

Oral presentations

1- Infertility, Gynecology

O-1

Immunological modes of recurrent miscarriage

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Evolutionary development of immune system dates back to the emergence of life in the universe. It controls all aspects of the living organisms and grows up in parallel with development of tissues and organs. A tiny and small change in the normal physiological processes is concomitantly followed by immediate counter-regulatory mechanisms of the immune system. Ovulation, spermatogenesis, zygote evolution; implantation and development are among the processes which are under the tight control of immune system. Humoral and cellular arms of immune system not only have a strict control over placentation and embryo development, but act in a very supportive way as well. Immune deviation from finely tuned state may result in such pregnancy-associated complications as implantation failure and miscarriage. Although recurrent miscarriage (RM) affects only 1-3% of couples, it has a major influence on the wellbeing and psychosocial status of patients. Therefore, finding its etiology is a prerequisite for successful management of RM in most settings. A significant portion of these recurrent pregnancy losses is associated with immune etiologies, including autoimmune and cellular immune abnormalities. In most instances immunological imbalances, especially those with emergence of auto-antibodies, are associated with inflammatory process leading to pregnancy loss. The influence of thrombophilia in pregnancy is a popular research topic in recurrent miscarriage. Interestingly, inflammatory processes are the main causative factor for pregnancy loss in both acquired and hereditary thrombophilias. Indeed, based on extensive expression of different pattern recognition receptors (PRR) at the fetomaternal interface, local infections could potentially lead to the downstream signaling pathways of inflammatory reactions and thereby induce abortion. It is conceivable, therefore, that counter-regulatory mechanisms might exist at the female reproductive tract to counteract inflammatory cascade of potentially harmful cytokines. Among the others, the pivotal immunoregulatory role of vitamin D3 has been the focus of many recent researches. Most interestingly, immunologic mechanisms responsible for pregnancy loss are not solely imposed from maternal side, but paternal factors are also play a determining role in shaping the immune responses in the uterus, where the final decision on the fate of the developing embryo is to be made. In this review, we will have a brief look on the immune

etiologies of RM mainly based on our extensive experiences in the past five years.

Key words: Pregnancy loss, Miscarriage, Immunology, Auto-Immunity, Thrombophilia, Inflammation.

O-2

Bilateral ovariectomy inhibits development of experimental endometriosis in rats

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Introduction: Endometriosis defined as functioning endometrium outside the uterine cavity and is found in peritoneum, ovary and rectovaginal septum. The disorder occurs mainly in women of reproductive age and regresses after menopause or under treatment with estrogen-suppressive substances. In women with completed families, removal of both ovaries as the main source of estrogen may be considered for disabling symptom.

Materials and Methods: In this study we evaluated whether ovariectomy as an estrogen-suppressive method is effective on the growth of established endometriosis lesions in the rat model? 22 adult female rats were selected. The surgical technique consisted to median laparotomy and resection of a 1cm segment of the right uterine horn. After endometrial detachment from myometrium, a 0.25cm² flap was removed and sutured to the abdominal muscle in peritoneum. The rats were randomly divided into 2 groups. Group 1 (n=10) was only transplanted with endometrial fragment and endometriosis was induced in 10 ovariectomised rats in group 2. 3 weeks after endometriosis induction, blood samples were collected to determine the concentrations of estradiol and progesterone and tissue samples were taken to histological studies using HE and PAS staining methods.

Results: indicated that serum estradiol and progesterone concentrations and histological thickness of implanted endometrial tissue, glands infiltration and vessel fields significantly decreased in group 1.

Conclusion: Bilateral ovariectomy as an estrogen-suppressive method effectively interferes with the maintenance of the disorder's symptoms and growth of endometriosis by inhibiting estrogen secretion from ovaries in completed family's women.

Key words: Endometriosis, Ovariectomy, Estradiol, Rat.

O-3

Infertility treatments and Islamic jurisprudence

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Introduction: Different Islamic religious schools in face of the permit or forbidden of the new infertility treatments have adopted different viewpoints. It's necessary to present a solution for those, who accept the forbidden approach in comparison with these treatments, with due attention to the subject importance and the challenge of the great percent of the Moslems milliard population with it. We are searching to find this solution, in this research, with regard to religious precepts on the one hand, and provide mind cicatrisation for barren couple to have generation that followed divorce in some case on the other.

Materials and Methods: This research is a review and library study.

Results: most jurisconsults permit AIH, either with IUI or IVF styles, and forbidden AID, either with IUI or IVF styles. They emphasis on the avoiding introductions forbidden such as the palpation and look except in the emergency cases. The Shiite and Sunni jurisconsults have diversities of opinions in use of the infertility treatments methods for example Mother Surrogacy.

Conclusion: Mahmud Shaltut, the great Sunni jurisconsult, recognized the Shiite beside the formal Sunni religions and permitted to follow this religion. We can solve our problem in infertility treatments by resorting to this method. In some of the infertility treatments, such as Mother Surrogacy and Embryo Donation, according to the Sunni juris consults opinion, can refer to the Shiite juris consults opinions and appoint it as the divine proof, consequently most of the barren couple problems can remove without the sacred law violation.

Key words: Infertility treatment, Islamic jurisprudence, Mother Surrogacy, Embryo Donation.

O-4 IVF implantation failure and hereditary thrombophilia

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Introduction: The objective of this study was to determine the prevalence of mutation in hereditary thrombophilia factors and its relation to in vitro fertilization (IVF)-embryo transfer failure in women who have had three or more previously failed IVF-embryo transfer cycles.

Materials and Methods: In a case-control study we enrolled 28 consecutive women with three or more previously failed IVF-embryo transfer cycles as case group (group 1). The control group included 35 women who conceived during at first IVF cycle. All women were tested for the presence of factor V Leiden, and methylenetetrahydrofolate reductase (MTHFR)

mutations. Ofcourse we continue this study to complete participant in each group to reach 45.

Results: There were 4 mutations in factor V Leiden in case group and in control group no mutation was seen and significant difference($p<0.01$) was found between two group. MTHFR mutations were found in 46% (13) of case group and 45% (16) of control group with no significant difference. Association between repeated IVF failure and mutation in factor V Leiden was found statistically.

Conclusion: These data suggest that factor V Leiden have a significant role in IVF-embryo transfer implantation failure. methylenetetrahydrofolate reductase gene mutation do not has a significant role.

Key words: Hereditary trombophilia, Implantation failure, IVF.

O-5 Effectiveness of Metformin in treatment of infertility and recurrent pregnancy loss in polycystic ovarian syndrome

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Introduction: Polycystic ovary syndrome (PCOS) is the most common endocrinopathy in women of reproductive age. The prevalence of PCOS is approximately 5-10% in population. It can cause an increased risk of recurrent pregnancy loss; moreover, it is assumed that it may cause infertility because of low quality of oocyte. Two factors such as hyperinsulinism and hyperandrogenism play an important role in abortion and infertility. The main goal of this study is to investigate the effectiveness of metformin during pregnancy in a group of PCOS women.

Materials and Methods: In this randomized trial, we enrolled 1024 women who had a history of unexplained recurrent pregnancy loss and 152 IVF failure women. PCOS infected women diagnosed based on women's consultation and Rotterdam criterion. Then we assigned them to received Metformin (500-1500 mg daily) for at least three month before conception and after confirmation of a viable pregnancy to the first trimester of pregnancy. All women were followed during pregnancy to the end or were contacted by telephone every 3 months till the end of pregnancy.

Results: The success rate of pregnancy in women with PCOS who suffering recurrent pregnancy loss after Metformin therapy was 32.8% and in IVF failure women with PCOS was 21.4%.

Conclusion: Metformin consumption has shown is not effective in reducing number of abortion in PCOS women; moreover, it is ineffective in IVF failure reduction too.

Key words: Metformin, Recurrent pregnancy loss, IVF failure, Treatment, Pregnancy.

O-6

N-acetyl-cysteine as an adjuvant to clomiphene citrate for successful induction of ovulation in infertile patients with polycystic ovary syndrome

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Introduction: To evaluate the effect of oral N-Acetylcysteine (NAC) administration as an adjuvant to Clomiphene Citrate (CC) on induction of ovulation outcomes in patients with polycystic ovary syndrome (PCOS).

Materials and Methods: In this placebo-controlled double-blind randomized clinical trial, 180 PCOS infertile patients were randomly divided into two groups for induction of ovulation. Patients in group 1 received CC 100 mg/d plus NAC 1.2 g/d and patients in group 2 received CC plus placebo for 5 days starting at day 3 of the cycle. On the 12th day of menstrual cycle in the presence of at least one follicle with an 18-20 mm diameter in ultrasound evaluation, 10000U HCG was injected intramuscularly and timed intercourse was advised 36 hours after HCG injection. Serum β -hCG level was measured on the 16th day after HCG injection.

Results: The number of follicles >18mm and the mean endometrial thickness on the day of HCG administration were significantly higher among the CC+NAC group ($p=0.001$). The ovulation and pregnancy rates were also significantly higher in the CC+NAC group ($p=0.02$ and 0.04 respectively). No adverse side-effects and no cases of OHSS were observed in group receiving NAC.

Conclusion: NAC as a safe and well-tolerated adjuvant to CC for induction of ovulation can improve the ovulation and pregnancy rates in PCOS patients. It may also have some beneficial impacts on endometrial thickness.

Key words: N-Acetylcysteine, Clomiphene Citrate, Polycystic Ovary Syndrome, Ovulation, Pregnancy Rate.

O-7

The effects of bee venom on in vitro maturation of isolated preantral follicles in NMRI mice

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The bee venom contains amounts of peptides and biological active amines that their effects on accretion of ovulation have been augmented in rats. Moreover, injection of HBV used of laparoscopy into ovary led to significant increasing ovulation and pregnancy. So, unmaturing follicles taken from 14day-old mice and cultured in α -minimal essential medium (α -MEM) with FSH for 12 days and divided into 3groups based on diameter, were treated with HBV (Honey bee venom). Then diameter of follicles and morphological appearances of oocytes s maturation was studied. In experimental group, diameters of follicles were increased significantly ($p<0.05$). In brief, it can be confirmed that HBV has led to significantly changes in invitro maturation of preantral follicles (IVM) and consequently, better performance for fertility. Moreover, preantral follicles with average diameter were better candidate ($p<0.001$) for HBV treatment.

Key words: Honey bee venom, Mouse, Preantral follicles, In vitro culture, Maturation.

O-8

In vitro culture of mouse preantral follicles following ovarian tissue vitrification by needle immerse and solid surface methods

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Introduction: Ovarian tissue cryopreservation in cancer patients is an efficient method for fertility preservation.

Materials and Methods: Ovaries of 13-day old NMRI mice were removed and randomly divided into control, needle immerse (NIV) and solid surface vitrification (SSV) groups. For vitrification, ovaries were transferred into equilibration medium [7.5% (EG & DMSO)] and vitrification medium [15% (EG & DMSO) and 0.5 M sucrose], then they immersed in liquid nitrogen after cooling on pre cooled steel surface in SSV group and directly in NIV group. Thawing was done in 2 steps (1 & 0 M sucrose solution). In all groups, some ovaries were analyzed histologically and then preantral follicles of other ovaries were isolated mechanically and cultured for 12 days. Follicle survival was assessed after 24 hour, 6 days, 10 days and 12 days in all experimental groups.

Results: The integrity of ovarian tissue was preserved after NIV and SSV vitrification. After 24 hours of in vitro culture, follicle survival showed no significant difference between different groups. Follicle survival was significantly different between control and SSV group (94.09 ± 1.42 versus $63.14\pm 11.51\%$) after 6 days,

and also between control and NIV with SSV group (92.82 ± 1.78 and 85.27 ± 3.7 vs. $62.67 \pm 9.27\%$) after 10 days. Finally, after 12 days of culture, the rate of this variant was different between control and NIV group with SSV group (93.16 ± 2.84 and 85.1 ± 10.53 vs. $58.4 \pm 12.726\%$) ($p < 0.05$).

Conclusion: NIV is a better preservation method for immature ovarian tissue compared to SSV and it shows lower harmful effects on follicle survival and follicle development.

Key words: Ovarian tissue, Preantral follicles, Vitrification, In vitro culture.

O-9

Vaginal progesterone effect on pregnancy rate in polycystic ovary syndrome patients

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Introduction: To determine the effect of intravaginal progesterone on pregnancy rate in combination regimen with clomiphene or letrozole with gonadotropin for ovulation induction cycles in women with polycystic ovary syndrome (PCOS).

Materials and Methods: A single blind clinical trial was performed on 200 PCOS patients referred to Kashan infertility center in 2010-2011. 100 patients received 5mg letrozole from 3-7 days of cycle and 100 patient's 100mg clomiphene in the same days. 150 IU HMG was added to regimen in two groups from day 5-9. TVS was done on 10 or 11 day of cycles and HMG dose was adjusted based on follicle size. After HCG injection for trigger of ovulation, patients in each groups divided to two groups. One group received vaginal progesterone 400 mg daily for 14 days and another group received none. β HCG test was performed 2 weeks later. Pregnancy rate in 4 group's determined and statistical analysis with chi-square, t-test and ANOVA was performed.

Results: Pregnancy rate in clomiphene+HMG ovulation induction cycles with progesterone (16.7%) was more than cycles without progesterone (14%) but this difference was not statistically significant ($p=0.714$) pregnancy rate in letrozole+HMG cycles with progesterone (28%) was more than cycles without

progesterone but this difference was not statistically Significant. pregnancy rate in progesterone received groups was 22.4% and 18% respectively ($p=0.436$).

Conclusion: Vaginal progesterone as luteal phase support in combination ovulation induction regimen with clomiphene or letrozole with gonadotropins in PCOS patients didn't significantly increased pregnancy rate.

Key words: Pregnancy rate, PCOS, Clomiphene, Letrozole, Vaginal progesterone.

O-10

Ovarian function preservation by GnRH agonists during chemotherapy with cyclophosphamide in breast cancer patients- A double blind randomized control trial clinical

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Introduction: The increased survival of patients with breast cancer has given rise to other problems associated with the complications of chemotherapy. One major complication is premature ovarian failure; an especially harmful outcome for women of reproductive age. This study is designed to evaluate ovarian preservation by GnRH agonists in young women with breast cancer during cyclophosphamide chemotherapy regime.

Materials and Methods: This is a double blind randomized controlled trial that was done on 42 patients with breast cancer who referred for chemotherapy to Shahid Sadooghi Hospital. Patients were asked as menstrual conditions and examined with vaginal sonography and also LH and FSH blood level at the end of 3 and 6 months. Finally data were analyzed by SPSS ver16 software for windows.

Results: Age average of samples was 36.5 year (from 30 to 45 year). After 3 months, 84% of cases maintained ovarian function while this rate increased up to 90.5% at the end of 6 months. In control group 14.3% maintained ovarian function after 3 months while this rate elevated to 33.3% after 6 months. This means that 33.3% had menopause symptoms like flashes, night sweats, fatigue and vaginal dryness. Finding showed that GnRH analogue can significantly preserve ovarian function ($p < 0.001$).

Conclusion: GnRH administration before and during chemotherapy in patients with breast cancer seem to preserve post treatment ovarian function in young women in the fertility ages. So that more detailed study

with larger samples in long time period is suggested for more reliable results.

Key words: Cyclophosphamide, Chemotherapy, GnRH agonist, Breast cancer.

O-11

Half dose GnRH agonist versus one-third dose GnRH agonist protocol in patients undergoing ICSI; a randomized controlled trial

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Introduction: Using GnRH agonist in controlled ovarian stimulation for ICSI prevents premature luteinizing hormone (LH) surge, but its side effects on endometrial lining is considerable. Recently low dose of GnRH-a has been proposed for these patients. In the present study 1/2 dose (1.875 µg/ml) agonist and 1/3 dose (1.25 µg/ml) of GnRH-a was used for this propose in infertile patients and the pregnancy rate was compared.

Materials and Methods: This is a double-blind, randomized clinical trial on infertile patients referring to Mehr infertility center and 300 patients randomly allocated in two groups: half dose GnRH-a long protocol (group A, n=150) vs. one third GnRH-a (group B, n=150). After down regulation with 1/2 or 1/3 dose of GnRH agonist on day 20th; all patients were stimulated with HMG (2-3 ampules) at 3th day of next menstrual cycle.

Results: The numbers of total and metaphase II oocytes were 12.84±7.19 and 10.32±6.06 in group A and 10.93±6.62 and 8.82±5.86 in group B. There was no significant difference in endometrial thickness, chemical and clinical pregnancy rate between two groups. The chemical and clinical pregnancy rates were 55.3% and 45.3% in group A and 52% and 46% in group B.

Conclusion: there is no significant difference in ICSI success rate between half dose and one-third GnRH agonist protocol and further study is recommended.

Key words: GnRH agonist, ICSI, Randomized controlled trial.

O-12

Cytologic diagnosis of endometrial carcinoma, comparing with histologic grade and stage

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Introduction: Type 1 endometrial carcinoma may be occurred as an end result of unopposed estrogen exposure which commonly seen in patients with

anovulatory cycles and infertility. In this research we evaluated the sensitivity, specificity of the new outpatient diagnostic tool (endometrial brush cytology) in diagnosis of endometrial malignancies and compare the cytologic grade with post hysterectomy grade and stage.

Materials and Methods: 23 cases of endometrial carcinoma with preoperative diagnosis of endometrial carcinoma made by cytologic examination were selected and grading was performed by modified Nottingham system for breast cancer. The results of cytologic grading compared with post surgical grades and stages.

Results: The sensitivity and specificity of endometrial brush cytology for diagnosis of endometrial carcinoma were 95.5% and 100% respectively. The tumor grade in cytology was a significant predictor of patient stage. Cytological grading was significantly correlated with histological grade also.

Conclusion: We concluded that the endometrial cytology is an efficient and rapid outpatient method for diagnosis, typing and grading of endometrial carcinoma for decision of surgical and adjuvant therapy.

Key words: Endometrial Cytology, Type 1 Endometrial Carcinoma.

O-13

Natural cycle frozen-thawed embryo transfer (FET) in patients with poor endometrium and repeated IVF failure (RIF): The observational study

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Introduction: The objective of this variable- control study was to compare pregnancy rate of FET on natural versus hormone replacement therapy (HRT) cycle endometrium in patients with RIF.

Materials and Methods: This cross-sectional 6 months observational study has been performed on 108 ovulatory 20-38 years old patients excluding sever male factor infertility. We analyzed the pregnancy rate after FET on natural endometrium in patients with RIF failure and previously thin endometrium on HRT (group 1, n=14) and patients with RIF with previously normal endometrium (group 2, n=42), comparing with patients with RIF and normal endometrium, in whom we transferred the frozen-thawed embryos on HRT cycle (group 3, n=52). Serial monitoring of ovulation has been done with human chorionic gonadotrophin (HCG) triggering, for timing of embryo transfer.

Results: Patients in group 1 and group 2, got pregnant in 35.7% (5 out of 14) and 42.2% (18 out of 42) respectively, compared with pregnancy rate of 36.5% (19 out of 52) in group 3.

Conclusion: The results suggest the superiority of the natural cycle as compared with the HRT cycle under certain conditions.

Key words: Frozen-thawed embryo transfer (FET), Natural cycle endometrium, HRT, Poor endometrium, Repeated IVF failure.

O-14

Effect of endometrial local injury on pregnancy rate in unexplained infertile patients undergoing intrauterine insemination (IUI)

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Introduction: Unexplained infertility is a diagnosis of exclusion when systemic evaluation fails to identify a cause. It may be truly no abnormality (lower end of couples natural fertility) or there is a specific cause but can't be revealed by available diagnostic test. This study aims to evaluate a simple strategy for improving endometrial receptivity and the result of pregnancy in unexplained infertile patients undergoing IUI.

Materials and Methods: This is a randomized case-control study on 139 unexplained infertile women who were divided into two groups. After superovulation by clomiphene-citrate and gonadotropins and when the dominant follicles reached 18-20 mm, 10000 IU hCG was injected. Endometrial local injury was performed in the posterior wall of the uterus by Novak curette (in the same day of hCG injection) just in the experimental group. All the patients underwent single IUI after 36 hours.

Results: There were 16 pregnancies in 65 cycle of IUI group comparing to 11 pregnancies in 74 cycle of case group (endometrial injury+ IUI group). Clinical and ongoing pregnancy rate were significantly higher in the endometrial injury group as compared to the control group (24.6% vs 14.9%) (p-value=0.108).

Conclusion: As revealed by this study, local mechanical injury of the endometrium can increase uterine receptivity probably by provoking the production of molecules which improve the implantation of the embryo and in combination with IUI will increase ongoing pregnancy. This may help many couples to avoid the stress and cost of more invasive technologies.

Key words: Unexplained infertility, IUI, Local injury, Pregnancy rate.

O-15

Hyperprolactinemia in men with sperm disorders

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Introduction: Hyperprolactinemia (HPRL) in men, a condition that should not be neglected. The role of that in male infertility is still unclear.

Materials and Methods: To assess the clinical significance of PRL determination during infertility studies, serum hormones and semen samples from 150 men attending the Shahid Beheshti research center were analyzed, and PRL serum values were correlated with volume, sperm count, motility, viability, and morphology.

Results: The range of PRL levels (ng/mL) was 5.9±4.3 in the control group (n=50), 14.2±5.4 in asthenozoospermic (n=54), 11.8±1.6 in oligozoospermic (n=36), and 9.3±7.2 in azoospermic patients (n=10). Significantly higher (p<0.001) levels of PRL were found in the men with asthenozoospermia, oligozoospermia, and azoospermia. In the 115 infertile patients with abnormal semen analysis, serum PRL levels were below 12.0 ng/mL (normal mean+3 SD) in 78 (70.2%) and above this level in 35 (28.6%) cases. Serum FSH and LH concentrations in azoospermic men were significantly higher (p<0.001) when compared with those of the control group, which indicates some disturbance of the spermatogenic process, and estradiol was significantly higher (p<0.001) in oligozoospermic patients. Hyperprolactinemia was treated with 2.5 mg of bromocriptine daily for 6 months, resulting in a nonmeasurable effect on their sperm analysis.

Conclusion: In conclusion, two-thirds of patients with oligozoospermia, asthenozoospermia, and azoospermia have normal PRL levels. Infertility in men due to moderate hyperprolactinemia could be associated with these sperm disturbances.

Key words: Hyperprolactinemia, Sperm disorders.

O-16

Relationship between melatonin nocturnal secretion and success of ART in infertile women

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Introduction: Assisted reproductive technologies are not only expensive but they also have low rates of success. This success rate varies among different seasons with the highest rate in seasons with longer days and the lowest in seasons with shorter days. Seasonal breeding in mammals other than humans is controlled by the nocturnal secretion of melatonin hence it has been suggested that while the seasonal changes seen in ART cycles are in concordance with the seasonal variability of melatonin, melatonin can be the influential agent. This research was conducted in order to study if the success rate of ART cycles is influenced by the melatonin secretion in different seasons.

Materials and Methods: 165 women who went on an ART cycle under the same induction protocol and micro injection followed by intra uterine transfer in Shariatie infertility center. Their urine was collected from 10 pm until 6 am after HCG injection. The number of retrieved oocytes, metaphase 2, embryos, freeze and transferred embryos was also registered. 6-sulfatoxy melatonin (a metabolite of melatonin) and creatinin were measured in urine.

Results: A significant correlation was found between the number of freeze embryos and season ($p=0.009$) with the highest number in spring and the lowest in winter. Significant seasonal variability in mel/cr ratio existed ($p=0.013$) with the lowest amount in spring and highest in winter.

Conclusion: As the number of freeze embryos can be defined as the indicator of high degree embryos, we can conclude that in seasons with the lowest melatonin secretion (mel/cr) spring, the probability of retrieving high grade embryos are higher.

Key words: Infertility, ART, Melatonin, Seasonal variability.

O-17

Analysis of thrombophilic gene mutations among Iranian couples with recurrent pregnancy loss: East-Azerbaijan Experiences

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Introduction: Recurrent pregnancy loss (RPL) is a significant obstetrical complication that may occur during pregnancy. The contribution of inherited thrombophilias to the pathophysiology of RPL has remained controversial. This study therefore aimed to evaluate the ten thrombophilic gene mutations, that were identified related with RPL in previous literature: Factor V (1691G/A), Factor V HR2 (4070A/G), Prothrombin (20210G/A), PAI-1 (-675 I/D, 5G/4G), ACE (intron 16 I/D), Factor VII (Gln353Arg), Factor XIII (Val34Leu), β -fibrinogen (-455G/A), Glycoprotein Ia (807C/T), tPA (intron 8 D/I).

Materials and Methods: We investigated 200 women experiencing RPL and 50 women who had two normal pregnancies. Following DNA extraction, we used ARMS-PCR in the determination of the genotype.

Results: The comparison of the frequencies of mutant alleles between the case and control group indicated that

the frequencies of mutant alleles for Factor V (1691G/A), Factor V HR2 (4070A/G), Prothrombin (20210G/A), PAI-1 (-675 I/D, 5G/4G), Factor XIII (Val34Leu) and β -fibrinogen (-455G/A) were higher in the case group compared with the control group; whilst the other studied genes were lower in the case in comparison to the control group.

Conclusion: Our findings indicate that whilst none of the specific thrombophilic gene mutations appear to be a risk factor for recurrent miscarriage on their own, when brought together, the total number of mutations carry a significantly increased risk. Thus, it appears that the risk for the termination of pregnancies might be related to the accumulation of thrombophilic mutations rather than to a single specific mutation.

Key words: Recurrent pregnancy loss, Thrombophilic gene mutations.

O-18

Do patients with unexplained and explained recurrent pregnancy loss suffer from diminished ovarian reserve?

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Introduction: Spontaneous recurrent pregnancy loss (RPL) is one of the complications of pregnancy, occurring in about 1% of couples. Even after a thorough evaluation, the potential cause remains unexplained in about one third to one half of the cases. This study is to compare the ovarian reserve of patients with unexplained and explained recurrent pregnancy loss.

Materials and Methods: This is a prospective case-control study, conducted in infertility research center of Shiraz University of Medical Sciences since 2009-2011 including 27 patients with unexplained pregnancy loss (≥ 3 consecutive pregnancy loss, less than 20 weeks of gestation) and 11 with explained RPL. Serum levels of the day 3 follicle-stimulating hormone (FSH), anti-müllerian hormone (AMH) and antral follicle count (AFC) were measured and compared between two groups.

Results: Elevated serum level of FSH was observed in 33.3% of patients with unexplained RPL and 27.3% of those with explained RPL ($p=0.516$). The prevalence of low serum levels of AMH (25.9% vs. 9.1%; $p=0.245$) and decreased AFC (55.6% vs. 72.2%; $p=0.272$) didn't differ significantly between patients with unexplained and explained RPL, respectively. Correlation analysis in those with unexplained RPL revealed a positive linear correlation between age and FSH and a negative correlation between age and AMH and also AFC. In the same way FSH was negatively correlated with AMH and AFC in those with unexplained RPL.

Conclusion: The results of this study reject the hypothesis that ovarian reserve diminishes in those with unexplained RPL compared with those with explained RPL.

Key words: Ovarian reserve, Unexplained recurrent pregnancy loss, Follicle stimulating hormone, Anti mullerian hormone, Antral follicle count.

O-19

The analgesic effect of gabapentin after total abdominal hysterectomy

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Introduction: Preliminary clinical studies have suggested that Gabapentin may produce analgesia and reduce the need for opioids in postoperative patients. The aim of the present study was to investigate the opioid-sparing and analgesic effects of Gabapentin administered during the first 24h after abdominal hysterectomy.

Materials and Methods: This is a double blind clinical trial study conducted in Shabih khani Hospital during 2011. 50 women candidate for hysterectomy (aged 35-50 years old) entered the study. Patients received oral Gabapentin 1200 or placebo 1 hour before surgery in case and control group, respectively. Pain was assessed on a visual analogue scale (VAS) at 2, 6, 12 and 24 hours after operation. Morphine need and drug induced complication such as nausea and vomiting were compared between two groups.

Results: Age, mean operative time, mean anesthesia time and body mass index were not significantly different between two groups. Mean pain score in 2, 6, 12, 24 hours after operation was significantly lower in Gabapentin group in comparison to placebo group ($p < 0.001$). Morphine consumption was significantly lower in case group ($p < 0.001$). First time to walk after operation was significantly shorter in Gabapentin group ($p < 0.002$).

Conclusion: Preoperative oral Gabapentin decreased pain scores in postoperative period and morphine consumption in abdominal hysterectomy patients.

Key words: Gabapentine, Post operative pain, Hysterectomy, Morphine.

O-20

The prevalence of poly cystic ovary syndrome in Iranian women

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Introduction: This study aimed to determine the prevalence of poly cystic ovary syndrome among Isfahanian women, Iran.

Materials and Methods: This cross-sectional study was conducted in 2009 in Isfahan Iran among females referred to per-marriage clinic, women with menstrual irregularity and clinical hyper androgenism underwent blood sampling for measurement of progesterone and free testosterone on the 22-24 day of their cycle and abdominal sonography of their ovaries was done.

Results: The estimated prevalence of p cos was 7% based on NIH criteria. 15.2% according to Rotterdam criteria and 7.9% under AES criteria.

Conclusion: The Rotterdam prevalence was double of those obtained with NIH criteria.

Key words: Poly cystic ovary, Hirsutism, Menstrual irregularity, Hyperandrogenism.

O-21

Comparison of the efficacy of letrozole-gonadotropins and clomiphene citrate-gonadotropins in ovarian hyperstimulation of infertile women undergoing intrauterine insemination procedure

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Introduction: Clomiphene citrate is the first-line treatment in patients with ovulatory dysfunction. Nowadays, it is considered to use letrozole for induction of ovulation. Current study compares the efficacy of letrozole-gonadotropins and clomiphene citrate-gonadotropins in ovarian stimulation in IUI cycles.

Materials and Methods: This clinical trial study was carried out on 80 infertile women with unexplained infertility. The patients were randomly divided into two groups: group 1 (40 patients) received clomiphene (100 mg/day) and group 2 received letrozole (5 mg/day) on the 3-7th days of menstrual cycle. Both groups received (150 IU/im) HMG on the 7-9th days of menstrual cycle. On 10-12th days of menstrual cycle, transvaginal sonography was determined endometrial thickness, dominant follicle number and increase HMG dose, if required. HCG at a dose of 5000 IU was administered when at least one mature follicle was observed and 36-40 hours later IUI was conducted. B-HCG level was evaluated 18 days after IUI. The two groups were compared for mature follicles numbers, endometrial

thickness, gonadotropin consumption and pregnancy rate.

Results: Mean estradiol level and mature follicle was significantly higher in clomiphene group (646.38+454.21 and 2.0750) than letrozole group (142.85+64.85 and 1.1650) ($p<0.001$ and $p=0.002$). There was no significant differences between groups in endometrial thickness (8.75+1.52 vs. 9.30+1.60) and pregnancy rate (10% vs. 17.5%).

Conclusion: As there was no differences in endometrial thickness and pregnancy rate, if there is a possibility of twain pregnancies or clomiphene intolerance, letrozole choice.

Key words: IUI, Letrozole, Clomiphene.

O-22

Fertility and endometrial cancer: case series

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Introduction: Endometrial cancer can affect reproductive-age women who may desire fertility preservation. The aim of this study was to evaluate fertility-sparing management in young patients with endometrial carcinoma.

Materials and Methods: This case series prospective study was carried out on 8 patients with endometrioid adenocarcinoma with clinically stage of I, grade 1 with no myometrial invasion in MRI study and negative ultrasonography for synchronous ovarian malignancy. After detailed counseling about the risks and benefits of conservative management, informed consent was taken each eligible patient.

Results: The mean age of patients was 29±4.3 years old. The average duration of hormonal therapy was approximately 9 months. The average response time was 6 months. Seventy five percent of patients treated with hormonal therapy had a complete response and the other 25% never responded to treatment. Of those who initially responded, 72% didn't show recurrence of disease. The other 28% had a relapse. Of those with never response, one had ovarian metastasis and another was stage of III. There were 3 deliveries with 4 live births.

Conclusion: A conservative approach in these patients can offer reasonable oncological security and the opportunity of fulfilling their maternal desires in selected cases. However, consideration should be taken regarding the potential adverse outcomes.

Key words: Fertility preservation, Endometrial cancer.

O-23

Adjuvant growth hormone therapy in antagonist protocol in poor responders undergoing assisted reproductive technology

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Introduction: The incidence of poor ovarian response in controlled ovarian stimulation (COH) has been reported in 9-24% of cycles. Growth hormone augments the effect of gonadotropin on granulosa and theca cells, and plays an essential role in ovarian function including follicular development, estrogen synthesis and oocyte maturation. The aim of this study was to assess ART cycle outcome after addition of growth hormone in antagonist protocol in poor responders.

Materials and Methods: 82 poor responder patients who indicated for ART enrolled the study and randomly divided into two groups (group I and II). Group I (growth hormone group, n=40) received growth hormone/ gonadotropin/ antagonist protocol and Group II (antagonist group, n=42) received gonadotropin/ antagonist protocol.

Results: The number of retrieved oocytes was significantly higher in growth hormone group 6.10±2.90 vs. 4.80±2.40 in antagonist group ($p=0.035$) and the number of obtained embryos was significantly higher in growth hormone group 3.7±2.89 compared to 2.7±1.29 in antagonist group ($p=0.018$). There were no significant differences between groups regard to implantation, and chemical and clinical pregnancy rates.

Conclusion: Our study showed that cotreatment with growth hormone in antagonist protocol in patient with history of poor responder in previous ART cycles did not increase pregnancy rates.

Key words: Assisted reproductive technology, Poor responder, Growth hormone, Antagonist protocol.

O-24

The use of high- dose letrozol in ovulation induction and controlled ovarian hyperstimulation

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Introduction: Letrozol is an accepted drug for induction of ovulation since 2001. The routine dose administration of the drug is 2.5-7.5mg daily for 5 days of menstrual cycle. However in this dose, there is no response in 9-10% of patients. This study is carried out to evaluate the effect of high-dose letrozol on ovulation induction and endometrium.

Materials and Methods: This clinical trial was carried out in infertility clinic of Kowsar Hospital in Qazvin

during 22 months. The 104 sum of infertile women, in 2 groups of polycystic ovarian syndrome and unexplained infertility, with no response to the regular dose of 7.5mg of letrozol were included in the study. 12.5 mg letrozol was administered for all patients from 3-7 days of cycle. In patients with appropriate follicle and no pregnancy the cycle is repeated for two or more. Ultrasonography was performed on the cycle 14th day of and the number and size of the follicles and the endometrial thickness were measured. In the presence of at least one follicle ≥ 18 mm, 10000IU of HCG was administered. SPSS software was used for data analysis.

Results: Overall 104 patients were included in this study. Mean age, weight and infertility duration were 27.2 ± 4.9 years, 70 ± 9.6 kg, and 3.5 ± 2.5 years, respectively. There was overall 183 treatment cycles which 92 (50.5%) were ovulatory. Mean endometrial thickness was 9.9 ± 1.7 mm ranging from 5-13 mm. 8 (8.6%) were pregnant, which culminated in abortion in one of them.

Conclusion: In this study, ovulation induction with letrozol (12.5mg daily) resulted in ovulation in some patients resistant to lower dose ($p < 0.05$). There was no adverse effect on endometrial thickness.

Key words: Letrozol, Ovulation induction, Endometrial thickness.

O-25

Cytogenetic and molecular screening of infertile female with premature ovarian failure: East-Azerbaijan Experiences

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Introduction: Infertility is an important health problem affecting 10-15% of couples. One of the major causes underlying female infertility is premature ovarian failure (POF). POF is a heterogeneous syndrome that characterized by premature dysfunction or depletion of ovarian follicles before the age of 40 years. Genetic defects such as X chromosome abnormalities and presence of the FMR1 gene premutation are responsible for the major cause of POF. Here, we investigate the contribution of chromosomal and molecular abnormalities in infertile women with POF.

Materials and Methods: This study included 100 infertile women aged from 20-45 years. Chromosomal studies using peripheral blood and G-banding technique and molecular expansion analysis of a CGG repeat in the 5' untranslated region of FMR1 gene are performing on all patients.

Results: Cytogenetic study revealed structural chromosomal abnormalities involving autosomes and

sex chromosomes in 6% infertile women. Most of the women were in the normal range (7-44 CGG repeats)/heterozygous alleles and remains were homozygous alleles for the CGG-repeat size of FMR1 gene.

Conclusion: Our study is consistent with those reported in the literature which is associated with a greater prevalence of chromosomal and molecular abnormalities in infertile women compared with the general population. However our results are preliminary and larger cohorts are needed for better understanding of the contribution of genetic alternations such as chromosomal and molecular abnormalities in female with POF. These findings show the importance of consider the cytogenetic and molecular study in the initial diagnosis protocol of infertile couples.

Key words: Premature ovarian failure, X chromosome abnormalities, FMR1 gene.

O-26

The effect of ultrasound therapy on folliculogenesis, angiogenesis and apoptosis on ovarian transplantation

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Introduction: one of the challenges in ovarian graft transplantation is overcoming the ischemia/ reperfusion injury. Low-intensity ultrasound treatment has been shown to increase mass transport, which could benefit tissue grafts during the immediate post implant period, when blood supply to the implanted tissue is suboptimal. The aim of this study is to investigate the effect of ultrasound on mouse ovarian tissue heterotopic transplantation.

Materials and Methods: 40 adult female NMRI mice were selected and divided to the two groups; control and experiment. in the experiment group, -left ovarian tissue underwent ultrasound exposure with intensity = 0.3 w/cm^2 , frequency = 3MHz & pulse mode of 1:4, after auto transplantation into the back muscle. The transplanted ovaries received same condition of ultrasound about 5 min daily for 14 days. Ovarian grafts were removed and immediately fixed for histological study. In another part, rate of angiogenesis and apoptosis were assessed by immunohistochemistry Cd31 and Caspase3 test.

Results: The results showed that in grafted ovary, the number of total types of follicles were significantly less than the non-grafted opposite ovaries. Despite this, the number of primordial, primary and preantral follicles significantly increased in the experimental group after exposure of ultrasound. There was significant reduction

in tissue apoptosis and increased angiogenesis in group treated with ultrasound.

Conclusion: The ultrasound therapy can improve the morphological structure and function of the grafted ovaries. This is probably due to acceleration of angiogenesis and increasing of growth factors production by low intensity pulse ultrasound.

Key words: Ovarian transplantation, Low intensity pulse ultrasound (LIPUS), Angiogenesis.

O-27

Screening of parent chromosomal anomalies and their roles in recurrent spontaneous abortion: East-Azerbaijan Experiences

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Introduction: Recurrent spontaneous abortion (RSA) represents a significant clinical problem which an estimated 1-5% of all women of reproductive age experience it. However, the pathogenesis of RSA is complicated and the cause in 40-50% of the cases is not well understood. Genetic, anatomic, endocrine, immunologic, infectious and environmental factors have been proposed as causes for RSA. Chromosomal anomalies are the most common cause of recurrent spontaneous abortion. In up to 7% of such cases, one partner carries a balanced chromosome rearrangement. The objective of the present study is to investigate the contribution of chromosomal abnormalities in women with RSA.

Materials and Methods: To investigate the ratio and types of chromosomal abnormalities in patients with recurrent spontaneous abortions we studied 160 couples (320 individuals). G-banded cytogenetic analysis was performed based on our standard laboratory protocols.

Results: Of the total 12 patients were found to have abnormal karyotypes, which were believed to cause RSA 3 of them were men (1%) and 9 were women (3%). The chromosomal abnormalities detected include reciprocal translocation (0.7%), Robertsonian translocation (0.3%), and inversion 9 (0.3%).

Conclusion: Chromosomal abnormality is an important cause of RSA. It is very important to provide chromosomal analysis service for patients with RSA, and it should be considered as a standard medical care.

Key words: Recurrent spontaneous abortion, Chromosomal anomalies.

O-28

Comparison of main semen parameters in IUI candidates and fertile individuals

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Introduction: The aim of this study was to evaluate the sensitivity and specificity of concentration, normal morphology and motility in semen analysis at cases which are candidate for IUI.

Materials and Methods: In this study 234 semen samples, from sub fertile couples which were referred to Infertility Laboratory of Shahid Beheshti Hospital were evaluated. These samples were obtained from individuals who were candidate for IUI procedure. And again 234 semen samples from individuals which were fertile and their wives were pregnant under 12 weeks. In order to assess the sensitivity and specificity of three main semen parameters, ROC curves were used.

Results: Our study shows normal morphology has higher sensitivity and specificity than concentration and fast motility respectively.

Conclusion: Mean of sperm concentration in couples who are candidate for IUI procedure is lower than fertile couples. Mean of percentage of normal morphology is the same as fertile couples and mean of percentage of fast motility before sperm processing is the same as fertile couples but after sperm processing is higher than fertile couples. Through these parameters normal morphology has higher sensitivity and specificity for pregnancy.

Key words: IUI, Semen parameters, Pregnancy.

O-29

GnRH antagonist versus GnRH agonist long protocol IVF cycle to avoid ovarian hyper stimulation syndrome (OHSS) - case reports

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Introduction: To describe five clinical cases involving PCOS patients suffered from OHSS during IVF stimulation.

Materials and Methods: Description of managing of IVF cycles and outcomes in high risk patients for developing OHSS. Setting: Reproductive medicine unites of Razavi Hospital. Patients: 5 infertile PCOS patients undergoing stimulation for IVF presenting high risk for OHSS. Intervention: IVF patients treated with long protocol GnRH Agonist representing developing OHSS symptoms, had their cycle, and replaced with an antagonist protocol and triggering ovulation with an agonist single dose. Main outcome measures: OHSS symptoms, pregnancy.

Results: 4 of 5 patients didn't develop OHSS. one patient got pregnant after fresh embryo transfer. 4 patients didn't get pregnancy.

Conclusion: When a PCOS patient undergoing a long protocol IVF cycle is at risk of severe OHSS, it should be better to withdraw the agonist and replaced it with an antagonist and induction ovulation triggered with an agonist bolus to prevent of developing OHSS.

Key words: Long protocol GnRH cycles, IVF, Antagonist protocol, Agonist trigger.

O-30

Comparison of Recombinant HCG with urinary HCG during ovulation induction cycles in infertile women undergoing assisted reproductive technology treatment

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Introduction: With regards to side effects, complications and efficacy of different infertility treatment drugs, our study compared recombinant HCG with Urinary HCG for induction ovulation in patients who were candidate for assisted reproductive technology.

Materials and Methods: In this prospective randomized clinical trial 126 patients candidate for IVF or ICSI were recruited from 2 infertility treatment centers in Isfahan. they were divided to 2 groups, 63 patients in each group. Two weeks after IVF or ICSI, β HCG titration was done and pregnant women were evaluated for fetal heart rate, miscarriage, Ectopic pregnancy, and ovarian hyper stimulation syndrome 7, 14 weeks later.

Results: The rate of biochemical pregnancy in Recombinant. HCG group was 35% in spite of 65% in urinary HCG group. Clinical pregnancy rate in urinary HCG group comparing with recombinant HCG was (65-35%). Abortion ratio in recombinant HCG was 20% but 15% in urinary HCG. EP ratio was similar in 2 groups, and ovarian hyperstimulation was seen in only 10% in recombinant HCG group.

Conclusion: According to our study results we had more biochemical and clinical pregnancy rate in urinary HCG group compared with recombinant HCG group, with less hyper stimulation syndrome in urinary HCG group.

Key words: Recombinant HCG (Ovidrel), Urinary HCG, In Vitro Fertilization (IVF), Embryo Transfer (ET), Infertility.

O-31

Does ovarian response decrease by increasing age in hypogonadotropic hypogonadism women undergoing ovarian stimulation?

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Introduction: Women with hypogonadotropic hypogonadism are the most obvious candidates for ovulation induction with exogenous gonadotropins. In a sense, gonadotropin therapy in women with hypogonadotropic hypogonadism may be viewed as hormone therapy intended to stimulate normal cycle ovulation once fertility becomes a priority. Follicular growth and oocyte maturation usually can be successfully stimulated. In practice we observed that in these patients for induction ovulation although need. To more gonadotropin ampoules, the number of follicle growth oocyte retrieval (in Art cycle) decrease by increasing age of patients. There are great studies to establish the age effect on reproduction and decrease of fertility in normal hypothalamic. Pituitary-gonadal axis and mechanisms responsible for those changes but there aren't any study to show the effect of age on the ovarian response to induction ovulation in hypogonadotropic hypogonadism women. Therefore, this study was performed to evaluate this hypothesis.

Materials and Methods: In this retrospective case series study 60 cycles of induction ovulation in hypogonadotropic hypogonadism (in IO, IUI, and ART cycles) were evaluated. Total dose of gonadotropin's ampoules, duration of stimulation and follicle growth >18, oocyte retrieval number per cycle were assessed by age statistically.

Results: By increasing age, total dose of gonadotropin and duration of stimulation, too increased but follicular growth, oocyte retrieval numbers declined ($p < 0.05$).

Conclusion: Ovarian response to ovarian stimulation decrease by increasing age in hypogonadotropic hypogonadism women similar to normal cycle women but by mechanism other than follicular depletion, so this mechanism that has been one of major mechanism of ovarian aging for long years can be in doubt and question.

Key words: Ovarian Stimulation, Ovarian aging, Hypogonadotropic hypogonadism.

O-32

Protection by *crataegus monogyna monogyna* fruit aqueous extract against cyclophosphamide-induced apoptosis in rat testes

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Introduction: Induction of programmed cell death (apoptosis) is one of the earliest signs of genotoxic

damage to the mature testis by cytotoxic drugs like cyclophosphamide (CP). This study was conducted to assess the possible ameliorating action of *Crataegus monogyna* fruits aqueous extract, a medicinal plant with anti-oxidant property, on CP-induced apoptotic effects in rat testes.

Materials and Methods: Male Wistar rats were categorized into four groups. Two groups of rats were administered CP at a dose of 5 mg in 5 ml saline/kg per day for 28 days by oral gavages. One of the groups received *Crataegus monogyna* aqueous extract at a dose of 20 mg/kg per day orally four hours after CP administration. A vehicle-treated control group and a *Crataegus monogyna* control group were also included.

Results: After 28 days, rats treated with CP alone displayed increase of cleaved caspase-3 abundance, while *Crataegus* aqueous extract co-administration could effectively prevent nearly this abnormality.

Conclusion: These findings provide evidence that *Crataegus* would offset the apoptotic impact imposed by CP, and may attenuate the testicular toxicity of CP in clinical practice.

Key words: *Crataegus monogyna*, Cyclophosphamide, Apoptosis, Rat, Testes.

O-33

Evaluation of morphology and apoptosis in vitrified-warmed immature mouse ovarian tissue

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Introduction: In this study, the efficiency of ovarian vitrification was investigated by several techniques including morphological, TUNEL and DNA laddering analysis.

Materials and Methods: 7 day old mouse ovaries were vitrified by solution containing 40% ethylene glycol (v/v), 30% ficoll 70 (w/v), and 1 M sucrose supplemented with bovine serum albumin (EGFS40). Ovaries were then placed in cryolock then plunged into liquid nitrogen and maintained there for 1day. Their morphology evaluated by hematoxylineosin staining and apoptosis assessment with TUNEL and DNA laddering technique and compared with fresh group.

Results: No statistically significant difference in normality follicles was observed between vitrified and nonvitrified ovaries. No sign of apoptosis was observed morphologically or by TUNEL technique and gel electrophoresis in either vitrified or nonvitrified ovaries.

Conclusion: Our results show that cryopreservation of the immature mouse ovary does not induce apoptosis just after warming and the normal histology of vitrified ovaries, suggest that vitrification is a promising method for preservation of ovarian follicles.

Key words: Vitrification, Ovary, Apoptosis, Mouse.

O-34

Diagnostic value of prostate-specific antigen (PSA) in women with polycystic ovary syndrome (PCOS)

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Introduction: Polycystic ovary syndrome (PCOS) is the most common endocrine disorder in women; presentation is that of irregular menstruation associated with ovulation defects. Because of adverse outcome such as metabolic and cardiovascular disorder, so diagnosis and treatment is very important. Therefore the diagnostic value of prostate-specific antigen (PSA) in women with polycystic ovary syndrome was evaluated.

Materials and Methods: Total of 32 women with PCOS and 32 aged matched healthy females were recruited in this cross-sectional randomize. The subjects were compared by means of metabolic measures and serum PSA level. The correlations between these markers were evaluated. Sensitivity, specificity values and cut off level of PSA was established for diagnosis of PCOS.

Results: Mean PSA, ferriman Gallwey score (FGS), luteinizing hormone / follicle stimulating hormone ratio (LH/FSH), testosterone, dehydroepiandrosterone sulfate (DHEAS), 17 hydroxy progesterone (17 HP) level are significantly higher in PCOS ($p < 0.001$, respectively). PSA level greater than 0.07ng/ml yielded a sensitivity of 91%, specificity 82%, helpful as a diagnostic tool for women with PCOS. Circulations androgen and hirsutism are associated with the degrees of PSA in PCOS women.

Conclusion: Our results showed that there was direct correlation between PSA, hirsutism and hyperandrogenism state. Therefore it is advised to use PSA level for detection of hyperandrogenism state in women.

Key words: Hirsutism, Prostate Specific Antigen (PSA), Polycystic Ovary Syndrome (PCOS).

O-35

The alteration of sperm populace and motility in chronic phase of type 2 diabetes influence the normal fertility in males

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Introduction: Diabetes mellitus is a serious metabolic disorder with numerous complications. Uncontrolled diabetic high blood glucose is associated with structural

and functional complications of reproductive system. The present study was conducted to assess the relationship between the alterations of hormones involved in spermatogenesis and the ability of sperm production of reproductive system following long time period of diabetes.

Materials and Methods: Diabetes was induced in adult male rats by single intraperitoneal injection of streptozotocin (STZ) at 45 mg/kg body weight. A group of rats treated with metformin at 100 mg/kg body weight for reducing the elevated blood glucose level.

Results: The results revealed that, the blood glucose level increased significantly in untreated diabetic rats. The blood levels of testosterone, 17- β estradiol and progesterone were reduced in diabetic rats whereas, the blood levels of these hormones elevated to near normal after treatment with metformin. Same as abovementioned hormones, the levels of pituitary gonadotropins were reduced after induction of diabetes while, metformin treatment lead to elevation of these hormones to near normal levels in diabetic animals. Furthermore, untreated diabetic rats had lower epididymal sperm density nevertheless; the sperm motility was not altered significantly.

Conclusion: These findings indicated that uncontrolled diabetes and subsequently elevation of blood glucose, might be effective in alteration of pituitary-testis axis hormones and the production of spermatozooids as an outcome of functional status of reproductive system.

Key words: Diabetes, Fertility, Males, Spermatozooids.

O-36

Effect of vitrification on ATP content and developmental competence of immature mouse oocyte

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Introduction: Vitrification is one of safety methods for fertility preservation. It can affect on cytoplasmic maturation. One of the cytoplasmic maturation indexes is metabolic activity of mitochondria that is evaluated by ATP content.

Materials and Methods: Immature oocytes were recovered from 6-8 weeks old NMRI strain female mice. Some of the oocytes were vitrified by cryotop, and the others were considered as control group. Both of groups were cultured in maturation medium for 24h. IVM-MII oocytes after insemination were assessed to hatching stage. ATP content in GV and IVM-MII oocytes was measured and compared in vitrified and non-vitrified groups.

Results: The ATP content of GV oocytes in the control and vitrified groups was 0.2974×10^{-12} M, 0.2692×10^{-12} M respectively and the ATP levels for MII oocytes in

those groups 0.2970×10^{-12} M, 0.3115×10^{-12} M respectively. There were no significant differences in this regards between two groups. There were no significant difference between vitrified and non-vitrified oocytes in the maturation (74.87 vs. 64.50), fertilization (72.72 vs. 64.36), and hatching rates (9.93 vs. 9.89).

Conclusion: Considering to the ATP content of oocytes after vitrification and in vitro maturation, it seems that these cryopreservation and culturing techniques have not affect on the mitochondrial function of oocytes.

Key words: Oocyte, Vitrification, ATP, Development.

O-37

The relationship between oxidative stresses in follicular fluid with fertilization rate in ART

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Introduction: The impact of oxidative stress in female reproduction is not clear. Contradictory reports on the effect of various oxidative stress markers on follicular fluid, oocytes and embryo quality and fertilization potential exist. The objectives of this study were to examine oxidative parameters levels in follicular fluid of women undergoing ART and to relate these levels to oocytes formation and quality.

Materials and Methods: In this study, 68 Women with infertility treated by ART were studied. Level of oxidative stress including GPx, MDA, SOD and CAT measured in follicular fluid and quality of oocytes and finally pregnancy results were checked in all of them. Eight women in period of study were excluded from study. They were divided in two groups according to pregnancy and compared levels of oxidative stress between them.

Results: Of the 60 women (mean age 31.8 ± 4.7 year) were pregnant in 13 (21.6%) and in 47 (78.3%) pregnancy were negative. Levels of Oxidative stress were not significant statistical difference between two groups of women with or without pregnancy. Glutathion Peroxidase (GPx) was significant negative relation with oocytes quality ($p=0.02$, $r=-0.3$) but in others oxidative stress were not significant relation with oocytes quality ($p>0.05$). Comparison of oxidative stress levels with other study showed that they were low levels in women with positive pregnancy however they were not meaningful.

Conclusion: According to results of this study levels of oxidative stress were not difference in cases with or without pregnancy. But like others medical reports

levels of Glutathione Peroxidase (GPx) had negative correlation with oocytes quality.

Key words: Oxidative stress; Infertility Oocytes quality.

2- Embryology, Genetic, Stem cell

O-38

Assessment of morphological changes in neonate vitrified testis grafts after host treatment with melatonin

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Introduction: This study was conducted to assess the effect of melatonin on the ultrastructure of testis and spermatogenesis dynamics in neonate vitrified testis grafts.

Materials and Methods: Neonate vitrified testes, candidates for transplantation to experiment or control groups, were warmed in the thawing media which have or doesn't have the supplement of 100 µM melatonin, respectively. Following transplantation, melatonin (20 mg/kg/day) or saline was given in the treated and non-treated groups, respectively. The initiating spermatogenesis and ultrastructure of testis graft were examined. Cell apoptosis (TUNEL) and proliferation (BrdU) in germ cells were determined.

Results: Histological studies revealed dynamic of spermatogenesis process in the testis graft. However, Ultrastructural analysis of the testicular parenchyma revealed that the structural characteristics of interstitial space and germinal epithelium in non-treated group was get worse than treated group. Furthermore, the proportion of apoptotic germ cells together with a reduced proportion of proliferated germ cells was higher in non-treated group than treated. Overall, the number of seminiferous tubules in testes graft of both groups was stayed steady. However, non-treated testes graft contained more damaged seminiferous tubules, than treated ones. The thickness of seminiferous tubules was thicker in melatonin treated than non-treated group. Indeed, the thickness of germinal epithelium was higher significantly in treated group than non-treated.

Conclusion: The study showed a positive effect with melatonin resulting in more grafts restoring puberty. Furthermore, the associated increasing in healthy number of seminiferous tubules suggests that melatonin may has preventative ischemia/antioxidant role and in fact be useful to initiated spermatogenesis process.

Key words: Melatonin, Testis allograft, Vitrification.

O-39

Effect of vitrification on developmental competence of parthenogenetic activation in in-vitro matured ovine oocytes

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Introduction: Cryopreservation of in-vitro matured oocytes is a useful technique because the oocytes can be used for some assisted reproductive technologies. On the other hand, the cryo-preservation of oocytes is an open problem as a result of their structural sensitivity to the freezing process. The purpose of this study was to evaluate the effect of vitrification on in vitro development of vitrified in-vitro matured ovine oocytes after chemical activation.

Materials and Methods: Immature oocytes were collected from abattoir-derived ovaries, matured in vitro. Then, in vitro matured oocytes divided into two groups: (1) vitrified in cryotop (VTR); (2) without treatment as a control (CTR). 407 matured ovine oocytes were cryopreserved by vitrification. oocytes were exposed to 7.5% EG+7.5% DMSO for 3 min and then 15% EG+15% DMSO+0.5 M sucrose for 25 sec, loaded in cryotops and immersed into liquid nitrogen. After warming, oocytes were cultured in vitro for 30 min and then parthenogenetically activated using ionomycin for 1 min and subsequently incubated in 6-dimethylaminopurine (6-DMAP) for 2 hr.

Results: When vitrified-warmed oocytes were activated, blastocyst rates in VTR (10.21%) group was significantly lower ($p < 0.05$) than in CTR (39.50%).

Conclusion : Vitrification procedures affect on the structural components and biochemical and molecular events such as spontaneous parthenogenetic activation that could be a reflection of injuries to cytoplasmatic biochemical components leading to abnormalities in the cell cycle control, degeneration and low developmental competence of vitrified MII ovine oocytes.

Key words: Vitrification, Ovine oocyte, Chemical activation, Developmental competence.

O-40

Association between insulin receptor gene and adiponectin gene polymorphism with polycystic ovary syndrome in Iranian population

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Introduction: Polycystic ovary syndrome (PCOS) is the most common gynecological endocrinopathy. Studies on homozygote twins or sisters suggested a genetic origin for this disorder, but the genetic components of PCOS have not been entirely illustrated.

We aimed to compare the frequency of insulin receptor (exon 17 and 8) and adiponectin (exon and intron 2) genes polymorphisms in Iranian women. Two polymorphisms for each of these genes were selected based on their commonly use in previous genetic epidemiology studies.

Materials and Methods: Two groups of women were enrolled among women presenting to a gynecologic clinic; case group included women with diagnosed PCOS and control group were non hirsute normo-ovulatory women. Genomic DNA was isolated from peripheral blood leukocytes of women with PCOS and controls using the salting out/proteinase K method. They were genotyped. Data analysis was performed using the SPSS 15.0 PC package. The Chi-square test, Kruskal-Wallis test followed with Mann-Whitney test and one-way ANOVA analysis, with Bonferroni correction were performed. $p < 0.05$ was considered as significant point.

Results: The distributions of genotypes and alleles of both polymorphisms were not different in women with PCOS and controls. There were no significant differences on the anthropometric and hormonal profiles of various adiponectin and insulin receptor genes polymorphisms among both groups.

Conclusion: In conclusion, in this case-control study, we found no significant associations between the insulin receptor and adiponectin gene polymorphisms and PCOS risk. Further studies with larger sample sizes are warranted to confirm these findings.

Key words: Iranian population, Insulin receptor gene, Adiponectin gene, Polycystic ovary syndrome.

O-41

Encapsulation of human gametes: encouraging technique for fertility preservation

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Cell encapsulation is a technique for coating of cells in semipermeable membrane. This technique has had multiple applications in nanobiotechnology, and particularly in drug delivery, the first experience in the realm of reproductive science; however, it had been carried out in encapsulation of bovine sperm. In the past two decades, gametes and embryos of various mammals have been encapsulated for various experiments including controlled releasing of sperm, In vitro gametogenesis, embryo culture, cryopreservation of gametes and even stem cell cultivation.

Alginate sodium (which consists of Mannuronic and Guluronic dimers) is the most natural polymer in encapsulation of stem cells and gametes and variety of its compounds such as Barium Alginate, Alginate-chitosan and Alginate-Fibrin have been investigated and tested. It has been widely used in embryology for its

biocompatibility, biodegradability and non-toxicity properties.

In recent decades, efforts to design a suitable system for cultivation, and in vitro growth (IVG) and maturation of oocytes (IVM) and primary follicles as well as the amalgamation of tissue engineering with the mentioned technique have led to innovative 3D- cultivation techniques. This approach has created much hope for treatment of infertility problems and fertility preservation in cancer patients. Recently successful application of sodium alginate has been reported in In vitro spermatogenesis for the treatment of non-obstructive azoospermia (NOA) to create semi-solid 3D matrix for bovine embryo cultivation. In this article emphasis is placed on clinical aspect of this technique and its benefits in ART methods.

Key words: Microencapsulation, Oocyte, Sperm, Embryo, In vitro fertilization, Sodium alginate.

O-42

Follicle development of transplanted sheep ovarian tissue to immunodeficient rat

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Introduction: Ovarian cortex xenotransplantation into immunodeficient rats is a method for follicles protection of rare animals and investigation on folliculogenesis. The aim of this study was: 1) to assess follicle survival after xenografts transplantation of sheep ovarian tissue to male and female immunodeficient rats and 2) evaluation of the effects of gonadotropin treatment on follicular development in the transplanted tissue.

Materials and Methods: Sheep ovarian cortical strips were transplanted into the back muscle of neck of castrated 10 male and 10 female immunodeficient rats. Only 7 male and 7 female rats survived. 14 days after surgery, each rat was treated with human menopausal gonadotropin (HMG) for 9 weeks. One day after the last injection, ovarian tissues were removed and fixed for histology assessment. Histology analysis was done before and after grafting. The rate of E2 was measured before and after gonadectomy and also once at the end of experiment.

Results: In all grafted tissues, follicular growth was decreased. The number of primordial follicles decreased after transplantation in male and female rats as compared to control (25.97%, 24.14% vs. 37.51% respectively), whereas the preantral follicles were increased (19.5%, 19.49% vs. 11.4%, respectively). E2 secretion increased in grafted male and female rats as compared to control groups and had a significant

differences with each other (34.44 vs. 23.26 pg/ml respectively, $p < 0.01$).

Conclusion: Male rats are better candidate for follicle support after transplantation compared to female rats.

Key words: Rat, Ovarian tissue, Sheep, Xenotransplantation

O-43

Evidence for dynamic role of NF-Y histone substitute family members in epigenetic regulation of human embryonal cells

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Introduction: Chromatin structure is a major player in the regulation of gene expression. The dynamics of this structure is itself regulated by a variety of complex processes, including histone post-translational modifications, chromatin remodeling, and the use of non-allelic histone variants and substitutes. In higher eukaryotes several histone substitutes have been identified, with lines of evidence suggesting their functional significance under this heterogeneity. NF (Nuclear Factor)-Y, is a histone substitute family protein, which specifically binds to the CCAAT box, an eukaryotic promoter element present on the upstream regions of several genes including the ones involved in embryogenesis and development.

Embryonal carcinoma (EC) cells, the pluripotent stem cells of teratocarcinomas, show many similarities to embryonic stem (ES) cells. Since EC cells are malignant but their terminally differentiated derivatives are not, understanding the molecular mechanisms that regulate their chromatin structure through differentiation maybe of value for diagnostic and maybe therapeutic purposes in embryology.

Materials and Methods: In this study, a human EC cell line named NT2/NTERA2 was used as an embryonal model system, and the mRNA expression levels of NFY member genes were evaluated by qRT-PCR before and after retinoic acid (RA)-induced differentiation of the cells.

Results: Quantitative real-time PCR analysis data showed a differential expression profile for the three NF-YA, NF-YB and NF-YC histone substitute coding genes in pluripotent NT2 cells and after their RA-induced differentiation.

Conclusion: Current finding implies the dynamic epigenetic role of NF-Y family members in gene activation/repression of the CCAAT regulated genes involved in embryonic development.

Key words: NF-Y, Embryonic development, Epigenetics.

O-44

Celecoxib effect on normal human endometrium cultured in three-dimensional model

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Introduction: Endometrium is a unique tissue with central role in reproductive events. Endometrial culture in three-dimensional condition was used as a suitable model for endometriosis research. Cyclooxygenase II plays important role in inflammation, angiogenesis and cell proliferation. The aim of present study was to investigate celecoxib effect on normal human endometrium in three-dimensional (3D) culture model.

Materials and Methods: Normal human endometrium (n=10) from reproductive age women were taken. Endometrial tissue were cut into 1×1mm. Culture were done in 24 wells culture dish. 0.5 ml of fibrinogen solution (3mg/ml in M199) were pour in each well and added 15 μ lit thrombin enzyme for fibrin jell formation. Endometrial fragments were placed in the center of wells and covered with second layer of fibrinogen solution. One ml of Medium 199 supplement with FBS (5%) and l-Glutamine (2 μ M) were added to each well. Media of experimental wells contain one of 1, 10 or 50 μ M celecoxib concentrations, and the culture period was three weeks. At the end of study, growth changes of endometrial tissue were calculated by scoring methods. Also their angiogenesis were determined. Data were analysis by Kruskal-Wallis method and $p < 0.05$ were considered significant.

Results: The growth scores of control, 1, 10 and 50 μ M celecoxib were 1.37, 1.96, 2.01, 1.17 respectively and their difference was significant. There is no significant difference in endometrial angiogenesis and the highest angiogenesis percent (42.67%) was belong to 10 μ M concentration.

Conclusion: Lower Celecoxib concentration had growth stimulation effect on normal endometrium.

Key words: Human endometrium, Celecoxib, Three dimensional culture.

O-45

Evaluation of germ cell induction from mouse embryonic stem cells by assay for CDH1 expression

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Introduction: Presence of specific growth factors is thought to be important for differentiation of embryonic stem cells (ESCs) in culture. In this study, the effect of bone morphogenetic protein 4 (BMP4) on germ cell differentiation from mouse ESCs was evaluated.

Materials and Methods: One day old embryoid body (EB) from CCE mouse ESCs was cultured in dulbecco's modified eagle medium (DMEM) containing 20% fetal bovine serum (FBS) for 4 days both in the presence or absence of 5 ng/ml BMP4. The Expression of CDH1, the late premeiotic germ cell specific marker, was evaluated immunocytochemically.

Results: Data of immunocytochemistry showed no significant difference in the mean percentage of CDH1 immunostaining cells in BMP4-treated cells compared with BMP4 free group. Meanwhile, CDH1, the late premeiotic germ cell marker, showed no significant difference between these two groups.

Conclusion: In spite of positive effects of BMP4 in primordial germ cell (PGC) differentiation, the results suggest that the employment of this inducer has no apparent effect on the late premeiotic germ cell derivation.

Key words: Embryonic stem cell, CDH1, Germ cell, BMP4.

O-46

In vitro culture of mouse preantral follicles after cryotop vitrification

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Introduction: Survival assessment of vitrified-warmed mouse preantral follicles after in vitro culture is the first step for efficiency evaluation of used vitrification method.

Materials and Methods: Preantral follicles isolated mechanically from the ovaries of 12-14 days old NMRI mice and divided into vitrification and control groups. In the vitrification group, follicles were washed in equilibration and vitrification solutions which were contained of ethylene glycol and dimethylsulfoxide as cryoprotectants, then immersed in liquid nitrogen after loading on cryotop tip. Vitrified-warmed and fresh control follicles were cultured for 12 days and their survival rate was assessed after 3 hours, 4, 8 and 12 days. Oocytes maturation rate was also compared in 13th day of culture in both groups.

Results: 3 hours after culture, 100% of follicles were viable in both experimental groups. The survival rate of follicles was 95.7%±2.4 and 88.2%±3.3 in 4th day, 93.8%±3.0 and 87.3%±2.7 in 8th day and 90.2%±3.2 and 84.2%±2.8 in 12th day of culture in control and

vitrification groups, respectively. This variant didn't show any significant difference between two groups. In the 13th day of culture, the percentage of GV, GVBD, MII and degenerated oocytes were 11.0%±2.4, 61.4%±2.9, 26.0±3.8, 1.7%±0.96 in the control group and 3.6%±1.2, 59.8%±5.7, 33.8%±7.0, 2.1%±0.6 in vitrification group, respectively. Only the percentage of GV oocytes in vitrification group was significantly lower than control group (p<0.05).

Conclusion: Cryotop vitrification didn't have any detrimental effect on follicle survival and it seems that causes more meiotic resumption in oocytes compared to the non-vitrified fresh ones.

Key words: Mouse, Preantral follicle, Vitrification, Cryotop, In vitro culture.

O-47

Two step in vitro maturation of mouse GV oocytes with a PDE3 specific inhibitor in the presence or absence of cumulus cells

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Introduction: This study aimed to investigate the effect of (Cilostamid) on the *in vitro* maturation and on subsequent oocyte developmental competence.

Materials and Methods: Mouse Germinal vesicle (GV) oocytes were considered in cumulus-denuded oocytes (CDOs) and cumulus-oocyte complexes (COCs) groups. The oocytes were cultured in Tissue Culture Medium 199 with or without cilostamid in two or one step manner respectively. In the two step manner, immature oocytes were arrested meiotically in TCM 199 containing 10uM cilostamid and then were matured in medium without cilostamide for 24h. In control groups, GV oocytes were culture without forskolin only for 24h (one step manner). In vitro fertilization of obtained MII oocytes and embryo development were evaluated.

Results: Significantly different MII rates were observed between COCs (59%) and CDOs (42.4%) control groups. The MII rates of 60.9% for COCs and 57.5% for CDOs were obtained in two step manner which were significantly higher in CDOs as compared to its respective control group, while, there was no significant difference between treated COCs and control COCs groups. The fertilization and two cells embryo rates of COCs (58% and 71.3%, respectively) were higher than those of CDOs (45.4% and 53.3%, respectively) control groups. The rates of tow cells embryo in the presence of cilostamid in COCs (81.5%) and CDOs (75.6%) were significantly higher than respective control groups. Also, there was no significant interaction between presence or absence of cumulus cells and cilostamid.

Conclusion: Two steps in vitro maturation of mouse oocytes with cilostamide could improve the rates of oocyte maturation and their embryo development.

Key words: In vitro maturation, Oocytes, Cumulus Cells, Cilostamid.

O-48

Parthenote embryos as a source of histocompatible cells for cell-based therapy

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Introduction: The generation of embryonic stem cells (ESCs) from parthenogenetically activated oocytes can provide histocompatible cells for cell-based therapy and generates an important tool for studying epigenetic effects in ESCs. In spite of their potential therapeutic utility, ESCs raise significant, religious, ethical and legal concerns due to destruction of viable embryos. In an attempt to solve these problems, extensive efforts have investigated alternative sources of pluripotent cell lines.

Materials and Methods: Parthenogenetic embryonic stem-like cell (pESC) lines were established from *in vitro* produced blastocysts following parthenogenetic activation of bovine oocytes. Four putative pESC lines were expanded for more than 16 passages (>150days) and characterized by histochemical and immunofluorescence staining, RT-PCR and karyotyping. They were differentiated as embryoid bodies (EBs) in suspension culture and analyzed by RT-PCR. Imprinted gene expression was investigated to examine differences with IVF-ESC lines and confirm the evidence of the parthenogenetic origin of these lines.

Results: The cell lines demonstrated typical ESC morphology and expressed ESC markers including alkaline phosphatase, Oct4, Nanog and either stage-specific embryonic antigen SSEA1 or SSEA4. The cells all expressed *OCT4*, *REX1*, *SSEA1* and *ALP*. All the cell lines except one had a normal karyotype of 60, XX. EBs expressed the markers of three embryonic germ layers. In addition, IVF cell lines were similar to pESC lines.

Conclusion: It can be concluded that ESCs which express pluripotent markers can be derived from parthenogenetic blastocysts and they have the ability to form EBs and differentiate into cells of the three embryonic germ layers and provide histocompatible cells.

Key words: Embryo, Parthenote, Embryonic stem cells.

O-49

Comparison of the developmental competence of mouse preantral follicles derived from vitrified whole ovaries and vitrified preantral follicle using the cryotop method

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Introduction: Based on the high-efficiency vitrification cryotop, this study aimed to compare the developmental competence of isolated preantral follicles from vitrified whole ovaries and vitrified preantral follicles using cryotop.

Materials and Methods: Whole ovary tissue and 3-5 group of preantral follicles of 14-day old NMRI mice were exposed to equilibration solution (7.5% ethylene glycol (EG) and 7.5% dimethyl sulfoxide (DMSO) in DPBS+20% FBS) for 10 and 5min respectively and then exposed to vitrification solution (15% EG, 15% DMSO and 0.5M sucrose in DPBS +20% FBS) for 2min and 30sec respectively. Finally, the samples were immersed in LN2 using the cryotop method. After thawing, preantral follicles from each group were cultured individually in 20- μ l droplets of α -MEM culture medium for 12 days. The ovulation was induced by 1.5 IU/ml HCG. The rates of follicle development and growth were assessed.

Results: The survival rate of vitrified preantral follicles (68.3%) was significantly greater than those which were isolated from vitrified ovaries (57.3%; $p < 0.05$), while were significantly lower than fresh follicles (85%; $p < 0.05$). The mean diameter of follicles on day 2 (189.6 μ m) and day 4 (290.5 μ m), the percentage of antral-like cavity formation (76.8%) and MII oocytes (42.9%) were significantly higher in fresh follicles than vitrified preantral follicles and isolated preantral follicle from vitrified ovaries ($p < 0.05$). Also, vitrified preantral follicles showed higher antral-like cavity formation and maturation rates when compared to isolated preantral follicle from vitrified ovaries (62.8% and 28.3% vs. 46.0% and 15.0% respectively; $p < 0.05$).

Conclusion: Vitrification of preantral follicles is more effective to preserve of follicle viability and developmental competence than vitrification of whole ovarian tissue.

Key words: Preantral follicles, Ovary, Vitrification, Cryotop.

3- Urology

O-50

Expression levels of Septins 14 in testes of patients with normal spermatogenesis and spermatogenic failure

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Introduction: Septins are an evolutionary conserved group of GTP-binding proteins. They polymerize to form filamentous structures and have diverse cellular roles. Septins are the major constituents of the annulus,

a submembranous ring that separates the middle and principal pieces of the mammalian spermatozoa. An increasing body of data implicates the septin family in the pathogenesis of diverse states including neoplasia, neurodegenerative conditions, sporadic breast cancer, Parkinson and infertility. In this study we evaluate the expression pattern of Septin 14 in testis tissue of men with and without spermatogenic failure.

Materials and Methods: The samples retrieved from patients who underwent diagnostic testicular biopsy in Royan institute. 10 patients with obstructive azoospermia and normal spermatogenesis and 20 patients with non-obstructive azoospermia were recruited for real-time reverse transcription (RT)-PCR analysis of the testicular tissue. Total RNA was extracted with trizol reagent. Septin expression level was normalized to expression of the housekeeping gene.

Results: Comparison of the level of Septin RNA revealed that in tissues with partial (n=10) or complete spermatogenesis (n=10), the expression of septin 14 were significantly higher than Sertoli cell only (SCO) tissues.

Conclusion: The testicular tissues of men with hypospermatogenesis, maturation arrest and Sertoli cell only had lower levels of Septin 14 transcripts than normal men. This data indicates that Septins expression levels are critical for human spermatogenesis.

Key words: Andrology, Male infertility, Septin.

O-51

Sperm DNA fragmentation in couples with unexplained recurrent spontaneous abortions

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Introduction: Recent studies have indicated the role of sperm parameters especially sperm DNA abnormalities in pathogenesis of recurrent spontaneous abortion (RSA). The objective of the present study was to evaluate the degree of sperm DNA fragmentation in couples with idiopathic recurrent spontaneous abortion and couples with no history of infertility or abortion.

Materials and Methods: In this cohort study, Thirty couples with recurrent spontaneous abortion and 30 fertile couple as control group completed the demographic data questionnaires and their semen samples were analyzed according to WHO standards (September 2009 to March 2010). Sperm DNA fragmentation was evaluated using Sperm chromatin dispersion (SCD) technique.

Results: In this study, When sperm quality of the control group was compared with that of the RSA group, a significant difference was observed in percentage of morphologically normal sperm (51.50 ± 11.60 vs. 58.00 ± 9.05 , $p=0.019$), but not in other parameters, and abnormal DNA fragmentation level in RSA group was significantly higher than control group (43.3% vs. 16.7% , $p=0.024$). Our results indicate a negative correlation between the number of sperm with progressive motility and DNA fragmentation ($r=-0.613$; $p<0.001$).

Conclusion: Sperm from men with a history of RSA had a higher incidence of DNA fragmentation and poor motility than sperm from a control group, therefore this finding indicate a possible relationship between RSA and DNA fragmentation.

Key words: Recurrent spontaneous abortion, DNA Fragmentation, Sperm, Infertility.

O-52

Large scale deletions of mitochondrial DNA in asthenoteratospermic and oligoasthenoteratospermic men

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Introduction: Mitochondria facilitate the sperm's rigorous demands for energy through oxidative phosphorylation (OXPHOS) via the electron transport chain. The human mitochondrial genome codes 13 polypeptide subunits of the respiratory chain complexes, along with the 22 tRNAs and 2 rRNAs. Mutation rates of mtDNA are generally 10-100 times higher than those of nDNA because of the mtDNA is compact (intron-less) and lacks an efficient DNA repair mechanism, That DNA damage causes sperm dysfunction and result in diminish male infertility. The purpose of this study is investigation of mitochondrial DNA deletions in asthenoteratospermic and oligoasthenoterato-spermic men.

Materials and Methods: 45 semen samples including: 15 asthenoteratospermic, 15 oligoasthenoteratospermic as the case groups and 15 samples normospermic as control group were collected from IVF center. Routine semen analysis was performed within 1h according to WHO (1999) guidelines. After separating the sperm cells by swim up method and DNA extraction with phenol/chloroform, Long PCR technique was used for multiple large scale mtDNA deletions.

Results: Analysis of PCR products were shown multiple deletions; 4977 bp, 4.8 and 7.4 Kbp in mtDNA spermatozoa of asthenoteratospermic, oligoasthenoteratospermic and control group. The frequency of multiple mtDNA deletions in asthenoteratospermic and oligoasthenoterato-spermic

patients (65%) were significantly higher than control group (42%).

Conclusion: These results suggest that mtDNA mutations cause infertility through an effect on sperm motility. Therefore, identification of mtDNA mutations and large scale deletions in the pathophysiology of human spermatozoa dysfunction is considered to be important to better understanding of the etiology of idiopathic infertility.

Key words: *Astenoteratospermic, Oligoasthenoteratospermic, mtDNA, Large scale deletions.*

O-53

Semen parameters improvement following varicocelectomy

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Introduction: Varicocele is one of the infertility causes in men population. Varicocele has adverse affect on semen parameters. After varicocelectomy these abnormal parameters will improve significantly. This study is designed to evaluate semen parameters before and after varicocelectomy.

Materials and Methods: This study was evaluated 64 varicocele patients with abnormal semen parameters who were visited in Urology clinics in Tabriz. After excluding the patients that had one or more excluding criteria, all patients underwent a semen analysis before surgery and then that monthly sperm analysis were done. One year after surgery all data were analysed by SPSS version 16.

Results: 64 varicocele patients with abnormal semen parameter, 47 married men and 17 single men, with mean age of 32.5±14 years (18-47 years old) were evaluated in this study. After varicocelectomy sperm count had a statistically significant increase (18.83±1.2 million in ml), semen volume also increased statistically significant (0.64±0.2 ml) and sperm motility (9.9%) and morphology (4.62%) increased statistically significant. Sperm count, semen volume, motility and morphology raised to platue in months forth, third, forth and fifth respectively after varicocele surgery.

Conclusion: The majority of varicocele patients with abnormal semen parameters showed significant improvement after varicocelectomy.

Key words: *Varicocele, Varicocelectomy, Semen parameters.*

O-54

The role of sex hormonal deficiency in male infertility

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Introduction: Normal hormonal activity is necessary for testicular function and spermatogenesis. The male hormonal deficiency leads to delayed puberty, testicular insufficiency and lack of spermatogenesis.

Materials and Methods: In period of 10 years, among the patients referred us as infertility, About 100 patients suffered from hypogonadism. In this group, the testicular size, spermatogenesis and male hormonal values were evaluated and all of patient underwent to hormonal treatment with testosterone.

Results: Among 100 cases of hypogonadism, 60 of them were referred after puberty age as delayed puberty. All of these patients were azospermic as well as small testis and incomplete masculinization. The other 40 cases were referred as infertility. Both of these groups had the degrees of erectile dysfunction. All of these patients underwent hormonal replacement therapy. The aim of hormone replacement is the induction of puberty at the first step and spermatogenesis for treatment of fertility at the second. The delayed puberty is managed with male Androgen hormones. But for induction of spermatogenesis administration of gonadotropin hormones is necessary. The result of treatment for delayed puberty was successful in all of the patients. But spermatogenesis was happened in 30% of patients and only one of them get child with normal pregnancy. The rest of patients referred to ART centers.

Conclusion: Normal male hormonal activity is essential for male fertility. Early diagnosis of hormonal insufficiency helps for hormonal replacement. Most of these patients can get child with hormone therapy with few amount of sperm count.

Key words: *Hormonal deficiency, Male infertility.*

O-55

Bilateral diagnostic testis biopsy; Is it necessary in all azospermic patients?

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Introduction: Diagnostic testis biopsy is necessary for evaluation and treatment of infertile men with azoospermia. There is no consensus that it must be done in one or both side. So in this study we evaluated the results of bilateral testis biopsy in male patients with azoospermia.

Materials and Methods: All infertile patients with azoospermia referred to our center for the past three years were selected. In patients who were candidate of testis biopsy it was done on one or both side. It was done on one side in patients who had only one palpable testis or in whom the result of first sample were positive. For all other patients it was done bilaterally.

Results: Overall 326 Patients were selected. Bilateral testis biopsy done in 170 and unilateral testis biopsy has done in 156 Patients. In the first group 85.88% (146) men had no sperm in their samples. In 5.88% (10) patients sperm was found in both testis, but only in

8.23% (14) patients testis sample was negative for one side and positive from other side.

Conclusion: According to our data it seems not necessary to do bilateral testis biopsy in every patient with azoospermia, but we must consider it in selected patients who have significant discrepancy in their testis volume.

Key words: Azoospermia, Testis biopsy, Bilateral.

O-56

Co-culture of spermatogonial stem cells with Sertoli cells in the presence of testosterone and FSH improved differentiation via up-regulation of post meiotic genes

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Introduction: Spermatogonial stem cells (SSCs) maintain spermatogenesis throughout the life of the male. Maintenance of SSCs and induction of spermiogenesis in vitro may provide a therapeutic strategy to overcome male infertility. This study investigated in vitro differentiation of mouse SSCs in the presence or absence of Sertoli cells, hormones, and vitamins.

Materials and Methods: The authors sorted spermatogonial populations from the testes of 4-6-week-old male mice by MACS according to the expression of a specific marker, Thy-1. On the other hand, isolated Sertoli cells from 6-8-week-old testes were enriched using lectin-DSA-coated plates. Isolated SSCs were cultured in the presence of LIF for 7 days in gelatin-coated dishes and then dissociated and cultured for 7 days in media lacking LIF in both the presence and absence of Sertoli cells and with or without FSH, testosterone, and vitamins. After one week, the authors evaluated the effects of Sertoli cells and supplementary media on SSC differentiation by microscopy and expression of meiotic and postmeiotic transcripts (RT-PCR).

Results: SSC colonies enjoyed limited development after the mere removal of LIF, exhibiting low expression of meiotic (Scp3, Th2b) but not postmeiotic transcript and loss of Stra8 and Dazl expression.

Conclusion: SSCs co-cultured with Sertoli cells, hormones, and vitamins developed spermatid-like cells expressing postmeiotic markers (TP1, TP2, Prm1) at levels over twofold greater than Sertoli cells or hormone/vitamins alone.

Key words: Spermatogonial stem cell, Sertoli cell, Differentiation, FSH, Testosterone.

O-57

Evaluating the rate of DNA fragmentation in processed human spermatozoa after incubation at different time intervals

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Introduction: One of the causes of failure in ART is sperm DNA fragmentation which may be increased by incubation of spermatozoa in 37°C. The objective was the evaluation of sperm DNA fragmentation using the sperm chromatin dispersion (SCD) test in spermatozoa after swim-up at different time intervals prior to use.

Materials and Methods: In this prospective study, we analyzed twenty one normozoospermic specimens. Semen analysis was performed according to WHO guidelines. The sperm morphology was evaluated by with Papanicolaou staining. The samples were incubated in 37°C after preparation by direct swim-up. DNA fragmentation were assessed at different time intervals (0, 1, 2 and 3h) using SCD test.

Results: There was an increasing trend in sperm DNA fragmentation after incubation. No significant difference in percentage of sperm cells with fragmented DNA was seen after 1h compared to 0h (6.14 ± 0.89 vs 4.38 ± 0.8), also 2h compared to 1h ($p=0.15$) and 3h compared to 2h ($p=0.4$). However, there was significant increase in sperm DNA fragmentation after 2h ($8.81 \pm .93$, $p=0.004$) and 3h (10.76 ± 89 , $p<0.0001$), also 3h compared to 1h ($p=0.002$). The normal morphology was 49 ± 3.10 and 72.33 ± 2.53 for before and after processing, respectively. Also Progressive motility was 63.71 ± 1.83 and 90.10 ± 1.02 for before and after processing, respectively.

Conclusion: It seems that incubation of prepared normozoospermic samples at 37°C prior to use in ART should be less than 2h.

Key words: Sperm DNA fragmentation, SCD test, Normozoospermia.

O-58

Study of HSPA5, ATP5D and SOD1 proteins expression in men with and without varicocele

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Introduction: To compare the sperm protein profile between men with and without varicocele.

Materials and Methods: This work designed as a case-control study. The research patients were recruited at The Infertility Unit of Royan Institute in 2009. Twenty sperm samples from normozoospermic men without varicocele (C) and twenty sperm samples from oligozoospermic patients with varicocele grade 3 (V) were included in this study. Sperm protein profile in two groups was characterized using two dimensional gel electrophoresis (2-DE). Differences in protein expression were established using gel analysis software and protein identification was performed by Mass Spectroscopy (MS) analysis.

Results: In V samples, we have noted 15 consistent differences in protein expression (1 spots missing, 12 less abundant and 2 more abundant) compared with C ($p < 0.01$).

Conclusion: The identified proteins demonstrated that heat shock proteins (HSPA5), mitochondrial proteins (ATP5D) and antioxidant proteins (SOD1) are the proteins mainly affected by varicocele disease. To our knowledge this is the first report describing the correlation between sperm proteins in men with and without varicocele obtained by 2-D proteomic approach. It can be an important prerequisite to the development of diagnostic tests to predict varicocelectomy outcomes in patients with varicocele and abnormal spermogram in a clinical environment.

Key words: Varicocele, Sperm, HSPA5, ATP5D, SOD1.

O-59

Y chromosome microdeletions in infertile men with azoospermia and severe oligospermia: East-Azerbaijan experiences

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Introduction: Approximately 10-15% of married couples have problems. Some infertile men with azoospermia or severe oligospermia have small deletions in three non-overlapping regions on the long arm of the Y chromosome (AZFa, AZFb and AZFc). We sought to determine the prevalence of Y-chromosome microdeletions amongst infertile men.

Materials and Methods: Screening of the Y chromosome micro deletions was done in 100 infertile men who reported to the infertility center of Kashan and infertility centers in Tabriz for ICSI. Genomic DNA was extracted, Y-chromosome micro-deletions were

then studied with the use of PCR to amplify specific regions of the chromosome using 7 STS markers based on EAA/EMQN guideline and 11 STS markers which were used in Iran and neighboring countries.

Results: Within the participants from Kashan, none of the patients were found to have these deletions, however, in Tabriz; four infertile men (8 percent) had micro-deletions of the Y chromosome who had azoospermia, whilst not having oligospermia. The size and location of the deletions varied and did not correlate with the severity of spermatogenic failure.

Conclusion: A small proportion of men with infertility have Y-chromosome micro-deletions, however, the size and position of the deletions correlate poorly with the severity of spermatogenic failure. Males who have Y chromosome deletions which are followed by ICSI should undergo screening for these deletions to prevent from transmission to their male offspring. Male infertility can also be related to the ethnicity and geographic region of the patients.

Key words: Infertility, Micro deletions, Y chromosome.

O-60

Enzymatic digestion improves testicular sperm retrieval in non-obstructive azoospermic patients

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Introduction: In non-obstructive azoospermia (NOA) patients, besides the mechanical treatment, vital spermatozoa from the tissue obtained from testes by biopsy can be enzymatically prepared. The objective is to increase the sperm recovery success of testicular sperm extraction (TESE), with enzymatic digestion if obtain no sperm from testis tissue by mechanical method.

Materials and Methods: In 150 men who presented with clinical and laboratory data indicating NOA, tissue samples were obtained by microdissection TESE method. Initially, mature spermatozoa were searched for by mechanical extraction technique shredding the biopsy fractions. In cases with no spermatozoa was observed after maximum 30 min of initial searching under the inverted microscope, the procedure was then followed by enzymatic digestion using DNaseI and collagenase type IV.

Results: Of 150 cases with NOA, conventional mincing method extended with enzymatic treatment yielded successful sperm recovery in 13 (10%). Comparison of parameters revealed that level of FSH and LH were significantly different ($p < 0.05$) between two groups that response negative and positive to enzymatic digestion.

Conclusion: Combination of conventional TESE and enzymatic digestion is an effective method to recover spermatozoa. The benefit of the mincing combined with enzyme to sperm retrieval for NOA is firstly to shorten the mechanical searching time, thus minimizing further cellular damage as well as exposure to external conditions, and secondly to reduce the number of cases with sperm recovery failures. Also, the serum level of FSH and LH are factors that influence the chance of sperm retrieval.

Key words: TESE, Enzymatic digestion, Non-obstructive azoospermia, FSH, LH.

4- Nursing and Midwifery

O-61

Exploring the aspects of couples interactions in reproductive health: a qualitative study

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Introduction: It is known that effective interactions are valuable for personal relationships. Marriage, as a long-lasting personal relationship, needs some interactive behaviors; especially in reproductive health matters. This study was conducted to explore the aspects of couples's interactions in reproductive health in contemporary family lives in Tehran, Iran.

Materials and Methods: This was a qualitative study with a purposeful sampling using individual interviews and FGDs in 2010-2011. The participants were 21 married individuals, aged 20 years or more, who had maximum variance in age, educational, and job categories, length of marital life, and number of children they had. We used open-ended questions in the sessions which lasted an average of approximately 45 minutes. All the interviews were tape recorded, verbatim transcribed, and prepared for content analysis.

Results: On the basis of the participants' perceptions and experiences in the reproductive health matters, five

different categories emerged as the aspects of couples interactions: Care and nurturance, trust, supervision and control, directing and decision making, and cooperation. Results showed that in the reproductive health matters, the largest part of couples' interactions belongs to "Directing and Decision making" category.

Conclusion: It seems that reproductive health matters need a variety of couples' effective interactions; and to achieve the optimum level of reproductive health, couples empowerment for effective interactions must be considered; especially in directing and decision making area.

Key words: Couples interaction, Reproductive health, Qualitative study, Iran.

O-62

Domestic violence in infertile women and its risk factors analysis; A mixed methods study

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Introduction: In Iran, the lifetime prevalence of primary infertility was reported to be 24.9% in 2004. Although the causes of infertility in man and women are similar, it appears that the women are consistently held responsible for a couple's infertility, and she is often punished socially and economically as a consequence. Violence affects the lives of millions of "infertile women" worldwide regardless of their socioeconomic or educational levels.

Materials and Methods: This study was a mixed method study. In the quantitative section, 400 women with infertility (in each case a female factor had been recognized) that referred to the Valiasr Reproductive Health Research Center in Tehran, Iran were interviewed using the Revised Conflict Tactics Scales (CTS2) questionnaire. After completing quantitative section, the qualitative section was started. We interviewed deeply with women that suffered domestic violence and after saturation the data; we analyzed them by content analysis.

Results: A total of 247 participants (61.8%) declared having experienced domestic violence. There were associations between the husbands being unemployed, husband's education level and coercive marriage and domestic violence ($p < 0.05$). The analysis of the part of qualitative study showed four main themes including abuse, marital instability, social isolation and loss of self esteem.

Conclusion: Although infrequently reported, domestic violence against infertile women is a problem that should not be ignored. Clinicians ought to identify abused women and provide them with supportive counseling as well as appropriate care.

Key words: Domestic violence, Infertility, Mixed Method.

O-63

Correlation between history of Cu-IUD using and secondary infertility

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Introduction: Appropriate type of contraception methods has been located in the core of reproductive health. Intra Uterine Device (IUD) has been introduced as one of the most effective contraception method in worldwide but the relation between using of IUD and secondary infertility has not been well known. This study was conducted to determine correlation between history of Cu-IUD using and secondary infertility.

Materials and Methods: A case-control study was carried out from December 2010 to September 2011 in Fertility and Infertility Research Center of Yazd. 750 married women in reproductive age (15-45 years old) were selected as participants. They divided into two groups (case and control) based on previous history of inserting Cu T-IUD, 380- A and were matched according age (± 2 years). The inclusion criteria were length of IUD using at least for six month, without history of primary infertility or infertility treatments and without systematic diseases. Using of additional contraception method and occurrence of STD were determined as exclusion criteria. Data were gathered by structured questionnaire and were analyzed with X2 and Fisher-Exact tests.

Results: There were not any significant statistical differences in age and occupation between case and control groups. There was not any correlation between history of Cu T-IUD using and secondary infertility (3.5% in case group versus 2.7% in control group, $p=0.63$).

Conclusion: This study confirmed safety of Cu T-IUD, 380-A without any unpleasant and serious consequence such as infertility. So it could be used as an effective and safe contraceptive method.

Key words: Intra Uterine Device, Secondary infertility, Case control study.

O-64

Developing an ethical framework for privacy in sexual and reproductive health care

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Introduction: Privacy in Sexual and Reproductive Health (SRH) services is one of the most global concerns in the world. In the new trend of SRH service delivery system new ethical issues regarding privacy have been emerged. Although professional codes of ethics have emphasized on clients' right to privacy, but clients' right abuse demonstrates a gap in providers practice and what they have trained regarding privacy. Illegal breach of clients' right to privacy is considered as a criminal action and acts as a barrier for providing correct information. It also interferes with quality of care promotion and creates unwanted health consequences. This study was designed to develop an ethical framework for privacy in SRH services.

Materials and Methods: A modified three rounds Delphi study was conducted with 45 Iranian academics and clinicians as expert panel members, who were selected through purposeful sampling. Data were collected in round 1 Delphi through sending electronic questionnaires containing open-ended questions and participants' responses were analyzed using content analysis approach. After calculating face and content validity index in round 2, final consensus was achieved in round 3.

Results: Emerged categories towards privacy according to the experts' views were 1) visual and auditory privacy 2) providing appropriate services and spaces of health care centers to protect privacy and 3) legal considerations.

Conclusion: This study introduces an exact and clarified practical framework towards all dimensions of privacy for SRH care providers in particular and other health care providers who serve men, women and adolescent's health in general.

Key words: Sexual and reproductive health, Privacy, Ethical framework.

O-65

Passive smoking damaged women's sexual satisfaction

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Introduction: Tobacco use damaged women's reproductive life. Although previous studies showed that active cigarette smoking is associated with an important anti-estrogenic effect, few have examined the impact of passive smoke exposure on it. This study was aimed to determine the relation between passive smoking and sexual satisfaction among women.

Materials and Methods: This study was a cross-sectional study in which sexual satisfaction score among 110 reproductive age women in Sari, in 2010 were indicated and analyzed. The study sampling method was

random sampling. Two questionnaires including socio-demographic and Larson standard questionnaire were used for data gathering. Data were analyzed using descriptive statistical methods and chi-square.

Results: there was no significant difference associated between sexual satisfaction and age, Body Mass Index, educational level, delivery type, marriage age, duration of marriage, husband age, husband educational level. However, a statistically significant association between sexual satisfaction score and contraception methods ($p < 0.01$), and passive smoking ($p < 0.05$) was showed.

Conclusion: The present findings suggest that passive as well as active smoking may be associated with a decreased sexual satisfaction. Therefore, reproductive health promotion programs should be focused on passive tobacco use prevention interventions.

Key words: Passive smoking, Women, Sexual satisfaction.

O-66

Domains of decision making in reproductive issues: a qualitative study in Iranian families

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Introduction: Reproductive issues are major aspects of the couples' interactions; and decision making in these matters would be a crucial and challenging process. To help the couples in this process, there is a need to explore important domains of decision making according to their own viewpoints. This study was conducted to explore the domains of decision making in reproductive issues in the contemporary Iranian families, in Tehran, Iran.

Materials and Methods: This was a qualitative study with a purposeful sampling using individual interviews and FGDs in 2010-2011. The participants were 21 married individuals, aged 20 years or more, who had maximum variance in age, educational, and job categories, length of marital life, and number of children they had. We used open-ended questions in the sessions which lasted an average of approximately 45 minutes. All the interviews were tape recorded, verbatim transcribed, and prepared for content analysis.

Results: Nine different categories emerged as the main reproductive decision making domains: Marriage and divorce, sexual matters, conception and pregnancy, delivery, breastfeeding, family planning, gender preference, infertility, and gynecological surgeries. Most of the codes were emerged in family planning, and sexual matters domains, respectively; which shows that these areas contains the most optional issues in the couples' lives.

Conclusion: The results showed that it seems better to focus more empowerment programs on the most optional domains of decision making in reproductive issues, in order to empower the couples for logic, beneficent, and equitable decisions.

Key words: Decision making, Reproductive issues, Qualitative study, Iran.

O-67

Infertile couples experiences of assistant reproductive treatments: A phenomenological study

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Introduction: Infertility is considered a severe cause of stress and disappointment with attendant risks for mental health and other psychiatric problem. In this research we can become more aware of experiences and emotions of infertile couples in different stages of treatment through qualitative method.

Materials and Methods: This study is qualitative and has been done by phenomenological method. Collecting the samples was done by a method based on the goal and its number was based on reaching quorum. Reviewing and coding the interview papers was done by three researchers with the Colaizzi method and this method was also used for analyzing datum.

Results: Seventeen couples were interviewed and mean age was 58.29 and all of them were women the achieved topics include 7 major and 22 minor topics. The main issues were: Participants' feelings toward infertility, Spouse's relationships with each other, infertile couples' familial relationships and their relations with own families and in-laws, assisted reproductive treatments, Couples' sexual relationships, Couples' dreams and aspirations and financial problems.

Conclusion: The results of this research show couples struggling with infertility are hopeless and disappointed in their lives. They've a vast collection of negative feelings simultaneously, such as anxiety, which obligates us to present them more specialized medical and psychological supports regarding their vast social and emotional disorders.

Key words: Infertility, ART, Phenomenology.

O-68

The impact of psychological consultation on mental health of infertile couples referring to Alzahra Educational Centre, Tabriz-2008-2009

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Introduction: Infertility has social, mental and biological dimensions that affects different aspects of infertile couple's life as stressful crisis. Expensive treatments, continuous stressful situations, society pressure, fear of family breaking – up, losing partner's attention and love, the effect of hormonal manipulations and leads to extreme anxiety & depression in infertile couples. So it requires multidimensional interventions for promoting mental health of them by specialists.

Materials and Methods: This was a semi-experimental study. Data gathering was done using *Goldberg general health questionnaires* answered by infertile couples referred to educational courses. Ninety four couples who obtained high scores were selected. Forty seven couples (experimental group) participated in consulting sessions (2 sessions for each couple). No Intervention was done for the control group. Then mental health of the two groups (experimental and control) were evaluated again using the test after a week.

Results: Results showed, in pre-test there were no significant difference between men groups Score (E=42.5±1.4 and C=43.2±2.0) and women groups score (E=46.4±2.1 and C=47.5±2.0) ($p \leq 0.05$). But there was significant difference in post-test scores in men's groups (E=25.4±1.0 versus C=45.0±1.1) and also women's (E=23.9±3.5 versus C=44.6±2.0) ($p=0.000$). Data were analyzed by SPSS version 15 using T test.

Conclusion: Psychological needs of infertile couples especially infertile women cannot be denied and should not be ignored. Unfortunately there are limited Researches in this field in Iran. On the basis of cognitive approaches, people's thoughts, attitude and believes about events cause personal negative emotions and reactions. By professional counseling as a midwife and care giver we can help them cope with their anxiety and get positive, attitude and believes which will helpful of the person by means of psychological methods because range of person's cooperation with the therapist increases via this way very much too.

Key words: Infertile couple, Consulting, Mental health, Psychology.

O-69

Association of central fat distribution with sexual dysfunction in women

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Introduction: There has been an alarming progressive worldwide increase in the prevalence of Obesity. Sexual dysfunction is a prevalent condition and is an important public health. Reduced sexual quality of life is a frequently reported yet rarely studied consequence of obesity. The relationship between female sexual function and obesity is unclear. This study aimed to investigate the relationship between Central fat distribution and sexual dysfunction in women.

Materials and Methods: 77, otherwise healthy women with abnormal values of female sexual function index (FSFI) score (≤ 28) were compared with 64 control women (FSFI >28). Central fat distribution, as evaluated by the waist-to-hip ratio. (WHR) was calculated as waist circumference in centimeters divided by hip circumference in centimeters. All women were free from diseases known to affect sexual function.

Results: Central fat distribution, showed correlation with FSFI score ($p < 0.05$). Of the six sexual function parameters, lubrication ($p=0.22$), orgasm ($p=0.76$) and desire ($p=0.65$) did not correlate with Central fat distribution; on the other hand, there was a correlation between arousal ($p=0.05$), pain ($p=0.04$) and satisfaction ($p=0.03$) with Central fat distribution.

Conclusion: Obesity affects several aspects of sexuality in otherwise healthy women with sexual dysfunction. Interventional studies aimed at reducing body weight in women with FSD are needed to disclose a cause and effect relation between obesity and FSD.

Key words: Central fat distribution, Female sexual function, FSFI, Obesity.

O-70

Pregnancy and childbirth as a point between the life and death

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Introduction: Despite the fact that birth is a joyful event, it can be associated with physiological trauma and for some women it can be very fearful. Birth is regarded as a violent incident with the fear of destroying the mother or baby by some women. This feeling varies in different cultural, social, economic and environmental contexts and on the other hand, the perception of the mothers from pregnancy and childbirth is completely subjective. This means that reviewing of mothers medical records is not helpful for recognition of the mother's perception.

Materials and Methods: This descriptive study is part of a mixed method research, carried out in 2012, aimed to investigate the mothers' feeling of pregnancy and birth in 2 large provinces of Iran. Data were collected from a convenience sample of 305 mothers admitted to post partum ward of Public and private hospitals (194

women from a province and 111 women from other province) and were assessed through the revised fourth edition of Psychiatric Standard Questionnaire DSMIV.

Results: A large percentage of participants (59.2%) felt serious danger to themselves and their children during pregnancy and birth. There was a significant difference between the mothers feeling between two provinces ($p>0.05$).

Conclusion: According to mothers' feelings of danger and death during pregnancy and birth, supportive programs to protect them should be designed. Also, regarding to a significant difference in mothers' feelings between two provinces, impact of the culture on fear of pregnancy and childbirth should be explored.

Key words: Traumatic labor, Pregnancy, Mothers feeling, Mothers perception.

O-71

Preterm delivery and plasma fibronectin

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Introduction: Due to the fact that preterm delivery is regarded as the most prevalent reason of fetus mortality, and that it has considerable social and psychological effects for the family and the society, the susceptible factors and the state of predicting and preventing it is not profoundly realized. Recognizing women who are at risk is the first effective step in preventing that. This study is designed to determine the diagnostic value of plasma concentration of fibronectin in preterm diagnose of delivery.

Materials and Methods: The comprised sample of 79 primigravida women who were in their 24-34 weeks was divided into three groups in our case-control study. Medical, demographic and midwifery information were studied along with the measurements of fibronectin plasma level. Data collected were analyzed using SPSS 19. Appropriate statistical tests (Kroskalvalis, ManWitney and ROC diagram) in significance level of 0.5 were employed.

Results: The average plasma level of fibronectin was 1320 ml/ng 547 in women with preterm deliveries and it was 708 301 ml/ng in women with term delivery which has significant statistical difference ($p<0.001$). The best cutting spot for fibronectin concentration in predicting preterm delivery is determined as 700. Sensitivity, characteristic, positive predicting value and negative

predicting value for this test are as follows: 100%, 54.3%, 61.1%, 100%.

Conclusion: Findings illustrated that the fibronectin plasma level in women with preterm delivery is significantly higher than those with term delivery. Considering the high sensitivity of the cutting spot of 700, this test could be regarded as a screening test to diagnose the preterm delivery.

Key words: Fibronectin, Plasma fibronectin, Preterm delivery, Preterm diagnosis.

O-72

Effect of a sex educational package on sexual function in pregnant women: a multicenter randomized controlled trial

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Introduction: Pregnancy is a major change in life and may directly affect sexual function due to psychological and biological changes. We aimed to determine the effect of a sex education package on sexual function in pregnant women.

Materials and Methods: We recruited 88 women in their 8-14 weeks of pregnancy from the four selected public health centers (22 from each) in Karaj, Iran, in 2011. We individually randomized the subjects into intervention and control groups. A midwife with special short education in sexual health in pregnancy educated the participants at the interventional group in two sessions (approximately sixty minutes each, once a week) using an educational booklet. The booklet was given to the women at the end of the first session. The subjects and their husbands could also get telephone counseling about sexual health. The women in the control group got nutritional education. All participants completed a self-administered questionnaire, just before and 4 weeks after intervention and put them into a sealed box. Sexual function was assessed using female sexual function index (FSFI). Data were analyzed using Student's-t and ANOVA and chi-square tests.

Results: At the baseline, there were no significant difference between the groups in terms of mean sexual function score and rate of sexual dysfunction. After education, mean (SD) of total score of sexual function was significantly higher in the intervention compared with the control group (26.8 (4.0) vs. 19.2 (8.7), $p<0.001$) and the rate of sexual dysfunction was significantly lower (41.5% vs. 83.3%, $p<0.001$). The education had positive effect on all six domains of sexual function (desire, arousal, lubrication, orgasm, satisfaction, pain).

Conclusion: The educational package improved the pregnant women sexual function. Therefore, it is recommended to use it during prenatal care.

Key words: Sex education, Sexual function, Pregnancy.

O-73

Health-related Quality of life and its predictive factors in infertile women

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Introduction: There is inadequate knowledge regarding health-related quality-of-life (HRQoL) of infertile women. The present study aimed to determine HRQoL of infertile women and predictive factors of their quality of life in physical and mental health components.

Materials and Methods: In this cross-sectional study, 1012 infertile women referring to Majidi infertility center were examined. The data were collected through a self-administered questionnaire including clinical and demographic characteristics and SF-36. One-sample T-test, independent T-test, one-way ANOVA and logistic regression were used for analysis.

Results: The QoL score of the infertile women in all eight studied aspects was significantly lower than normative data (general Iranian people stratified by gender and corresponding age). The differences were substantial in vitality, bodily pain, social functioning and physical functioning (Z score <-0.4). Mean (SD) of physical and mental health component scores (PCS, MCS) in women were 46.8 (7.2) and 41.1 (9.9), respectively. Based on results of logistic regression, low PCS score was more frequent in those who were younger, less educated or had low income and less income was significantly associated with low MCS score.

Conclusion: Results of the study indicated low QoL in infertile women. Therefore, necessary supports about infertile couples should be done, especially for those at risk such as those with lower education level or low income.

Key words: Quality of life, Infertility, Predictive factors, Women.

O-74

A survey of medical and paramedical group awareness and attitude toward fertility preservation techniques in mashhad-2009

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Introduction: Technological development in tissue and gamete cryopreservation (along with ART) have provided the chance of fertility not only to sub-fertile couples, but to the young men and women whose cancer treatment .radiotherapy or chemotherapy may prevent their fertility in future. Therefore, it is importance for everyone to be aware of the current fertility preservation methods. Surveying the knowledge and attitude of Medical and Paramedical Group on fertility Preservation methods was the main purpose of this research.

Materials and Methods: The current descriptive research was done in summer 2009 in Mashhad.190 subject (including 30 gynecologists, 34 general practitioners, and 88 midwives and 38 nurses), who were employed in different hospital of Mashhad, completed the related questionnaire and participated as sample group in this research. The results of study have been reported by the use of K.Square test based on frequency and percentage.

Results: The study endorsed 88.9% of subjects had low to average information about different methods of fertility preservation. 92.1% subjects recommended low to relative application of these methods. Lack of enough information in this field was the main reason which all the participants were agreed on.

Conclusion: Due to the importance of fertility preservation methods in cancers, impotencies, belated marriage and etc, it is quite necessary that therapeutic personnel do learn these methods and teach them to patient and those benefiting from their application.

Key words: Fertility preservation.

5- Psychology

O-75

The baby doesn't belong to me: The experience of interviews with surrogate mothers

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Introduction: Surrogacy is a treatment option available to women with medical problems. Many health issues arise for the surrogate mother. There is a lack of scientific proof, while many psychologists, and psychiatrists believes that there are a special tie that develops between a pregnant mother and a child in her uterus. Research has shown that surrogate mothers are less attached to the fetus, which is most likely due to encouragement by others to feel detachment toward the fetus during pregnancy. Also many surrogate mothers are trying to not dependent on the fetus inside their uterus. The purpose of this study was to evaluate

surrogacy mothers' emotional experiences in their pregnancy in Isfahan city.

Materials and Methods: This was a qualitative, phenomenological study. We selected 6 surrogate mothers in Isfahan. We used convenient sampling method and in-depth interview for collection of information. Data analysis was done via Colaizzi seven-stage method.

Results: Findings of these interviews were classified in 45 codes and 3 themes including "Psychological issues associated with family, relatives and friends", "Feelings towards pregnancy" and "Psychological consequences of surrogacy" and 2 main concepts.

Conclusion: Surrogate pregnancy should be treated as a high-risk psychological experience because many of these surrogate mothers could have negative experience in this period. In addition, it is recommended that surrogates receive professional counseling before, during and after pregnancy.

Key words: Surrogate mothers, Emotional experiences, Phenomenological study.

6- Ethics and miscellaneous

O-76

Effect of body mass index on pregnancy rate in infertile women through of IVF cycle in Razavi

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Introduction: Obesity has become a major health problem across the world. Obese women experience longer times to conception, even if they are young and cycling regularly. Today there are contradictory findings about the effect of obesity on quality of oocyte, number of matured oocyte, growth of embryo and rate of pregnancy in assisted reproduction technology (ART). The purpose of this study is evaluation of the relation between BMI and pregnancy rate through IVF cycle in infertile women.

Materials and Methods: This analytic cross-sectional study included of 130 infertile women who referred to Razavi IVF center for treatment. 168 patient records were studied and finally 130 subjects were selected. The required data were collected through providing questionnaire. Patient divided to three groups based on the BMI: normal weight, overweight and obese. All women underwent controlled ovarian hyper stimulation (COH), using long agonist protocol. The data were analyzed by Pearson correlation test, Spearman test, and one-way analysis of variance.

Results: Regarding their LH and FSH levels (3th day), number of follicles and oocyte there are any significant difference in three groups. According to the results, pregnancy rate was affected by BMI levels. Percentage of fertility in women with normal weight was 43.3, whereas this percentage was 27.9 and 4.5 in women with overweight and obese respectively (p=0.003).

Conclusion: BMI had significant effects on IVF outcome, so weight reduction is suggested in women with obesity in preconception consultations to increase pregnancy rate.

Key words: BMI, IVF, ART.

O-77

Assisted reproductive technology (ART) treatment in HIV couples from ethical aspects

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Introduction: A major increase in the life expectancy and life quality of HIV infected persons has resulted from treatment improvements. Use of assisted reproductive techniques, the possibility of having a healthy child for many couples HIV has provided. However, almost all of infertility centers do not accept these couples that this problem leads to isolation of these people from the society and decreases their quality of life.

Materials and Methods: It is a multidisciplinary study of review literature, expert opinion and law review. The references varied from Iranian constitution, civil law, Islamic texts, the Holy Quran and scientific papers.

Results: Pregnancy is the natural right of every person. If having healthy children without transmitted HIV to the partner is possible, the infertility centers shouldn't avoid of using assisted reproductive techniques (ART). Therefore, the rejection of couples by infertility treatment centers seems to be unethical. Acceptance of patients with other chronic or end stage diseases despite of not accepting HIV patients confirms discrimination between the patients. Estefta of Jurists voted that treat these couples by ART. The welfare of the child is not only physical, but also includes a psycho-social. i.e. the risk of being orphaned at a vulnerable age and of growing up in a family which is confronted with a serious illness. Also called Stigma associated with HIV in Iran and it seems that families with children from the socially not perfect. However, the life expectancy of HIV-infected parents, comparable to parents that suffer from cancer or genetic diseases, especially if the family (positive-negative) that have at least one parent will have normal lifetime. Attempts to remove social stigma with support by the community of all chronic patients should be taken that step. The risk of transmission of HIV in Infertility treatment centers, like hospitals and clinics likely contamination to sample of other patients and to the equipment and laboratory personnel involved. Fortunately, international and national guidelines for effective prevention of other patients and staff involvement are developed centers. It is considered good practice to have a separate laboratory and well informed and trained personnel to treat cases.

Conclusion: No strong evidence for rejection couples with HIV, and there seems to be lack of acceptance of new methods for people with the possibility of having healthy children are immoral and violate the natural rights of individuals.

Key words: Ethics, Islam, Research, HIV, Reproductive.

O-78

Exploring the necessity of sexual health education to female adolescents in Iran: A qualitative content analysis

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Introduction: There is evidence that Iranian adolescents, particularly females have many unmet needs in terms of sexual health education (SHE); nonetheless there are controversies about necessity and appropriateness of SHE for adolescents mainly due to the socio-cultural challenges in the Iranian society. This study therefore aimed to explore experiences and perspectives of adolescents and key adults regarding the necessity of SHE to female adolescents in Iran.

Materials and Methods: The design was a qualitative content analysis in which qualitative data were collected through 13 in-depth individual interviews and seven focus group discussions with female adolescents, one FGD and five interviews with mothers, one FGD with health care providers and interviews with authorities in provincial organizations of health and education, teachers and school counselors, and male and female clergies in Ahvaz and Mashhad. Purposeful sampling was adopted until data saturation was achieved. Data were analyzed adopting conventional content analysis using MAXqda software.

Results: The main emerging reasons for necessity of SHE to adolescents were categorized in five themes consisted of: lack of accurate sexual knowledge and attitudes, existence of inaccurate sources for sexual knowledge, social status influences on adolescents' vulnerability to sexual disorders, increased sexual health disorders, and religious obligations.

Conclusion: Findings showed that many adolescents and key adults had the same opinion that SHE is an

essential issue, so this fact should encourage policymakers to go forward to the next step which is designing and implementing such educational programs instead of being in doubt about whether adolescents need to be provided SHE.

Key words: Sexual education, Reproductive health, Female adolescents, Qualitative content analysis.

O-79

Fertility motivation in different situation

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Introduction: Transition of reproduction in the four recent decades in Iran, refers to reproductive behavior changes. A deep perception of family reproductive motive and behavior, particularly in women, clears the effective factors on the changes up. This study was performed to explain the reproductive motive in Iranian women.

Materials and Methods: This study was conducted with qualitative research approach and content analysis method in 2011. It included 21 fertile women and 5 with history of infertility. Purposive sampling began and continued up to data saturation. Deep semi-structured interview was the main method for data collection. The data were analyzed using qualitative content analysis method and constant comparative method.

Results: In content analysis process, finally five main themes emerged that indicated women's reproductive motive. Also the detail concepts were defined as subgroups of the main concepts. These themes include: 1-Natural and inherent characteristic, 2-Social norms and pressure 3- Need to social and emotional support, 4- Continuation of generation, 5-Assurance and hopefulness for future. These concepts in women with the history of infertility differ from fertile women.

Conclusion: The use of these concepts for helping infertile people, couples and the women at the age of marriage, can be effective on making decision for curative methods and or family planning programming. The motive of reproduction is affected by different factors such as: marriage age, parity, history of infertility, women's age, socio-economic conditions.

Key words: Motive, Reproductive behavior, Infertility, Qualitative research.

O-80

Relationship between androgens with anthropometric indices in women with polycystic ovary syndrome

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Introduction: Polycystic ovary syndrome (PCOS), the most common endocrine disorder in premenopausal

women, is characterized by chronic ovulatory dysfunction and hyperandrogenism. Clinical studies have shown that hyperandrogenism is linked with insulin resistance in PCOS women. Androgen excess, as a central defect in PCOS patients, is triggered by obesity. This study aimed to evaluate serum testosterone and dehydroepiandrosterone sulfate (DHEA-S) levels in women with PCOS and their correlations with anthropometric indices.

Materials and Methods: This cross-sectional study investigated 185 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 levels of testosterone and DHEA-S were measured by commercially available enzyme immunoassay kits.

Results: There was a positive and significant correlation between serum testosterone level and waist circumference in the normal ($r=0.41$, $p=0.005$) overweight ($r=0.51$, $p=0.02$) obese I ($r=0.40$, $p=0.01$) obese II ($r=0.41$, $p=0.02$) and obese III ($r=0.38$, $p=0.04$) groups, respectively. Also a positive and significant correlation was found between serum DHEA-S level and waist circumference in overweight ($r=0.42$, $p=0.01$), obese grade I ($r=0.48$, $p=0.005$) and obese grade II ($r=0.41$, $p=0.02$) groups respectively. We found a positive and significant correlation between testosterone and waist to hip ratio in individuals of the Obese I, Obese II and Obese III groups, and also a positive and significant correlation between DHEA-S and waist to hip ratio in individuals of these three groups.

Conclusion: In PCOS women, serum levels of DHEA-S and testosterone increase with increasing grades of obesity.

Key words: Obesity, BMI, DHEA-S, Testosterone, Anthropometric Indices.

O-81 Critical decisions field in developed methods for infertility treatment

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Introduction: Hiding the true identity of the gamete donor in the course of different infertility treatment methods is in fact, hiding the true origin of the new born person in question. But do we really have the right to deny any human being's origin? Especially as the mistreated information has a close and inevitable effect on matters such as heritage and inter-family relations.

Materials and Methods: Different conflicts occur on matters such as the moral definition of guardians, genetically, biological and social parents, and the precedence of the mentioned in relation to the surrogate child. Severe ethical issues such as the genetical manipulation of the ovum and sperm cells, DNA transfer, genetical doping, gene selection and etc are seriously undermined. Freezing the gametes,

reproductive cell's ownership, decision making about the reproductive cells in the occurrence of the partners death, research use and etc have their own ethical, legal and religious problems.

Results: Matters such as birth after death, the actual value and the potential human personality of the fetus, determining the actual time when the fetus must be considered as a human being and therefore the dominance of personality over property and actual values over potential ones, the definition of property and rights in relation to child abortion in such cases have serious religious and legal complications.

Conclusion: Agreements on the use of reproductive cells, the gonads and their biological use are of different legal values in different legal systems and cultural structures. The possible responsibilities of the agreement stewards are also matters of discussion. Matters such as the human value and its collation on the fetus will always be questioned.

Key words: Critical decisions, Infertility treatments, Ethics, Origin and Dignity.

O-82 The multi-layered complications of recent infertility treatment methods

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Introduction: The different methods of infertility treatments, although effective, have seriously complicated conceptual aspects that must be taken into consideration. These aspects include the ethical and religious standards, the ownership rights and the social acceptance of the matters in question. If neglected, these issues may cause severe psychological discomforts, emotional conflicts and personality losses in the surrogate, guardians and even the society.

Materials and Methods: The modern infertility treatment procedures, fertilization and fetus production acts should follow a systematic definition and plan in order to minimize the conflicts and reduce the amount of hazardous criteria. An example of the systematic definitions mentioned is that both partners must be alive and within the reproductive age. They should also be in a socially accepted relation with each other and they must be aware of, and accept, the technical, ethical, legal and social consequences of the circumstance.

Results: The definition presented above has: 1) Emphasized on the legal, social and ethical status of the partners. 2) Noticeably limited, but not altogether eliminated, the subject of reproduction after death. 3) Eliminated the possibility of pregnancy in women after menopause. 4) Emphasized on the acceptance of the

different aspects introduced by newly formed medical techniques.

Conclusion: An acceptable and carefully thought out scheme must rigidly be followed in order to guarantee the ethical, legal and social values of the infant to be born but matters such as fertilization with the gamete of a dead person, substitute womb, the precedence of the biological or social parents etc are still open for discussion.

Key words: Ethics, Law, Fertilization, Modern techniques.

O-83

Infertility treatments and Islamic jurisprudence

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Introduction: Different Islamic religious schools in face of the permit or forbidden of the new infertility treatments have adopted different viewpoints. It's necessary to present a solution for those, who accept the forbidden approach in comparison with these treatments, with due attention to the subject importance and the challenge of the great percent of the Moslems milliard population with it. We are searching to find this solution, in this research, with regard to religious precepts on the one hand, and provide mind cicatrisation for barren couple to have generation that followed divorce in some case on the other.

Materials and Methods: This research is a review and library study.

Results: most jurisconsults permit AIH, either with IUI or IVF styles, and forbidden AID, either with IUI or IVF styles. They emphasis on the avoiding introductions forbidden such as the palpation and look except in the emergency cases. The Shiite and Sunni jurisconsults have diversities of opinions in use of the infertility treatments methods for example Mother Surrogacy.

Conclusion: Mahmud Shaltut, the great Sunni jurisconsult, recognized the Shiite beside the formal Sunni religions and permitted to follow this religion. We can solve our problem in infertility treatments by resorting to this method. In some of the infertility treatments, such as Mother Surrogacy and Embryo Donation, according to the Sunni jurisconsults opinion, can refer to the Shiite jurisconsults opinions and appoint it as the divine proof, consequently most of the barren couple problems can remove without the sacred law violation.

Key words: Infertility treatment, Islamic jurisprudence, Mother Surrogacy, Embryo Donation.

O-84

ART technologies; real treatment or no?

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Introduction: Infertility is one of the problems that many people are directly or indirectly concerned and disturbed. Reproduction is one of the main indexes in the Maslow's hierarchy of needs at the adult stage. Different medical groups in all over the world have done various efforts to remove this disturbed. So this question is brought up: "Are ART technologies really treat the infertility?" and "Can they respond human needs in reproduction?"

Materials and Methods: This research is mainly based on an analytic methodology and library study.

Results: Famous psychologists such as Ericson, Cox, and Maslow have accentuated production as human needs in fertility process not only have any baby from any one. When the production in human reproduction surely has been that the pair, themselves, reproduced a baby from their sperms and ovules, nor accepted embryo from others, nor broth other child, nor adopted other child. Holy Koran admonishes human infertility need to child in different verses such as "Progeny", "Ally to inherit from me" and "descendant", that show real human need is in reproduction from him. So ART technologies that help other sperms, ovules, womb or embryo for reproduction, don't respond human need and we can include them such as attractive medicines.

Conclusion: Since human need in reproduction responds until he has a baby from himself, ART technologies that help infertility pair to breed from their sperms and ovules, really treat infertility and the others don't respond the need of infertility treatments.

Key words: Reproductive psychology, Infertility treatment, Human needs, ART technologies.

O-85

Effect of metformin on lipid profile in women with polycystic ovarian

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Introduction: polycystic ovarian syndrome (PCOS) affects 7-10% of women in reproductive age. Metabolic disorders are insulin resistance, excessive androgen and hyperlipidemia. The aim of this study was to investigate the effect of metformin on lipid profile.

Materials and Methods: 86 Women aged less than 30 years with PCOs were identified on the basis of oligomeorrhoea or amenorrhoea from outpatient's clinic. Plasma total cholesterol, triglycerides, HDL, LDL measurement was performed in 86 patients in first day three and six months later. Metformin was administered at a dosage of 500mg every 8 hours except for the first

week that were given twice daily. Randomization was effected in a double blind fashion; patient received either metformin or placebo.

Results: 32 patients in metformin group and 26 patients in placebo group were following up in three and six month the remaining subjects were either pregnant or lost to follow up. The results shows that 6 months treatment with metformin there is no significant difference in cholesterol, triglycerides and LDL level in metformin and placebo groups. But HDL level in metformin group was more than that of the placebo

group ($p=0.01$) cholesterol LDL and HDL level before and after treatment with metformin were not significantly different ($p=0.004$). However thtriglycerides was reduced after treatment. In placebo group LDL, HDL and triglycerides were not significantly different. But cholesterol level was increased ($p=0.047$).

Conclusion: the present study shows that metformin treatment was not effective in reducing total cholesterol and triglycerides. But metformin was improved HDL.

Key words: Metformin, PCOS, Lipid profile.