	P-212	Naseri L.	P-168
Mirzadegan E.	O-30	Nasiri M.	P-153
Mobini S.	P-29	Nasiri N.	P-19
Modarresi M.	P-38	Nasr-Esfahani MH.	O-19
Modarresi T.	O-54, O-55	Nasri S.	P-219
Moezzi F.	P-99	Nasrolahi O.	P-76, P-82
Moghaddam A.	P-53, P-130	Nasseri M.	O-4
Moghaddam G.	P-144	Nazari A.	P-52
Moghimi Hanjani S.	O-66, P-166	Nazari M.	P-177
Mohabati Mobarez A.	P-156	Nazari Z.	P-219
Mohamadirizi M.	P-189	Nazem E.	O-59
Mohamadirizi S.	P-189, P-217, P-227	Naziry G.	P-204, P-206, P-207, P-208
Mohamadirizi Sh.	P-189		
Mohammad K.	P-42, P-222	Nedjat S.	O-67
Mohammad-Alizadeh-Charandabi S.	O-70, P-179, P-180, P-190, P-191	Negargar S.	P-47
		Nejatbakhsh F.	O-59
Mohammadi F.	O-1, P-30, P-31	Nejati V.	P-73, P-76, P-84, P-90, P-108, P-113
Mohammadi M.	P-183		
Mohammadi T.	P-132, P-137, P-157	Nematollahi S.	O-41, O-58, P-134
MohammadJafary R.	P-163	Nezamivand S.	P-191
Mohammadnejad D.	O-27	Nikbakht Nasrabadi A.	O-59, O-67
Mohammadpour N.	P-184	Nikbakht R.	P-114
Mohazzab A.	O-12, O-22, O-24	Nikpouri Z.	O-25
Moini A.	P-19	Nikzad B.	O-27, P-81
Mojab F.	P-192	Noori Mugehi SMH.	P-65, P-88
Mojtahedi M.	O-11	Noroozian M.	P-134
Mokabberinejad R.	P-43, P-161	Noruzinia M.	O-50
Mokhber Maleki E.	O-42, P-61	Nouraei S.	O-71, P-192, P-194
Mollaahmadi F.	O-73, P-178	Nouri M.	P-2, P-146
Momeniha M.	O-24, P-54, P-60	Nowroozi M.	O-50
Montazeri A.	O-67	Nozhat F.	O-48
Montazerie A.	P-179, P-180	Olfati Karaji R.	O-49, P-143, P-144, P-145
Moosavi SGA.	O-3		
Moradan S.	O-13, P-1, P-44, P-45, P-202	Olyae S.	P-211
		Omidi F.	O-70
Moradi A.	O-47, P-177	Oryan Abkenar Z.	O-29
Mortazavi S.	P-123	Ouladsahebmadarek E.	P-91, P-92, P-93, P-94
Morteza A.	P-158		
Mosaffa N.	P-134	Oveisi H.	P-205
Mosaieby E.	P-138	Pad N.	P-39, P-155

Padmehr R.	O-12	Saboori F.	P-6
Pakgozar M.	P-215	Sabouri E.	P-30, P-31
Parkami M.	O-26	Sadaghiani M.	P-26, P-146
Parkami S.	O-26	Sadeghi E.	P-127
Parsanezhad ME.	K-1, O-9, P-14	Sadeghi M.	O-60, P-25
Pashaee Rad S.	O-42	Sadeghi S.	P-145
Paylakhi SH.	O-40	Sadeghipour rodsari H.	P-64, P-116
Pilevariyan A.	P-117, P-139	Sadeghnia S.	P-29
Poorolajal J.	P-184, P-185	Sadighi Gilani MA.	O-52, O-54, O-55, O-57, P-158, P-162
Poorshojai S.	O-4, P-36, P-39, P-155	Sadrefozalayi S.	O-43, P-72, P-76
Pormonsef F.	P-52	Sadri S.	P-41
Porseif R.	O-25	Sadrkhanlou RA.	O-47, P-57, P-83, P-85, P-137
Pourmatroud E.	O-23	Saeepour N.	P-162
Pourteymour Fard Tabrizi F.	P-223	Saeidi H.	O-53
Pouyan N.	O-53	Safarian S.	O-60
Pouyan O.	O-53	Safavi M.	P-25
Pouyanmanesh F.	P-219	Safdarian L.	O-17, P-215
Qaderi K.	P-216	Salehi L.	P-103
Rabiee S.	P-27, P-52, P-184	Salehi M.	O-41, O-58, P-4, P-134
Rabzia A.	P-127	Salehiniya H.	P-7, P-197
Rafeie F.	O-37, P-41	Salehnia M.	O-15, O-28, O-40, O-45, P-69, P-96
Rahimian T.	O-25	Salehpour S.	O-15, O-45
Rahmani E.	P-50	Salimi M.	P-4
Rahmani F.	P-82	Saliminejad K.	P-125
Rahmanpour H.	O-17, O-18, P-51	Salman Yazdi R.	O-52
Rahmati-Ahmadabadi M.	O-44	Samsami A.	O-9, P-13, P-14
Rahnama A.	P-118	Sarikhani L.	O-21
Rahnavardi M.	P-168	Sarvari A.	P-29
Raisi Dehkordi Z.	P-133	Sarvi F.	O-17
Rajabalinejad A.	P-152	Savari H.	P-228
Rajaei F.	P-96, P-141	Seifi B.	P-64, P-116
Ramezani N.	P-184	Seyedi Asl S.	P-213
Ramezanzadeh F.	O-19	Seyedoshohadaei F.	P-50
Ranjbar F.	P-42, P-222	Shabanipour S.	P-131
Ranjbar M.	O-61, P-230	Shadjoo K.	O-12
Raofi Z.	O-5	Shafaie F.	P-193
Raoufi A.	O-25	Shafeghati S.	P-42, P-222
Rasekh Jahromi A.	O-4, O-68, P-36, P-39, P-155	Shahhosseini M.	O-46
Rashide B.	P-81	Shahnazi V.	P-146
Rasooli S.	O-7, P-48	Shahrooze R.	P-87, P-89
Rastgou Z.	P-156	Shahverdi AH.	O-42, P-61, P-119
Razi M.	P-78, P-79	Shams A.	P-162
Razmjoo N.	P-37	Shariati M.	P-62, P-63
Reisie M.	P-195	Shariatzadeh SMA.	P-119, P-120, P-121
Rezaee F.	O-56, P-159	Sharifi F.	O-71, P-186, P-187, P-192, P-194, P-221, P-225, P-226
Rezaee Z.	P-209	Sharifi N.	O-71, P-186, P-187, P-221, P-225, P-226
Rezaei E.	O-69	Sharifi R.	P-122
Rezaei M.	P-38	Shervin A.	O-12, O-22, O-24
Rezaeian F.	P-162	Shiravi A.	O-52, P-122
Rezaeian Z.	P-126	Shirazi A.	O-44, P-29, P-70
Rezaei-Golmisheh A.	O-47	Shirdel M.	P-190
Rezaie N.	P-179, P-180	Shirinbayan P.	O-39
Rezazad M.	P-95	Shirzad M.	O-22, P-42, P-222
Rezazade Y.	P-132, P-157	Shoghi M.	O-66, P-166
Rezazadeh S.	P-169	Shojaie K.	P-163
Rezazadeh Valojerdi M.	O-38	Shojazadeh S.	P-97, P-98, P-100, P-147, P-148, P-149
Roghani M.	O-39	Shokrollahi E.	P-112
Roostaei H.	P-30, P-31	Simbar M.	P-192
Roshanaei K.	P-115	Slahi N.	P-128
Roshangar L.	O-27, P-81		
Rostaii M.	P-177		
Rousta F.	P-188		
Saadati N.	P-163		
Sabbaghian M.	O-52, O-54, O-55, O-57		

Sobhi G.	P-26	Younesi M.	O-9, O-21
Sohani M.	P-64, P-116	Yousefi B.	O-13
Sohrabvand F.	P-43, P-161	Yousefi F.	P-37
Soleimani Mehranjani M.	P-119, P-120, P-121	Zabihi A.	P-58, P-71
Soleimani Rad J.	O-27, P-81	Zabihi E.	P-160
Soleimani Rad S.	O-27, P-81	Zademodares S.	O-6
Soltangharaee H.	P-122	Zafari J.	O-36, P-140
Soltani Z.	P-220	Zahiri M.	O-50
Soodi M.	O-36	Zahiri Sh.	O-26
Taghipour S.	P-121	Zahiri Soruri Z.	P-131
Taheripanah R.	K-4	Zahiri Z.	P-15
Tahmoressi F.	O-37, P-41	Zahmatkesh E.	P-108
Tajaddini S.	P-59	Zamani Z.	P-83, P-85
Talaei Khozani T.	O-31, P-34, P-35, P-71	Zare M.	P-2
Talebi A.	P-99	Zare S.	O-35, P-83, P-85
Tansaz M.	P-43, P-161	Zarei A.	O-9, O-21, O-33, P-13, P-14
Tara F.	P-224	Zarei Fard N.	O-31
Tarang A.	O-37, P-41	Zarei O.	P-124
Tavana Z.	P-17	Zarei S.	P-122, P-124, P-141
Tavangar B.	P-122	Zarghami M.	p-203
Tehrani N.	O-61, P-231	Zarghami N.	P-146
Totonchi M.	O-57	Zarnani A.	O-12, O-22, O-24, O-30, P-70
Toushieh M.	P-220	Zarnani AH.	O-44, P-124
Vahedian Z.	O-30	Zavareh S.	O-28, O-40, P-118
Vaziri H.	P-74	Zeighami Mohammadi S.	P-176
Vizheh M.	P-215	Zeinalzadeh M.	P-11
Yadollahi P.	P-164	Zendehdel R.	O-36
Yari N.	O-14	Ziyadi S.	P-183
Yavangi M.	P-52	Zolghadri J.	O-9, O-21, O-33, P-14
Yazdanpanah S.	O-26		
Yazdanikhah S.	O-55, O-57		
Yazdian MR.	P-115		

## Subscription Order Card for Iran

- I would like to receive a FREE sample copy of the *Iranian Journal of Reproductive Medicine*.  
 Please enter my subscription to *Iranian Journal of Reproductive Medicine*.

### PERSONAL SUBSCRIPTION

- Please enter my Personal Subscription for 60.000 Rials, for four issues.

### STUDENT SUBSCRIPTION

- Please enter my Student Subscription for 40.000 Rials for four issues.

### INSTITUTIONAL/LIBRARY SUBSCRIPTION

- Please enter the Institutional/Library Subscription for 80.000 Rials for four issues.

### ADDRESS

Please print the following clearly:

Name:

Address:

City:

Phone:

E-mail:

### PAYMENT METHOD

- Cash

- Cheque enclosed

Cheque must be made to:

*Iranian Journal of Reproductive Medicine*,  
Bouali Ave. Safayeh, Yazd, Iran.

- Bank Transfer

Transfer must be made to:

Melli Bank (Aboozar Square, Code: 3517)  
Current Account No. Siba-2178545922005,  
Yazd, Iran.

## Subscription Order Card for Other Countries

### PERSONAL SUBSCRIPTION

- Please enter my Personal Subscription for US \$50 for four issues.

### STUDENT SUBSCRIPTION

- Please enter my Student Subscription for US \$20 for four issues.

### INSTITUTIONAL/LIBRARY SUBSCRIPTION

- Please enter my Institutional/Library Subscription for US \$100 for four issues.

### ADDRESS

Please print the following clearly:

Name:

Address:

City:

Phone:

E-mail:

### PAYMENT METHOD

- Cash

- Cheque enclosed

Cheque must be made to:

*Iranian Journal of Reproductive Medicine*,  
Bouali Ave, Safayeh, Yazd, Iran.

- Bank Transfer

Transfer must be made to:

Melli Bank (Aboozar Square, Code: 3517)  
Current Account No. Siba-2178545922005,  
Yazd, Iran.

**Stamp**

**To:** *Iranian Journal of Reproductive Medicine*, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Bouali Ave, Safayeh, Yazd, Iran.

**Stamp**

**To:** *Iranian Journal of Reproductive Medicine*, Research and Clinical Center for Infertility, Shahid Sadoughi University of Medical Sciences, Bouali Ave, Safayeh, Yazd, Iran.

***Iranian Journal of Reproductive Medicine***

***Send for a free sample copy today***

Please send me a sample copy of the *Iranian Journal of Reproductive Medicine (IJRM)*.

Name:

Address:

E-mail:

*Iranian Journal of Reproductive Medicine,*  
Research and Clinical Center for Infertility,  
Shahid Sadoughi University of Medical Sciences,  
Bouali Ave, Safayeh, Yazd, Iran.  
info@ijrm.ir

---

***Iranian Journal of Reproductive Medicine***

***Send for a free sample copy today***

Please send me a sample copy of the *Iranian Journal of Reproductive Medicine (IJRM)*.

Name:

Address:

E-mail:

*Iranian Journal of Reproductive Medicine,*  
Research and Clinical Center for Infertility,  
Shahid Sadoughi University of Medical Sciences,  
Bouali Ave, Safayeh, Yazd, Iran.  
info@ijrm.ir

# Call for Papers

*Iranian Journal of Reproductive Medicine (IJRM)* will consider for publishing review articles, original articles, case reports and short communications in the field of reproductive medicine. If you have a manuscript that you think might be appropriate for *IJRM*, please submit it to our office for consideration.

Please visit our website for further details and for full Instructions for Authors

<http://www.ijrm.ir>

Manuscript should be submitted to:

*Dr. Abbas Aflatoonian, Editor-in-Chief  
Iranian Journal of Reproductive Medicine  
Research and Clinical Center for Infertility,  
Shahid Sadoughi University of Medical Sciences,  
Bouali Ave., Safayeh, Yazd, Iran.  
Postal Code: 8916877391*