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ABSTRACT BOOK

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Oral presentations

1- Infertility, Gynecology

O-1
Effects of cytotoxic agents on gonadal function in adult men

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Introduction: Approximately 15% men with newly diagnosed cancer are younger than 55 yr at the time of diagnosis, among them about 26% of them are <20 yr old. Around 24,000 new cases of testicular cancer are diagnosed every year in Europe. It is the most common cancer in men younger than 45 yr, accounting for 17% of all cancers occurring men below that age. Today high percentage of these patients is cured by using chemotherapy, radiation, or the combination. Due to their age, family planning has often not started yet. Hence, fertility and sexual functioning are key issues for these patients. The aim was to evaluate kind of chemotherapeutic agents with the most deleterious effect on male fertility.
Materials and Methods: This article is result of newest review and original articles. We searched in PubMed, Elsevier, update, etc.
Results: The mechanism action of most cytotoxic chemotherapeutic agents is interference with obligatory cell processes, such as DNA synthesis, in the rapidly dividing cancer cells. In testis, cells within seminiferous tubules of germinal epithelium have the highest mitotic and meiotic indices, and are most vulnerable the toxic effects of chemotherapy.
Conclusion: Cancer treatment has become more successful during the last few decades; increasing attention must now be focused on improving quality of life in these patients. Number of strategies has been explored to preserve fertility in men scheduled to receive cytotoxic chemotherapy such as semen cryopreservation and hormonal manipulation.
Key words: *Gonadotoxicity, Chemotherapy, Spermatogenesis.*

O-2
Can herbal medicines do lead to ovarian hyper stimulation syndrome? A retrospective cohort study

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Introduction: Ovarian hyper stimulation syndrome (OHSS) is an iatrogenic complication that occurs in the luteal phase of an induced hormonal cycle. It is supposed to be a complication of some medications. We aimed to assess the association between herbal medication and OHSS.
Materials and Methods: A cohort of 120 married women diagnosed with OHSS participated in this retrospective study from 2011-2013. Among them, 86 cases had history of taking herbal medicine. Vaginal ultrasonography was performed in a Gynecology and Obstetrics Clinic in Jahrom University of Medical Sciences. List of herbs consumed was recorded and data analyzed by SPSS.
Results: The participants were aged between 18-51 years (mean: 31). 54% of cases didn't have history of infertility, 36.5% were diagnosed with primary infertility and 9.5% with secondary infertility. 56% of OHSS women having history of taking nigrum (pepper), 30.2% of them used zingiber officinate (ginger), 25.6% used cinnamomum verum (Cinnamon), 19.8% of the cases consumed thymus vulgaris (Thyme), 15.1% of them used carum carvi (cumin) matricaria recutita (Chamomile), 14% of them used thum graveolensdhi (dill) and 14% of them used corocussativus (saffron). Consumption period was from third to eighth day of menstrual cycle for 1-4 months. Dosage of herbal regimes was one tablespoon (3g). The results showed that 100 (93.02%) individuals had mild OHSS, 17 (5.8%) had moderate OHSS and only 3 (1.1%) cases showed severe OHSS.
Conclusion: We concluded that the indiscriminate use of herb might lead to OHSS. As the patients tend to consume herbs a lot, we hope to obtain the appropriate dosages of herb and use it as substitute of synthetic drugs with high side effects.
Key words: *OHSS, Herb, Infertility.*

O-3
Effect of oxytocin on serum level of luteinizing hormone in women without ovulation

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Introduction: Infertility is a problem that in addition to psychological effects, its high medical costs is also gripped the family and society. Regarding the role of the hormone oxytocin in stimulating ovulation and its less complications and cost, it may be considered substitutes for HCG. We decided to perform this study because the mechanism of effect of oxytocin on ovulation is not clear and no study has been conducted directly about its effect on LH surge.
Materials and Methods: Of infertile women without ovulation, presenting to specialized clinics of Tabriz University of Medical Sciences, who had ovulation following excitation with clomiphene, 20 patients were selected, and 20 patients received 5 U intra-muscular oxytocin.

This was "experimental" and "Case- Control" study in which the subgroups were cased for:

- Ultrasound study of follicular growth and follicle diameter measurement;
- Serum LH levels measured periodically in both groups; and
- Ovulation confirming using serum progesterone measurement in the middle of the luteal phase.

The data obtained in the groups were analyzed by SPSS software version 15 using T-Case.

Results: The mean serum LH levels after 24 h was 21.87±21.71 mIu/ml in Control group and 23.77±34.51 mIu/ml in Case group, without significant difference (p=0.836); but u-man- Whitney Case showed significant difference (p=0.029) of mid-luteal average serum progesterone between the Controls (15.92 ng/ml) and the group (23.88 ng/ml).

Conclusion: Although there was no significant difference in the mean serum LH after 24 h in two groups, but the presence of significant difference in mean mid- luteal progesterone levels in both groups suggest that administration of oxytocin is effective in the Ovulation induction.

Key words: *Oxytocin, Luteinizing hormone, Ovulation.*

O-4
Association between individual ovarian dimensions with ovarian reserve indices

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Introduction: In some young female candidates of assisted reproductive technology (ART), ovarian response to simulative treatments is less than what is expected. More precise assessment of oocyte quality and quantity through studying ovarian dimensions can be useful for determining the dose of ovarian stimulant drugs. The aim of the present study is to determine the association between ovarian dimensions and ovarian reserve (OR) indices.

Materials and Methods: In this cross-sectional study, 85 infertile women were studied. In early follicular phase, ovarian diameters (including length and width of the ovaries) were measured using transvaginal ultrasonography. Mean ovarian diameters (MOD) were calculated according to average length and width of the ovaries. A serum sample was taken from all patients to measure the level of FSH and oestradiol as OR indices.

Results: The results of univariate analysis showed that FSH and oestradiol had a negative significant association with width, length and MOD ($p<0.01$). The results of multivariate regression analysis showed that FSH and oestradiol had a negative significant association with width (βFSH= -0.59, p=0.001 and βoestradiol= -0.019, p=0.029) and MOD (βFSH= -0.52, p=0.003 and βoestradiol= -0.021, p=0.017) and had a borderline negative significant correlation with ovarian length (βFSH= -0.49, p=0.077 and βoestradiol= 0.022, p=0.08)

Conclusion: The results of this study revealed that despite a moderate correlation, ovarian diameters could be an applicable index for predicting OR. Using this method along with other methods may be useful in treatment with ovarian stimulants.

Key words: *Ovarian length, Ovarian width, FSH, Oestradiol, Infertility.*

O-5
Evaluation of progesterone receptor α and β expression in endometrium of women with repeated implantation failure

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Introduction: One of the most important limiting factors in ART (Assisted Reproductive Technologies), is repeated implantation failure (RIF). In the process of embryo implantation and establishment of a successful pregnancy, the accurate function of progesterone hormone is essential for creating a receptive endometrium. Progesterone hormone should bind to its receptors, PRα and PRβ in endometrial tissue to activate the transcription of genes essential for embryo implantation. Therefore, any noticeable alteration in the level of PRα and PRβ expression in endometrium results in attenuated response of endometrium to this hormone and can be related to a non-receptive endometrium. In this study we investigated possible in vivo role of altered PRα and PRβ expression in repeated implantation failure.

Materials and Methods: Endometrial biopsy was performed for ten RIF's women and ten normal women in the midsecretory phase. Gene-specific primer pairs and Tagman probe for PRα, PRβ and GAPDH, as internal control, were designed using the beacon designer software 7. Then total RNA was extracted, single-stranded cDNA was synthesized and detection of target gene expression was performed using Real time PCR technique. Finally for or each sample the $2^{\Delta Ct}$ was calculated and the results were indicated as relative expression.

Results: The PRα and PRβ mRNA expression was significantly lower in the endometrium of RIF women compared to normal women.

Conclusion: In conclusion, a lower level of PRα and PRβ mRNA expression in endometrium of RIF women may cause alteration in function of progesterone

hormone, leading to diminished endometrial receptivity and embryo implantation failure.
Key words: *RIF, Endometrium, PRα, PRβ.*

O-6
Transvaginal endometrial perfusion of granulocyte colony-stimulating factor for infertile women with thin endometrium in frozen embryo transfer program

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Introduction: We often see patients with a thin endometrium in ART cycles, in spite of standard and adjuvant treatments. Improving endometrial growth in patients with a thin endometrium is very difficult. Without adequate endometrial thickness these patients, likely, would not have reached embryo transfer.
Materials and Methods: This is a non randomized intervential clinical trial. Among 68 infertile patients with thin endometrium (7 mm) at the 12^{th}-13^{th} cycle day, 34 patients received G-CSF (300 microgram/1mL) to improve endometrial thickness. It was directly administered by slow intrauterine infusion using IUI catheter. If the endometrium had not reached at least a 7-mm within 48-72 h, a second infusion was given. Endometrial thickness was assessed by serial vaginal ultrasound at the most expanded area of the endometrial stripe. The cycle was cancelled in the patients with thin endometrium (endometrial thickness 7mm) until 19^{th} cycle day ultimately.
Results: The cycle cancelation rate owing to thin endometrium was similar in G-CSF group (15.20%), followed by (15.20%) in the control group (p=1.00). The endometrial growth was not different within 2 groups, an improvement was shown between controlled and G-CSF cotreated groups, with chemical (39.30% vs. 14.30%) and clinical pregnancy rates (32.10% vs. 12.00%) although were not significant .
Conclusion: Our study fails to demonstrate that G-CSF has the potential to improve endometrial thickness but has the potential to improve chemical and clinical pregnancy rate of the infertile women with thin endometrium in frozen-thawed embryo transfer cycle.
Key words: *Thin endometrium, Granulocyte colony-stimulating factor, Frozen embryo transfer, Pregnancy rate, Implantation.*

O-7
Oestrous cycle restoration after rat ovarian tissue autotransplantation, using hyaluronic acid hydrogel scaffold

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Introduction: One of the new emerging techniques to preserve reproductive potential of cancer patients is transplantation of ovarian tissue. Ischemia after transplantation leads to substantial follicular loss. So, we used hyaluronic acid (HA) hydrogel scaffold as a pro-angiogenic tool for restoration of cyclical ovarian function after ovarian tissue transplantation in a rat model.
Materials and Methods: In this study, a total of 20 Wistar female rats weighing between 90 and 100 g were used. All these animals had normal estrous cycles according to vaginal cytology and were randomly divided into 2 groups for ovarian tissue graft surgery in diestrus stage: The ovarian tissues treated with HA hydrogel were designated as an experimental group (B) and without this scaffold were defined as control group (A). All grafts were transplanted into latissimus dorsi muscle. From the fourth day of post-surgery, ovarian function was monitored by taking vaginal smears and continued till restoration of first cycle.
Results: Daily vaginal smear showed that the first estrous cycle began on the average of 15.9 and 13.4 days after transplantation in group A and group B respectively. Also resumption of ovarian function was happened in 11-26 days after graft whereas in experimental group it was seen in 10-18 days after surgery. However no significant ($p<0.5$) differences were observed between the two groups.
Conclusion: The use of HA hydrogel scaffold improves ovarian function and resumption of cyclic ovarian activity after transplantation but in our study this improvement was not impressive. Perhaps HA alone cannot overcome ischemic issue.
Key words: *Ovary, Autotransplantation, Vaginal Smear, Hyaluronic acid, Oestrous cycle.*

O-8
Assessment of ovarian tissues autografted to various body sites followed by IVM in mouse

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Introduction: Ovarian tissue transplantation is emerging technologies for fertility preservation. In addition, in vitro maturation (IVM) of oocytes retrieved

from ovarian tissues may overcome the fertility defects in certain cases. The aim was to evaluate the best site for ovarian tissue transplantation in mice. Also, feasibility of IVM of oocytes retrieved from auto grafted ovarian tissues was freshly assessed.
Materials and Methods: Hemi-ovaries from 6 weeks old mice were auto grafted into kidney capsule (K) versus the back muscle (B) and leg muscle (L) in a mouse auto graft model which was stimulated with gonadotropins. Then ovarian grafts were recovered and processed histologically for follicle assessment compared with control, also the ability of oocytes to mature with IVM was studied 14 days after transplantation.
Results: Total follicle count was significantly higher in K-graft (3.5±3.17) and the antral follicles were only observed in K-site model. The number of retrieved immature oocytes as well as successful IVM in K-grafts was significantly higher than other groups (p=0.008, p=0.016).
Conclusion: The kidney capsule is a promising site for ovarian tissue auto graft in mice. This resulted in better follicular survival and IVM outcomes.
Key words: *Ovarian transplantation, In vitro maturation, Mouse.*

O-9
Parental human leukocyte antigen compatibility and its relation to recurrent abortion

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Human Leukocyte Antigen (HLA) causes differentiation of self-cells from non-self-cells. A pregnancy must be recognized as a foreign being, because father puts HLA antigens on the placenta that are different from those of the mother. When this applies, the mother makes an antibody called a blocking antibody that attaches to the placenta and protects the fetus. In various studies, significantly increased recurrent abortion rates were observed among couples matching for the entire 16-locus haplotype. In this situation parental HLA sharing avoids producing blocking antibodies therefore Natural Killer Cells can attack them which can lead to recurrent abortion. On the other hand increased HLA-A sharing in couples with recurrent spontaneous abortion (RSA) or with Neural Tube Defect (NTD) fetus is consistent with the hypothesis that HLA-DR contributes to some fetal loss and susceptibility to NTD. So in parental HLA sharing cases, by blocking antibodies production, either naturally or with immunization, it would be possible to increasing the rate of pregnancy and decreasing of recurrent abortion.
Key words: *Recurrent abortion, HLA, Blocking antibodies, Pregnancy.*

O-10
Evaluation of three different strategies (intravenous hydroxylethylstarch, intravenous albumin 20%, and oral cabergoline) for prevention of ovarian hyperstimulation syndrome in patients undergoing ovulation induction

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Introduction: The purpose of this study was to compare three different strategies, intravenous hydroxyethystarch (HES), intravenous human albumin (HA) and oral cabergoline (Cb) in the prevention of Ovarian Hyperstimulation Syndrome (OHSS).
Materials and Methods: In this prospective randomized clinical trial, 91 women at high risk of developing OHSS were allocated in three groups, group one received 2 vial (2×50 ml) intravenous human albumins, in group two, 1000 ml of 6% HES was administered intravenous, both groups 30 minutes after oocyte retrieval within 4 hours. Group three, 31 infertile patients received oral Cabergoline 0.5 mg daily for 7 days after oocyte retrieval. Patients were visited 14±1 days after IVF and if βhCG level >10, transvaginal ultrasonography was performed two weeks later to confirm intrauterine pregnancy. Patients were followed up weekly for 3 months for signs of OHSS and were also informed about the signs of OHSS and asked to contact immediately if any symptoms of were detected.
Results: None of the participants in group HES developed severe OHSS and only 3 patients (10%) developed mild to moderate OHSS. The incident of severe OHSS was significantly higher in albumin group compared to Cabergoline and HES group (p=0.033 and p<0.001 respectively). Also the probability of developing severe OHSS was higher in Cabergoline group than group HES (p=0.031).
Conclusion: The findings from this study suggest that administration of 1000 ml of Hydroxyethylestarch 6% has a higher prophylactic effect compared to administration of IV human albumin and oral Cabergoline.
Key words: *Ovarian hyperstimulation syndrome, Human albumin, Cabergoline, Hydroxyethylestarch.*

O-11
Two protocols for pretreatment in women with polycystic ovary syndrome before intracytoplasmic sperm injection cycle; a prospective, randomized, clinical trial.

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Introduction: The aim of this study was to compare the effectiveness of metformin with simvastatin administration prior to ICSI in patients with PCOS.
Materials and Methods: In this clinical trial, the efficacy of these drugs in 40 women with PCOS (20 patients in each group; A: simvastatin and B: metformin) who were candidates for ICSI were evaluated. In both groups, the drug was administered for eight weeks before starting the ICSI cycle. Endocrine, metabolic and clinical parameters were measured before and after drug therapy; in addition, the results of the ICSI cycle were evaluated in both groups.
Results: The results showed that both drugs significantly improved patients' hirsutism scores, and that simvastatin had a greater effect than metformin (Group A; p=0.0001 vs. Group B; p=0.003). Simvastatin reduced some biochemical parameters, such as FSH, LH, testosterone, total cholesterol, and LDL, and significantly increased the HDL levels, whereas metformin significantly decreased FSH, TG, testosterone and total cholesterol. Overall, 35% and 30% of patients treated with metformin and simvastatin, respectively, became pregnant. There was no significant difference between the effects of these two drugs on the ICSI cycle results, such as the number of oocytes in meiosis 2 (M2) phase (p=0.4) and the number of grade A embryos (p=0.7).
Conclusion: The results showed that simvastatin effectively improved hyperandrogenism signs and symptoms in PCOS patients, but the impressive effects of simvastatin as a pretreatment regimen were not significantly different from metformin with regards to ICSI cycle outcome.
Key words: *Metformin, Simvastatin, Polycystic ovary, ICSI.*

O-12
Effect of cholesterol, iron and vitamin E on protamine deficiency and DNA fragmentation of male rabbit sperm

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Introduction: The role of vitamin E as an antioxidant and iron-containing compounds on DNA is not well defined. So, recent study was carried out to determine the role of vitamin E and iron, as both separate and combined effect on sperm protamine deficiency and DNA fragmentation in male rabbits.
Materials and Methods: This study included 42 male rabbits which were randomly divided into seven groups each containing six rabbits. They were all treated under special diets for 6 weeks. After this period the animals were anesthetized and sacrificed .The epididymis duct and vas deferens were dissected and their sperms were extracted from it by Ham's f10 solution. Sperm DNA fragmentation and protamine deficiency were evaluated by the acridine orange and chromomycin A3 staining, respectively.
Results: The mean values of protamine deficiency and DNA fragmentation were significantly higher in group that concomitant use of cholesterol and iron. In addition, Vitamin E as an antioxidant agent has a significant effect in reducing these damages.
Conclusion: Vitamin E as an antioxidant, decrease sperm DNA damage resulting from the consumption of foods high in cholesterol and iron.
Key words: *Sperm, Cholesterol, Iron, Vitamin E, DNA fragmentation, Protamine deficiency.*

O-13
Comparison of the metabolic parameters and androgen level of umbilical cord blood in newborns of mothers with polycystic ovary syndrome and controls

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Introduction: This study aimed to assess the metabolic parameters and androgen concentration in the cord blood of newborns of mothers with polycystic ovary syndrome (PCOS) in comparison with controls.
Materials and Methods: This cross-sectional study was conducted in 2010-2011 in Isfahan, Iran. Biochemical tests were conducted on 40 infants, born from singleton pregnancies in women with PCOS and an equal number of controls.
Results: The mean weight gain during pregnancy was higher in women with PCOS than in controls (16.02±4.39 vs. 9.10±2.20 kg, respectively, p<0.0001). The mean birth weight was lower in newborns of mothers with PCOS than in controls (2905.25±415.59 vs. 3223.25±425.02 vs. grams, respectively, p=0.001). The mean testosterone was higher in cord blood of newborns of PCOS women than in controls (5.58±3.20 vs. 2.28±0.62 pg/ml, p<0.0001). Triglycerides and LDL-C were lower in cord blood of newborns, born from PCOS women than in controls (p=0.001). The birth weight of the newborns of PCOS mothers was negatively correlated to free testosterone of cord blood (R=-0.26, p=0.04).
Conclusion: The metabolic aberration in PCOS might influence fetal birth weight and cord blood lipid profile. These disorders may be caused by an exposure to elevated testosterone level during fetal life. The offspring of PCOS women may be at higher risk for chronic diseases in later life. The clinical impact of our findings should be confirmed in future longitudinal studies.
Key words: *Androgen, Metabolism, Neonate, Polycystic ovary syndrome, Pregnancy.*

O-14

The prevalence of metabolic syndrome and insulin resistance according to the phenotypic subgroups of polycystic ovary syndrome in a representative sample of Iranian females

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Introduction: Polycystic ovary syndrome (PCOS) is associated with metabolic abnormalities which are also parts of metabolic syndrome (MetS). It is debated whether all women with PCOS should be screened for MetS and Insulin resistance (IR), since they may vary in terms of PCOS phenotype, ethnicity and age. This large scale study aimed to determine the prevalence of MetS among Iranian women diagnosed with different phenotypic subgroups of PCOS based on the Rotterdam criteria.
Materials and Methods: This study was conducted from January 2006 to June 2008 in Isfahan, Iran. The study population comprised females diagnosed with PCOS referred to the infertility clinic. The subjects were divided into for subgroups according to different phenotypes of PCOS based on the Rotterdam criteria. They underwent metabolic screening according to NCEP ATP III guidelines and IR screening based on homeostasis model assessment (HOMA) of insulin resistance.
Results: The prevalence of MetS and IR were 24.9% and 24.3%, respectively. A significant difference in the prevalence of MetS was documented between an ovulatory women having PCOS with or without hyperandrogenism (23.1% and 13.9%, respectively; p=0.001). Likewise, in PCOS women with hyperandrogenism, the MetS prevalence differed among those with or without polycystic ovary (23.1% and 63.8%, respectively; p=0.001).
Conclusion: The prevalence of MetS and IR varies between the phenotypic subgroups of PCOS. Hyperandrogenemia PCOS phenotypes of Iranian women, in particular those without sonographic polycystic ovary, are highly at risk of MetS and IR.
Key words: *Polycystic ovary syndrome, Rotterdam criteria, Metabolic syndrome, Insulin resistance.*

O-15

The role of heparin on embryo implantation rate in recurrent implantation failure cases without history of thrombophilia

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Introduction: The causes of recurrent implantation failure (RIF) in patients treated with assisted reproductive techniques (ART) are unknown. Several studies have shown the improving effect of heparin on the outcome of ART. Moreover, it has been reported adding heparin in non-thrombophilia patients with RIF is useful probably for its anti-inflammatory effects. Therefore, the aim of this study was to evaluate the beneficial effects of heparin on ART outcomes in women with history of RIF and without history of congenital or acquired thrombophilia in a randomized, controlled clinical trial (RCT).
Materials and Methods: in this study, 100 patients with a history of two or more failures in implantation in cycles of ART were randomly subdivided into two groups of study and control. Patients of the control group just received the luteal phase support. In the patients of study group, in addition to the routine support of luteal phase 5000 units of subcutaneous heparin were administered for 15 days from the day of oocyte pick up. Pregnancy test (β-HCG) was done 15 days after embryo transfer.
Results: In the study group, β-HCG was positive in 16 (32%) patients and negative in 34 (68%). In the control group, β-HCG was positive in 15 (30%) patients and negative in 35(70%). There was no significant difference between two groups for the pregnancy rate (p=0.5).
Conclusion: Although the effect of heparin on pregnancy was not statistically significant in this study, with regard to the numerous benefits of this agent, it is recommended to study its effects in further studies with more samples.
Key words: *Heparin, Recurrent implantation failure, ART, Pregnancy test.*

O-16

Reproductive outcome after hysteroscopic septoplasty in patients with septate uterus and unexplained infertility: prospective cohort study

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Introduction: Septate uterus is the most common congenital malformation of the uterus in patients with recurrent pregnancy loss. Hysteroscopy is known as the standard diagnostic and therapeutic procedure forseptate uterus. In this study, our aim was to evaluate the effects of hysteroscopic septoplasty in improving pregnancy outcomes .
Materials and Methods: Prospective cohort study was conducted in Shariati Hospital from April 2012 to May 2013. Forty patients were recruited through a prospective cohort study and treated for septate uterus. Septum size was measured by hysteroscopy. Patients underwent hysteroscopic metroplasty with an equatorial semicircular loop cutting 12 resect scope. Some of them resected by 5 French hysteroscopic scissors. Patients

followed 2 months later by hysteron salpingography. The mean time of follow up for reproductive outcomes was 6.43±10.33 months.

Results: The mean age of patients was 31.5±3.02 years. In whole, 48 patients underwent hysteroscopic metroplasty. In 52.1% length of septum occupied two third of uterine cavity.8 patients were excluded from the study because of non-reproductive related complains. There were 29 pregnant patients (72.5%). 15patients became pregnant without intervention (51.7%). 14 patients had pregnancy under ART. Among pregnant population there were 9 miscarriages (31%), 3 preterm (13.3%) and 17 term delivery (50%). Live birth rate in our study was 68.9%.Incontrol hysterosalpingography; no patients had adhesion or residual ridge.

Conclusion: The findings of this study indicate that hysteroscopic septoplasty is acceptable for improving reproductive outcomes inpatients with septate uterus.

Key words: *Hysteroscopic septoplasty, Uterine septum, Pregnancy outcome.*

O-17

Effect of vitamin D insufficiency treatment on fertility outcomes in frozen-thawed embryo transfer cycles: a randomized clinical trial

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Introduction: Frozen-thawed embryo transfer has become an essential part of ART treatment. Fertility outcomes after frozen-thawed embryo transfer associate to several clinical factors. Vitamin D plays a role in reproductive physiology. Several studies have showed higher IVF outcomes in women with replete vitamin D. the aim was to determine whether treatment of vitamin D insufficient women can improve pregnancy rates of frozen-thawed embryo transfer cycles.

Materials and Methods: This is an interventional, randomized clinical trial. Serum 25-(OH) vit D level of 128 women who had undergone IVF/ICSI with cryopreservation of embryos was checked. 114 infertile women with insufficient serum vitamin D (less than 30 ng/ml) were included the study. 57women were treated with supplementary vitamin D, 50000 IU weekly, for 6-8 weeks and 57 women received no supplementation. 106 women completed frozen thawed embryo transfer cycles and included in the final analysis. Primary and secondary outcomes were chemical and clinical pregnancy respectively.

Results: Our study did not show any significant difference between vitamin D insufficient and treated women in term of chemical (29.40% vs. 29.10%, p=1.00) or clinical (25.50% vs. 21.80%, p=0.81) pregnancy rates.

Conclusion: Vitamin D insufficiency treatment is not associated with higher pregnancy rate in frozen-thawed embryo transfer cycles.

Key words: *Vitamin D, Infertility, IVF, Frozen-thawed embryo transfer, Pregnancy rate.*

O-18

Serum glutathione and oxidative stress in Iranian women with polycystic ovary syndrome

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Introduction: Oxidative stress is considered to be implicated in the pathophysiology of polycystic ovary syndrome (PCOS). This study was designed to evaluate the Glutathione (GSH) and oxidant/antioxidant status in Iranian women with PCOS and its contribution to the risk of atherosclerosis.

Materials and Methods: In this study, in 35 patients with PCOS and 30 healthy controls; lipid profile, hormonal parameters, serum GSH and oxidant (Malondialdehide)/antioxidant (total antioxidant capacity (TAC)) levels were analyzed using a spectrophotometric method; correlation analysis was made between these variables. Insulin resistance was calculated by homeostasis model assessment (HOMA-IR).

Results: Women with PCOS had significantly higher fasting insulin, HOMA-IR and LH levels than controls. Lipid profiles and free androgen index (FAI) were significantly higher in women with PCOS when compared with controls. Serum GSH was lower in the PCOS group in compared with controls, whereas malondialdehyde levels were higher in the PCOS group in compared with controls. Total antioxidant capacity was lower in the PCOS group in compared with controls. In PCOS group, GSH levels was positively correlated with HDL-C ($r=0.425$, $p<0.05$) and TAC ($r=0.582$, $p<0.01$) but inversely correlated with HOMA-R ($r=-0.54$, $p<0.01$), testosterone($r=-0.672$, $p<0.01$), FAI ($r=-0.546$, $p<0.01$) and malondialdehyde ($r=-0.610$, $p<0.01$).

Conclusion: Our data indicate that GSH and antioxidant status were significantly decreased in Iranian women with PCOS. Lower serum GSH might contribute to the increased susceptibility for the development of atherosclerosis risk in Iranian women with PCOS.

Key words: *Glotathione, Polycystic ovary, Antioxidant, Malondialdhyde.*

O-19

Antioxidant and estrogen combination in induction ovulation of infertile women

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Introduction: Many studies reported that antioxidants such as vitamin E, vitamin C help to scavenge the oxygen radicals throughout the female reproductive tract that might improve the infertility treatment. The aim of this research is adjusted a regimen that is a combination of antioxidant and ovulation induction drugs and evaluation of pregnancy rate.
Materials and Methods: This is a clinical study which was done on 101 infertile women that referred to Dr. Rasekh clinic in Jahrom city. Results are reported as number and percentage and the Chi-square test .All these patients were treated with regimen include letrozole+ tamoxifen+ estrogen+ Vitamin E. Most of the women in this study were in range of 20-30 years old (63.4%). 24.8% of patients were case of PCO syndrome. Frequency of pregnancy was reported based on endometrial quality, endometrial thickness and follicular size. Data was analyzed by SPSS.
Results: At the end of the study 25.7% of patients treated with this regimen were pregnant. 44.6% of follicular sizes were more than 18 mm. 68.7% of patients had high quality of endometrium (triple layer & lucid). 71.6% of endometrial thickness was more than 8 mm.
Conclusion: Based on the results of this study, this regimen can improve the endometrial quality and thickness which are required for successful implantation of fetus in uterus. Also this regimen had acceptable effects on follicular size which is one of the basic steps in success of ovulation induction. Pregnancy was occurred in 1 woman between 4 infertile women. Another important factor; availability of drugs, low cost.
Key words: *Infertility, Antioxidants, Letrozole, Tamoxifen, Estrogen.*

O-20
Comparison the results of intra uterine insemination cycles in PCOD patients which have agonist administration with the risk of OHSS with those who had just intercourse.

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Introduction: Some IUI involve controlled ovarian hyper stimulation, which is the simulation of the ovaries to make more than one egg per cycle. Ovarian hyper stimulation syndrome (OHSS) is a serious, life threatening complication resulting from this process where the ovaries become more stimulated than planned. We evaluated the IUI outcome in our PCOD's patients with the risk of OHSS that received agonist (Buserline) in comparison with group who have just had intercourse instead of receiving agonist.
Materials and Methods: This study was performed between 2012 and 2013 in Novin Infertility Treatment Center (Mashhad, Iran). We examined IUI cycles of 245 PCOD's female with risk of OHSS. 176 females received agonist and 79 females have just had intercourse. It is explained in all of cases, spermogram was normal.
Results: IUI outcome was compared regarding clinical and ongoing pregnancy rate (PR) and abortion rate (AR). No difference was found regarding the number of follicles, age of females, BMI and sperm quality or process between the groups. Pregnancy rate in agonist group was more than the other group (p=0.05).
Conclusion: Our results suggest that in patients with PCOD and risk of OHSS administration of agonist (Buserline) have better result in pregnancy rate in comparison with patients who have just had intercourse.
Key words: *IUI, Pregnancy rate, PCOD, OHSS.*

O-21
The effects of hysteroscopy on pregnancy rate before in vitro fertilization-embryo transfer

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Introduction: Recurrent implantation failure (RIF) may be due to unrecognized uterine pathology. Hysterosalpingography, transvaginal ultrasonography, saline infusion sonography and hysteroscopy are the tools to assess the inner architecture of the uterus. Hysteroscopy is considered to be the gold standard; however, the validity of hysteroscopy may be limited in the diagnosis of endometritis and endometrial hyperplasia. We evaluated the ICSI outcome for females who have hysteroscopy before embryo transfer in comparison with groups who have embryo transfer without hysteroscopy.
Materials and Methods: This study was performed between 2012 and 2013 in Novin Infertility Treatment Center (Mashhad, Iran).We examined ICSI cycles of 600 patients. For 300 patients embryo transfer was done without hysteroscopy and for 300 patients hysteroscopy was done before embryo transfer.
Results: Hysteroscopy finding, implantation rate (IR), clinical and ongoing pregnancy rate (PR) were measured. Fertilization and implantation were similar between the groups. No difference was found regarding the number of transferred embryos (on day 2 or 3) and cryopreserved embryos, multiple pregnancies, abortion rates or transfer's drug protocol between the groups. Pregnancy rate in group that have hysteroscopy before embryo transfer was more than the other group (p=0.05). 36.6% of the study population had abnormal hysteroscopic findings and 22.2% had unsuspected findings.
Conclusion: Hysteroscopy in asymptomatic woman prior to their first IVF cycle was found to be associated

with improved chance of achieving a subsequent clinical and ongoing pregnancy when performed just before commencing the IVF cycle. Women with 2 implantation failures after IVF had a remarkably high possibility for unsuspected abnormalities on hysteroscopy. The procedure was safe.

Key words: *Hysteroscopy, Pregnancy rate, IVF, Recurrent implantation failure (RIF).*

O-22

A new technique of surgery for a severe mullerian anomaly

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I am reporting ten cases with vaginal agenesia, but normal uterus and ovaries which vaginoplasty by using amniongraft was done and the uterus was connected to the end of new vagina, and the uterus was kept. Now, they have monthly menstruation. The married patients are now very good candidate for using surrogacy. I believe this technique first has been done in our center.

Key words: *Vaginoplasty, Amniongraft.*

O-23

Effect of vitrification on expression level of DNA methyltransferase3b (Dnmt3b) in mouse ovary

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Introduction: Cryopreservation of ovarian tissue is paramount for fertility preservation, with important clinical applications; especially for women suffering from an oncological condition. Vitrification has recently emerged as a new trend for biological specimen preservation. On the other hand, gene expression changes during vitrification can influence oocyte maturation and need to be studied. Methylation of mammalian DNA is a major epigenetic regulatory mechanism that plays a special role in gene expression regulation. *Dnmt3b* is responsible for de novo methylation and essential for genome stability, imprinting and embryonic development. The aim of the present study was to evaluate the effects of vitrification on mRNA expression level of DNA methyltransferase3b gene.

Materials and Methods: Ovaries of 4-6-week old NMRI female mice were placed in two control and needle immersed (NIV) vitrification groups. In vitrification group, ovaries were transferred into equilibration and vitrification medium, and then immersed in liquid nitrogen after loading by acupuncture needle. Parallel to vitrification process, morphology of ovarian tissues in control and vitrification group were analyzed and compared by using hematoxylin & eosin staining. Then, the expression of *Dnmt3b* gene was investigated by real-time PCR.

Results: In morphological analysis, ovarian tissue integrity was well preserved in vitrification group and was similar to the control group. However, the result of this study showed that the expression level of *Dnmt3b* gene in vitrification group was significantly higher in comparison with control group ($p<0.05$).

Conclusion: Our finding can be considered as an evidence for differential expression pattern of genes in vitrified ovary tissues through cryopreservation process.

Key words: *Epigenetic, Vitrification, Ovary, DNA methyltransferase3b.*

O-24

Effects of prednisolone on pregnancy outcomes among infertile patients undergoing intra cytoplasmic sperm injection (ICSI)

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Introduction: Regarding the develops of treatment and management of infertility during recent three decades, success of these methods is limited, due to explaining of autoimmune mechanisms in unsuccessful outcomes in ICSI cycles, glucocorticoids may be could get better success in ICSI cycles by reduction of immune cells in uterus and blood circulation of patients. Therefore this study tried to show how corticosteroid therapy improves the results of ICSI.

Materials and Methods: This randomized clinical trial study was included infertile women were candidate for ICSI in Kosar infertility center- urmia medical sciences university between 2011-2013. 134 patients equally were divided to the study. Prednisolone get started from one day before embryo transfer, 20 mg/daily to 7 days and continued with10 mg/daily for next 7 days. The day of 15 after transfer Prednisolone was stopped. On the 16 days after transfer pregnancy test were did and positive results were followed on 6 weeks and monthly.

Results: In prednisolone group, 32 (47.8%) had chemical pregnancy vs. 32 (47.8%) in control group.

Clinical pregnancy rate was 28(41.8%) and 22(32.8 %) of prednisolone vs. control group, blighted ovum were 2 (6.7%) and 4 (15.4%) in trial vs. control group. Abortion was 4 (13.3 %) in prednisolone group and 7 (26.9%) in control group. In all results there was no significant difference between two groups (p>0.05).

Conclusion: Prednisolone improved pregnancy outcomes including chemical pregnancy, appearance of fetus heart and abortion before 20 weeks but there was no significant difference between two groups.

Key words: *ICSI, Prednisolone, Pregnancy outcomes, Infertility.*

O-25
Impact of body mass index versus physical activity and calorie intake on assisted reproduction outcomes

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Introduction: To measure the effect of body mass index (BMI) versus calorie intake and physical activity (PA) on the outcome of assisted reproductive treatment.

Materials and Methods: A prospective study was performed on 236 infertile women who underwent in vitro fertilization. BMI, level of PA and calorie intake were assessed at study entry and associations between these variables and assisted reproduction outcomes were analyzed. Participants were divided into four groups based on BMI and PA: normal BMI/inactive, overweigh/inactive, overweight/ active and normal BMI/ active.

Results: BMI, adjusted for age and PA, calorie intake and etiology of infertility was not associated with the number of oocytes retrieved, fertilization rate, cleavage rate, number of embryos, number of high-quality embryos and pregnancy rate. for women aged <36 years, the number of oocytes and the number of embryos decreased with increasing BMI, independent of calorie intake and PA. The number of oocytes was significantly higher in women of normal weight compared with overweight women, regardless of the level of PA.

Conclusion: Age has strong negative effect on assisted reproduction treatment parameters. Increased BMI, independent of calorie intake and PA, has an adverse effect on the number of oocytes in women aged <36 years; but does not affect the number of high-quality embryos or success of treatment cycle.

Key words: *Body mass index, Physical activity, Calorie intake.*

O-26
Uterine fibroid embolization and pregnancy outcome

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Introduction: Uterine fibroids are common in reproductive age. Around 10-20% of women who have fibroid require treatment and 1%-2% of infertility in women is due to fibroids. To determine and compare fibroid treatment effects on fertility, and to review the role of uterine fibroid embolization (UFE) in pregnancy outcome.

Materials and Methods: A literature review was undertaken to include the published articles about UFE between 1995-2014.

Results: Gn-RH agonists treat fibroids by blocking the estrogen and progesterone releasing, cause a postmenopausal situation and decrease the fibroid size. Usual surgical procedures contain hysterectomy and abdominal myomectomy. Minimally invasive procedures like laparoscopic or robotic myomectomy are less invasive. Hysteroscopic myomectomy, endometrial ablation and sub mucosal fibroid resection are vaginally options. New non-invasive method, Magnetic Resonance Guided Focused Ultrasound is under research. UFE is a less invasive procedure, preserve uterus and requires a small incision into the femoral artery for using microspheres or polyvinyl alcohol particles to block the blood supply to the uterine fibroids, causing them to shrink. Numerous successful pregnancies after UFE have been reported. In Ravina's study, among 184 women who had UFE, 12 unexpected pregnancies occurred. McLucas reported that 22 of the 28 pregnancies after UFE were normal full term pregnancy. He compared the pregnancy rate of his cohort study after UFE (47.7%) to abdominal myomectomy where was in the range of 10-46%, laparoscopic myomectomy (16-33%), and hysteroscopic myomectomy (8-35%).

Conclusion: UFE as an acceptable fibroid treatment should be considered in young women, as benefits, risks and further fertility evaluation is suggested.

Key words: *Uterine fibroid embolization, Uterine arterial embolization, Pregnancy outcome, Magnetic Resonance Guided Focused Ultrasound, Fibroid treatment.*

O-27
The effects of intrauterine injection of human chorionic gonadotropin (hCG) before embryo transfer on the implantation rate in the intracytoplasmic sperm injection (ICSI) program

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Introduction: HCG as the first embryonic signal has receptors in the endometrium and therefore has systemic and local effects on the embryo-endometrial cross-talk

during implantation. We investigate the effect of intrauterine injection of hCG before embryo transfer (ET) on the implantation (chemical pregnancy) rate in ICSI program.

Materials and Methods: This double-blind randomized controlled trial was performed on 80 candidates for ICSI. They were randomly assigned into two groups: the treatment group received intrauterine injection of 500 units hCG dissolved in 40 µl of embryo transfer media and controls received only 40 µl of embryo transfer media exactly 10 minutes before the ET. All other interventions were the same in the two groups. Implantation rate was checked as positive serum β-hCG 2 weeks after the ET.

Results: The patients included 42 women in the treatment group and 38 women as controls. There was no significant difference between the treatment and control groups in terms of age (29.5±5.4 and 29.3±4.4 years), infertility duration (3.9±3.2 and 4.1±3.8 years), type of infertility (83.7% and 89.3% primary infertility), number of M_{II} oocytes (11.1±5.6 and 9.1±5.0), and number of transferred embryos (2.8±0.8 and 2.9±0.7), respectively. Implantation rate was 38% in the treatment group and 27% in controls (p=0.27).

Conclusion: The higher implantation rate in the treatment group was clinically significant. Therefore, it seems that intrauterine injection of hCG before ET in the ICSI program increases the implantation and consequently the pregnancy rate. A study with larger sample size is recommended for more definite conclusion.

Key words: *ICSI, hCG, Implantation Rate, Pregnancy rate, Intrauterine hCG.*

O-28

Correlation between women age and oocyte quality, embryo formation and pregnancy outcomes in assisted reproductive technology (ART) cycles: a retrospective analysis

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Introduction: To estimate the effect of women age on assisted reproductive technology (ART) outcomes.

Materials and Methods: In a retrospective study, a total of 1560 in vitro fertilization (IVF) and intracytoplasmic sperm injection (ICSI) cycles were initiated in different age-groups women. Patient's data including Age, number of retrieved oocytes and matured oocytes, types of ART procedures, number of fertilized oocytes, zygote and embryo scores, as well as, pregnancy and delivery rates were ascertained by records review and face-to-face follow-up.

Results: The results showed a significantly negative correlation between age of patients and the number of oocytes retrieved (p<0.01), mature oocytes (p<0.001), and fertilized oocytes (p<0.01) in five age- groups. We found no significantly differences in the number of mature oocytes in the 26-30 age group with the women who aged between 31 and 35 (p=0.066). The zygote and embryo scores only showed a significant negative correlation with age in women more than 40 years of age (p≤0.01 for each). However, a statistically negative correlation was found between the age of women with clinical pregnancy and delivery rates (p=0.031 and p=0.006, respectively). No striking differences found in pregnancy rate between IVF and ICSI procedures (p=0.095 and p=0.117, respectively).

Conclusion: The women age negatively influences outcome of assisted reproductive technology treatment.

Key words: *Women age, Pregnancy rate, Intracytoplasmic sperm injection, In vitro fertilization.*

O-29

Evaluation of plasma creatine phosphokinase (CPK) level following a single injection of methotrexate as a predicator of treatment success in ectopic pregnancy

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Introduction: To evaluate the plasma creatine phosphokinase (CPK) level after a single injection of methotrexate (MTX) as a predictor of treatment success in ectopic pregnancy (EP).

Materials and Methods: In this prospective study, 79 women >18 years treated with methotrexate for EP were evaluated for CPK and β-subunit of human chorionic gonadotropin (βhCG) levels, while they received intramuscular MTX at a dose of 50 mg/m2. The day of injection was considered as day 1 (D1). CPK on D1 was compared between the group 1 (as treatment success group), treated by a single MTX injection, and the group 2, treated by two or three MTX injections or by surgery.

Results: The success rate of MTX treatment was 58 (73.3%). The mean of CPK was higher in group1 than failure group (group 2) (71.98±15.711 vs. 64.43±15.898), but the difference wasn't significant (p=0.06). The mean of βhCG was significantly lower in group 1 than group 2 (1187.52±631.45 vs. 1663.87±1096.845; p=0.01). Ultrasonographic findings of EP were seen in 63 patients, while the means of βHCG and CPK were higher in these patients than those with normal ultrasonography, but difference wasn't significant (p=0.37, p=0.24, respectively).

Conclusion: The sample wasn't large enough to indicate a significant difference in the CPK, which can be considered as an indicator for differentiating between group 1 and group 2. This study didn't show any relation between initial β-hCG and CPK levels, so our

findings indicate that they aren't possibly considered as two independent biomarkers in EP.
Key words: *Methotrexate, CPK, Ectopic Pregnancy, Treatment.*

O-30
Spontaneous uterine rupture during pregnancy

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Introduction: Rupture of gravid uterus is a surgical emergency. Predispoising factor include a scarred uterus. Spontaneous rupture of unscarred uterus during pregnancy is rare occurrence.
Materials and Methods: In this report we describe a case of uterine rupture in an unscarred uterus at gestational age 30 week in a 30 years old patient gravid one.
Results: She presented with tachycardia and dizziness and weakness and decreased hemoglobin and an emergency laparatomy was performed which find the rupture of fundus of uterus and fetus trapping.
Conclusion: This case report show that abnormal architecture of the uterine cavity (blind uterus horns) is a risk factor for the presence of uterine rupture.
Key words: *Pregnancy, Uterine rupture.*

O-31
Elevated CD 56 dim and CD 56 bright natural killer cells in peripheral blood of women with IVF failures

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Introduction: Some studies support the concept that NK cells play an important role in the success or failure of embryo implantation. Some couples suffer from infertility of unknown cause. In vitro fertilization (IVF) is one of the useful treatment methods used for treatment of this type for infertility with variable outcomes. The aim of this study was to compare the percentage of peripheral blood CD56 (+) (CD 56 (dim) and CD 56 (bright)) cells and the level of NK cell in patients with IVF failure with those of successful IVF control women.
Materials and Methods: In this case-control study (prospective-follow up) peripheral blood samples from 50 patients, who included 34 with IVF failure, plus 16 women with successful IVF, were collected. The percentage of peripheral blood NK cells (CD56 (+)) was identified by flow cytometry.
Results: The percentage of CD 56 (dim) cells and the level of peripheral blood NK cell in IVF failure were significantly higher than in successful IVF control groups ($p<0.05$).
Conclusion: The findings of the present study suggest that increases in the percentage of CD56 (dim) cells in peripheral blood may be important contributing factors for IVF failure. Our results suggest considering treatment option for women undergoing repeated IVF failure with increased percentage of CD56 (dim) cells and the level of peripheral blood NK cell.
Key words: *Natural killer cell, Infertile women, In Vitro fertilization.*

O-32
Effect of soy phytoestrogen on metabolic and hormonal disturbance of women with polycystic ovary syndrome

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Introduction: Infertility is an increasing medical and social problem. Recently, In Vitro Fertilization (IVF) has become a common and accessible treatment for a wide variety of indications that have variable outcomes. NK cells have been identified as relevant immunological factors involved in reproductive success or failure. The aim of this study was to compare the percentage of peripheral blood CD56 (+) (CD56 (dim) and CD56 (bright)) cells and the level of NK cell in patients with IVF failure with those of successful IVF control women.
Materials and Methods: We assessed the level of CD56dim CD16+ and CD56 bright CD16 cells in 50 women under IVF treatment and were comparing between successful IVF and IVF failure with the flow cytometry examination.
Results: 58% of women did not response to IVF therapy and 42% had successful IVF, the level of CD56dim $CD16^+$ cells in women with IVF failure was significantly higher than successful IVF($p<0.0001$) but the level of CD56bright CD16 cells was not significantly different between women with IVF failure and successful IVF ($p=0.28$).
Conclusion: The results of the present study demonstrated that the level of CD56 dim CD16+ cells is associated with pregnancy loss in women with IVF failure but the level of CD56 bright CD16 cells was not significantly different between women with IVF failure and successful IVF. However further study with more sample size are need to be done. We suggest considering treatment option for women undergoing repeated IVF failure with increased percentage of CD56 (dim) cells and the level of peripheral blood NK cell.
Key words: *NK Cell, CD56, IVF Failure.*

O-33
A comparative study of vaginal estrogen cream and sustained-released estradiol vaginal tablet (vagifem) in the treatment of atrophic vaginitis among postmenopausal women

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Introduction: Atrophic vaginitis is a disease which affects up to 50% of post menopausal women. This study compared the effectiveness and user-friendliness of Vagifem (an estradiol vaginal tablet) and vaginal estrogen cream in treatment of atrophic vaginitis.
Materials and Methods: One hundred and sixty postmenopausal women with symptoms of atrophic vaginitis were randomly divided into 2 groups of treatment with Vagifem or with vaginal estrogen cream for 12 weeks. Patients used the medication daily for the first 2 weeks of the study, and twice-weekly. Severity of vaginal atrophy and 4 main symptoms of atrophic vaginitis including dysuria, dyspareunia, vaginal it ching and dryness were evaluated and compared pre and post treatment. In addition, patients were asked regarding user-friendliness and hygienicissues of medications.
Results: Both vaginal estrogen cream and Vagifem significantly improved symptoms of atrophic vaginitis, but, in terms of effectiveness, there was no significant difference between 2 medications. Vagifem resulted in significantly lower rate of hygienic problems, and was reported by the patients as a significantly easier method of treatment ($p<0.0001$). Vagifem treated patients experienced fewer endometrial proliferation or hyperplasia compared with patients who were using the vaginal cream.
Conclusion: This investigation showed that Vagifem is an appropriate medication for the treatment of atrophic vaginitis which is as effective as vaginal estrogen creams, and is more user-friendly.
Key words: *Atrophic vaginitis, Estradiol vaginal tablet, Vagifem, Vaginal estrogen cream, Patient acceptability, Postmenopausal women.*

O-34
The value of interleukins-1 alpha in the diagnosis of endometriosis: A case-control study

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Introduction: The first study to compare the value of cervico-vaginal fluid of interleukin (IL)-1 alpha in patients with and without endometriosis. Design: Case control study. Setting: Shahid Beheshti and AlZahra teaching hospitals in Isfahan, Iran. Patient(s): The endometriosis group included 25 patients with laparoscopically and histopathologically confirmed endometriosis. The control group included 25 women without any evidence of endometriosis or any other genital disease.
Materials and Methods: Intervention(s): Cervico-vaginal fluid samples were obtained from patients during the follicular phase and pre up surgery. Main Outcome Measure(s): The levels of IL-1 alpha in cervico-vaginal fluid were determined and compared between patients with and without endometriosis.
Results: The cervico-vaginal fluid level of IL-1 alpha in cases was significantly higher than controls (210.44 ± 40.11 versus 54.28 ± 25.73 pg/mL, respectively, $p<0.0001$). Area under the curve of cervico-vaginal fluid IL-1 was 1.00 (95%CI: 0.928-1), and cut-off point was 105 pg/mL, with a sensitivity of 100% (95%CI: 86.2-100), and specificity of 100% (95%CI: 86.2-100). Using this cut-off point odd ratios was 2.3904 (95%CI: 0.00-4.19) in the prediction of endometriosis.
Conclusion: Our results show that a significant increase in the cervico-vaginal fluid levels of IL-1 alpha, in women with endometriosis, and it can be a useful marker in the prediction of endometriosis
Key words: *Endometriosis, Cervico-vaginal fluid, Interleukin, Cytokine, Interleukins-1 alpha.*

O-35
Study of Dehydroepiandrosterone (DHEA) to Treat Previously Unexplained Infertility

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Introduction: The aim of this study was to investigate the effect of the length of follicular phase and treatment with dehydroepiandrosterone (DHEA) on fertility outcomes among women with unexplained infertility and premature ovarian aging.
Materials and Methods: This was a longitudinal study in an academically affiliated private infertility center. Two hundred women with unexplained infertility previously diagnosed and diminished ovarian reserve based on currently presented age-specific levels of FSH and AMH had serial ovulation induction with concomitant use of DHEA dietary supplementation. Women received 75 mg of DHEA daily (25 mg three times daily) for an average of 16.6 ± 2.13 weeks. We performed a comparison of sonographic and hormonal parameters in natural and induction cycles with before and after DHEA treatment, including follicles numbers, the length of follicular phase and endometrial thickness.
Results: the results demonstrated significant increase in the length of follicular phase ($p=0.001$) and pregnancy rate ($p<0.001$) after DHEA treatment.
Conclusion: This study confirms significantly the effects of normal length of follicular phase on pregnancy rate and the beneficial effect of DHEA supplementation on it in patients with unexplained infertility and premature ovarian aging based on new age-specific levels of FSH and AMH.
Key words: *Dehydroepiandrosterone, Unexplained infertility, Premature ovarian aging.*

2- Embryology, Genetics, Stem Cell

O-36
Determining daz genes copy number in idiopathic non-obstructive azoospermic and oligospermic men

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Introduction: Three distinct Azoospermia Factor (AZF) regions on the long arm of the Y chromosome (AZFa, AZFb, and AZFc) are essential for normal spermatogenesis. Four copies of the *DAZ* genes within the AZFc region are 99.99% identical which have the highest frequency of deletion in men with azoospermia and oligozoospermia. The multicopy nature of *DAZ* has limited the understanding of its actual role in human spermatogenesis. The current study was designed to evaluate the role of *DAZ* deletions and duplications in spermatogenesis.
Materials and Methods: Totally, 115 azoospermic, 41 oligozoospermic and 113 fertile healthy men as controls were recruited for this study. AZFc region deletions and DAZ copy number changes were analyzed using six STS markers sY1191, sY1161, sY1197, sY1291, sY1206, sY1201. The presence and absence of each *DAZ* gene was evaluated using two STS markers sY581, sY587 by PCR and RFLP. Also copy numbers were analyzed by comparison of number of *DAZ* genes to the autosomal *DAZL* by Quantitative PCR followed by fragment analysis.
Results: The gr/gr deletions were seen in 6.9, 7.3 and 1.7% of azoospermic, oligozoospermic and fertile men, respectively. On the other hand, b2/b3, b2/b4 deletions were found only in azoospermic group with a frequency of 4.3, 1.7% in each deleted region. And whole AZFc region deletions were found in 0.86 and 0.88% of the azoospermic and fertile men, respectively. Results of fragment analysis showed that deletions of *DAZ* copies with 1:1 ratio (*DAZ/DAZL*) were 5.2, 7.3 and 0.88% in azoospermic, oligozoospermic men and controls, respectively. *DAZ* copies with 0:1 ratio was 26.08 and 0.8% in azoospermic and fertile men, respectively. *DAZ* copies duplications with 3:1 ratio was 7.8, 2.4 and 7.9% and with 4:1 ratio was 16.5, 17.01 and 4.4% in azoospermic, oligozoospermic men and controls, respectively.
Conclusion: The results of RFLP comparing to the STS-PCRs were not analyzable, suggesting a specific Y haplo groups in Iranian population that differ to the previous known haplo groups. Decreasing of *DAZ* copy number was associated with oligozoospermia, while neither azoospermia nor oligozoospermia was associated with increasing of *DAZ* copies.

Key words: *DAZ, AZFc, Azoospermia, Oligozoospermia, Fragment analysis.*

O-37
The effect of Eicosapentaenoic acid (omega-3) on the expression of PGR in cumulus cells on mice

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Introduction: Despite the known benefits of omega-3 fatty acids on health, there is little knowledge of its effect on fertility. Omega-3 fatty acids can modify gene and protein expression through altering the function of transcription factors controlling gene expression. Cumulus expansion, is a critical process for normal oocyte development, ovulation, and fertilization, this event needs to the synthesis of Progesterone receptors. The aim of this study was to determine if Omega-3 can affect on the expression of PGR in Cumulus cells.
Materials and Methods: 30 female mice were kept in standard condition. Female mice were super ovulated with 10 unit hMG and 48 hours later 10 unit HCG as IP injection. for the collection of cumulus- oocyte complexes (COCs) mice were killed 36 hours later by cervical dislocation and COCs were collected from 6-8 weeks old bulb/c female mice oviduct by flashing method .COCs were cultured in 20cc universal medium supplemented with 20 omega-3 and overlaid with mineral oil and incubated for 4-6 hrs at 5% CO2 and 37^{o}C. Surrounding cumulus cells were removed mechanically by using 20 hyaluronidase. The cumulus cells was stored at- 80^{o}C until real-time PCR. PCR was performed by using a master mix containing CYBR green. The expansion level of mRNA PGR was evaluated by real-time PCR.
Results: The result showed that the level of expansion of PGR in experimental group comparing with control was significantly increased.
Conclusion: The result indicates that omega-3 could improve Cumulus expansion through increasing the amount of expansion of PGR.
Key words: *omega-3, PGR, Cumulus cells.*

O-38
Investigation of expression pattern of stem cell markers of mice uterine tissue in the presence of steroid hormones

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Introduction: Fluctuating levels of circulating estrogen and progesterone orchestrate regeneration of uterine tissue. It has been postulated that stem cells are likely responsible for this remodelling. The aim of this study was to investigate the effect of estradiol and progesterone hormones on the Oct4 and Sox2expression at the protein level of uterine tissue in the ovariectomized mice.
Materials and Methods: Adult female NMRI mice were underwent ovariectomy operation. After two weeks, following 5 days of treatment with 17β-estradiol, progesterone and combination of estradiol & progesterone, uterus was removed and Immunohistochemical staining (IHC) of pluripotent markers (Oct4 and Sox2) were performed on the paraffin sections of middle region of uterus horn.
Results: IHC staining revealed different expression locations of the Oct4 and Sox2 in the endometrium and myometrium of treated groups. Oct4 and Sox2 expression were seen innuclei of few number of cells in the estradiol-treated group, whereas the Oct4 and Sox2 overexpression were detected in the cytoplasm of a large number of cells (non- pluripotent cells) in the endometrium and myometrium of progesterone treated groups.
Conclusion: The present study indicated that expression of the Oct4 and Sox2 at protein level in the uterine tissue were affected by steroid hormones.
Key words: *Steroid Hormones, Stem Cells, Uterine tissue.*

O-39
Association of plasminogen activator inhibitor-1 (PAI-1) polymorphisms with recurrent pregnancy loss

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Introduction: Recurrent pregnancy loss (RPL) refers to the occurrence of two or more consecutive losses of clinically recognized pregnancies prior to the 20th week of gestation. Several factors play a role in recurrent pregnancy loss (RPL) including thrombophilic conditions which can be influenced by gene polymorphisms. Plasminogen activator inhibitor-1 (PAI-1) is involved in the fibrinolytic process, and several studies have reported the association between this gene polymorphism and recurrent pregnancy loss (RPL).
Materials and Methods: We studied the PAI-1 4G/5G polymorphism in women with recurrent abortion. 100 patients with recurrent abortions (at least two) as cases and 100 healthy female with two or more normal term deliveries and without a history of abortion selected as controls. Total genomic DNA was isolated from blood leukocytes. The status of the PAI-1 4G/5G polymorphism was determined by PCR-RFLP. Amplifying the corresponding region of genomic DNA followed by treatment with restriction enzyme Bse RI.
Results: Homozygosity for PAI-1 4G polymorphism was seen in 17 cases (17%), in contrast to 5 persons in the control group (5%), (p=0.006) and patients with homozygote 4G mutation were significantly more prone to RPL in contrast to others (OR: 4.63, % 95 CI: 1.55-13.84).
Conclusion: Considering these results, because 4G/4G polymorphism for PAI-1 gene could be a thrombophilic mutation leading to abortion, Analysis of this mutation and other suspected factors such as MTHFR and FV Leiden is recommended in patients with RPL.
Key words: *Recurrent pregnancy loss, Thrombophilia, Plasminogen activator inhibitor-1, (PAI-1).*

O-40
Is time for using non-invasive pre-natal diagnosis for genetic disorders?

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Introduction: Prenatal screening for aneuploidy is offered to all pregnant women and is undertaken in two phases: screening and risk assessment followed by invasive prenatal diagnosis of high risk cases. The gold standard for diagnosis of chromosomal abnormalities is karyotyping of fetal cells obtained via invasive procedures; chorionic villus sampling and amniocentesis. However, a small but significant risk to the pregnancy is remained.
Materials and Methods: During last three decades several attempts have been done to use fetal cell from maternal blood as a non-invasive prenatal Diagnosis (NIPND). A multi centric assay was done during more than ten years. Our results confirmed from results of PND with the NIPND using homemade centrifugation and followed by FISH techniques for trisomy 21 and 18. In 36 cycles the results from both fetal cells obtained confirmed each other.
Results: Also, from literature the results of others institutions during last decade will be discussed.
Conclusion: From all results, it would be recommended to perform NIPND to provide sufficient information about all 23 chromosomes from week 8, and followed by scanning schedule. For gene abnormality also can be used for screening the fetal condition.
Key words: *Non-invasive PND, Aneuploidy, Fetal abnormality.*

O-41
Performance of PCR method on Amelogenin gene in maternal blood for sex determination of embryos

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Introduction: Sex determination can not only be used for forensics investigations but can also be useful in prenatal diagnosis of fetus x-linked diseases and diagnosis of fetal abnormalities. Recently, the molecular techniques has special place and are highly important to determine gender. PCR methods using sequences that are both in X and Y chromosomes, such as ZFY and ZFX, Steroid Sulfatase (STS), Amelogenin gene, or only are on the Y chromosome like: SRY, DYS14, DYS1. Techniques used for sampling of the fetus are divided into two groups including invasive methods such as, chorionic villus sampling (CVS), Amniocentesis Precutaneous umblical blood sampling (PUBS), Fetal tissue sampling (FTS) methods and non-invasive methods that includes the detection of cell-free fetal DNA in serum or plasma.
Materials and Methods: Maternal blood samples were collected and DNA was extracted from blood samples using modified phenol-chloroform extraction procedure. The primers of the Amelogenin gene were designed to yield products that would be readily distinguishable by their sizes upon agarose gel electrophoresis.
Results: All of amplified samples which had been shown a single 467-bp fragment were interpreted as female and the others involved both the 467 and 341 bp amplification products were interpreted as male. This method could detect accurately the sex of male and females embryos by 90%.
Conclusion: This assay provides a rapid and sensitive method for gender determination. The success of the procedure can be monitored by the presence of the X-chromosome band. The method contains an internal control which detects PCR failure. Two important merits of this research are its feasibility and reliability. All of these processes can be carried out in a regular laboratory or at an outside workstation and results are available within ten hours. By using PCR method on Amelogenin gene favorable results for sex determination of the fetus in the first trimester of pregnancy were obtained.
Key words: *PCR, Amelogenin, Sex determination, Maternal blood, Embryos.*

O-42
Effect of oxidative stress on KDM5D expression in mature mouse testis

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Introduction: Male factors are important causes of infertility. Two major causative factors of male infertility are oxidative stress (OS) and genetic factors. OS damages the sperm plasma membrane, the genome integrity and expression profile of genes involved in spermatogenesis. *KDM5D* or *SMCY* is one of these genes which its alteration is associated with male infertility. In this study the expression profile of *KDM5D* gene was evaluated in testis tissues of infertile after OS induction.
Materials and Methods: Oxidative stress in adult mice testis was induced by injection of the 1:10 concentration of tertiary-butyl hydro-peroxide (TBHP). Adult male Balb/c mice were randomly selected. Case group included treated mice by TBHP for 2 weeks and control group treated only by injection of dH_2O. Induced ROS levels in testes tissue samples of all mice measured by flow-cytometry. Consequently the expression of *KDM5D* gene was quantitatively measured in samples of both groups by real-time PCR.
Results: According to flow-cytometry results, an increase of oxidative stress in ROS treated mice in comparison to control group was observed. Moreover, the expression level of *SMCY* gene was significantly decreased in TBHP treated mice ($p<0.01$).
Conclusion: Oxidative stress can have detrimental effects on testicular tissue and alters the expression of some genes which are involved in spermatogenesis.
Key words: *Oxidative stress, KDM5D, Male infertility.*

O-43
Morphological and ultrastructural studies of human spermatogonial stem cells from patients with maturation arrest

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Introduction: Destruction of spermatogonial stem cells (SSCs) along the cancer cells is one of the side effects of cancer treatments that can produce infertile patients. To preserve fertility in these patients, one hypothesis was that testicular biopsies are obtained prior to the treatment, and SSCs are isolated and preserved by cryopreservation and finally transplanted back into the patient's testis in a suitable time. Since small testicular biopsies do not contain sufficient SSCs to fully

repopulate the testis after transplantation, in vitro propagation of hSSCs will be necessary to obtain an adequate number of cells for successful transplantation.
Materials and Methods: hSSCs were isolated from testis biopsies and permitted to amplify in number by self-renewal in vitro in the presence of LIF and bFGF in DMEM for 5 weeks. Various types of human spermatogonia in culture system was identified and compared with testis tissue using morphological criteria, at the ultrastructural level.
Results: Although many differences in various types of spermatogonia were identified but approximately were not observed remarkably difference between spermatogonial cells in culture system and testis tissue. Electron and light microscopic studies of hSSCs colonies and also assessment of gene expression did not show differentiated SSCs in the culture system.
Conclusion: The results also showed that two-three weeks after culture is probably suitable time for transplantation of SSCs in recipient testis because in this time apoptosis has not been started in colony cells so that the population of apoptotic cells is low in the culture system.
Key words: *Infertility, Spermatogonial Stem Cell, Human.*

O-44
YBX2 involved in down regulation of Protamin2 expression in testicular spermatids of azoospermic men

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Introduction: PRM_1/PRM_2 ratio is important in spermatogenesis and male fertility; on the other hand uncoupling of PRM_1 and PRM_2 expression involves in the infertility of males. But the mechanisms implicit in this condition remain unclear. In this regard, we compared PRM_1/PRM_2 mRNA ratio and mRNA contents of YBX2 and Jhdm2a genes as two expression regulatory factors of these genes.
Material and Methods: After RNA extraction and cDNA synthesis, Real-time quantitative (RT) PCR was used to evaluate the expression of PRM_1, PRM_2, YBX2 and Jhdm2a genes in testicular biopsies of 50 non-obstructive azoospermic and 12 normal testis tissues.
Results: The PRM_1/PRM_2 mRNA ratio was 0.21± 0.13 in azoospermic samples and -0.8±0.22 in fertile samples, which was a significant difference. The amount of PRM_2 mRNA was significantly reduced in azoospermic patients. Significant under expression of YBX2 gene was seen in azoospermic men in comparison to controls ($p<0.001$), and mRNA content of this gene showed positive correlation with PRM mRNA ratio ($R=0.6$, $p=0.007$). No significant difference was seen in Jhdm2a expression ratio between studied groups ($p=0.3$); no correlation was found between Jhdm2a mRNA content and the PRM mRNA ratio ($R=0.2$, $p=0.3$).
Conclusion: Our results suggested that down regulation of YBX2 gene may be involved in PRM_2 under expression, and this molecule can be a useful biomarker for predicting male infertility.
Key words: *Protamins, YBX2, Jhdm2a, Azoospermia.*

O-45
The effect of estrogen receptor α polymorphism on semen quality

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Introduction: Estrogens are recognized as one of the significant regulators of spermatogenesis. In the target tissue, estrogen function is mediated by estrogen receptors (ER-α or ER-β). Many studies identified some ESR_1 polimorphisms can affect semen parameters and etiology of male infertility.
Materials and Methods: A cohort of 264 infertile men who were referred to Royan Institute was evaluated. This group was consisted of 149 Nonobstractive Azoospermia and 115 oligo- asteno- terato zoospermia and ninety fertile men were enrolled as normal controls. All patients underwent a comprehensive examination, karyotyping and molecular test for Y chromosome micro deletion. All subjects had a normal karyotype and intact Y chromosome. DNA was extracted from whole blood, and amplification of ESR_1 was accomplished using PCR. RFLP was applied to determine rs2234693 (ESR1 pvuII C>T). Statistical analysis was performed using the Chi-square test.
Results: Both allele and genotype frequencies of rs2234693 were not significantly different among infertile men (Nonobstractive Azoospermia, oligo-asteno- terato zoospermia) and controls ($p>0.05$). Consequently, rs2234693 was not associated with semen quality.
Conclusion: Estrogen plays a critical role in male reproduction system. Previous studies have shown that intron positioned within an ORF can affect gene expression. Although, in the current study, no association was found between intronic polymorphism (rs rs2234693) of ESR1 gene and semen quality. To determine whether intronic polymorphism pvuII C>T of ESR1 is associated with alteration of ESRα expression in infertile men; we will investigate ESR1 gene expression in same samples with different genotypes.
Key words: *Male infertility, Estrogen receptor α, Polymorphism.*

O-46
Investigating the rate of SNP of H2BFWT gene in an Iranian population with idiopathic spermatogenesis impairment

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Introduction: Spermatogenesis is a complex process including spermatogonial stem cell proliferation, meiosis and spermatid differentiation. Genetic variation of those genes involved in this process may play an important role in impaired spermatogenesis. Histones are the major nuclear proteins in eukaryotic cell nuclei that are responsible for the nucleosome structure of chromatin. The H2B family member W, testis specific (H2BFWT) gene encodes a testis specific histone that plays a crucial role in reorganization and remodeling of chromatin and epigenetic regulation during spermatogenesis, suggesting that the gene may be involved in spermatogenesis impairment.
Materials and Methods: To test the speculation, the allele frequency of one single-nucleotide polymorphism locus in this gene, -9C >T was investigated in 92 infertile patients with idiopathic azoospermia or oligozoospermia and 100 fertile men as controls using polymerase chain reaction restriction fragment length polymorphism (PCR-RFLP) assay.
Results: As the results, the frequency of -9C>T (48.9% vs. 51.1%, p=0.470, OR=0.783, 95% CI=0.444-1.382) was similar between patients and those in controls; these frequencies were the same in allele as well, -9C >T for oligozoospermia or azoospermia.
Conclusion: These results indicated that the polymorphism -9C >T in H2BFWT gene is not associated with male infertility with idiopathic azoospermia or oligozoospermia in our patients, suggesting that H2BFWT gene may not be contribute to susceptibility to spermatogenesis impairment in Iranian population.
Key words: *H2BFWT, Single-nucleotide polymorphism, Male infertility, Spermatogenesis impairment.*

O-47
The relationship between sperm protamine deficiency and PRM1 and PRM2 genes changes in varicoceles

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Introduction: Varicocele is associated with impaired testicular function and male infertility, but the molecular mechanisms by which fertility is affected have not been satisfactorily explained. It has been demonstrated that patients with varicocele have a sperm DNA fragmentation index and anomalies than healthy fertile men. Protamines play an important role in DNA packaging within the sperm nucleus. In order to evaluate the association of PRM1, PRM2 and protamine deficiency in sperm of varicocele patients, this study was conducted.
Materials and Methods: In a case control study, 110 infertile men patients with varicocele and 105 controls were recruited. PRM1 and PRM2 gene mutations in extracted DNA samples, were assessed by PCR-denature polyacrylamide gel electrophoresis and then by DNA sequencing. The relationship between gene variations and semen parameters/ protamine deficiency was evaluated.
Results: The results showed that sperm count, total motility (grades "a" and "b" and "c"), progressive motility (grades "a" and "b"), non-progressive motility and sperm morphology were significantly different between control group without gene mutation and varicocele group who had different gene variations ($p<0.05$). With regard to CMA3 test, the protamine deficiency was significantly higher in varicocele patients than controls ($p<0.05$).
Conclusion: our results showed that PRM1 and PRM2 variations in varicocele patients are related to the production of spermatozoa with poor quality and more protamine deficiency. The latter may consider as one of the possible mechanisms of infertility due to varicocele.
Key words: *Sperm, Protamine genes, Varicocele, Infertility.*

O-48
Assessment of ovarian tissues autografted to various body sites followed by IVM in mouse

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Introduction: Ovarian tissue transplantation is emerging technologies for fertility preservation. In addition, in vitro maturation (IVM) of oocytes retrieved from ovarian tissues may overcome the fertility defects in certain cases. The aim was to evaluate the best site for ovarian tissue transplantation in mice. Also, feasibility of IVM of oocytes retrieved from auto grafted ovarian tissues was freshly assessed.
Materials and Methods: Hemi-ovaries from 6 weeks old mice were auto grafted into kidney capsule (K) versus the back muscle (B) and leg muscle (L) in a mouse auto graft model which was stimulated with gonadotrophins. Then ovarian grafts were recovered and processed histologically for follicle assessment

compared with control, also the ability of oocytes to mature with IVM was studied 14 days after transplantation.
Results: Total follicle count was significantly higher in K-graft (3.5±3.17) and the antral follicles were only observed in K-site model. The number of retrieved immature oocytes as well as successful IVM in K-grafts was significantly higher than other groups (p=0.008, p=0.016).
Conclusion: The kidney capsule is a promising site for ovarian tissue auto graft in mice. This resulted in better follicular survival and IVM outcomes.
Key words: *Ovarian transplantation, In vitro maturation, Mouse.*

O-49
Effects of angiotensin II addition to the culture media on Na+/K+/ATPase expression and subsequent developmental competence of ovine embryos

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Introduction: Presence of components of the renin–angiotensin system in mammalian ovaries and their involvement in ovarian physiology has been indicated**.** In the present study effects of angiotensin II (Ang II) addition to the maturation and embryo culture media on Na^+/K^+/ATPase expression and subsequent development of ovine embryos was evaluated.
Materials and Methods: The abattoir-derived COCs (cumulus oocyte complexes) were randomly allocated into three experimental groups: I) IVM in medium supplemented with 1000 ng⁄mL Ang II; ii) IVM/IVF embryos followed by IVC wherein the resulting embryos were exposed to IVC medium supplemented with 1000 ng⁄mL Ang II at day 4; and iii) IVM/IVF and IVC in media without Ang II (Control). The blastocyst and hatching rates were recorded on days 6 to 8. Day 8 embryos were immunostained with primary and secondary antibodies against Na^+/K^+/ATPase subunits.
Results: Addition of 1000 ng⁄mL Ang II during IVM and IVC was significantly increased the hatching rate of blastocysts on day 8 compared to the control. The total cell number was significantly increased by addition of Ang II to the IVM and IVC media, though the expression of Na^+/K^+/ATPase α_1 and β_1 subunits when IVC medium was supplemented with Ang II and β_1 subunit when IVM medium was supplemented with Ang II were significantly increased compared to the control.
Conclusion: In conclusion, this study for the first time demonstrated that addition of Ang II to the ovine IVM and IVC media could improve the hatching rate.
Key words: *Angiotensin II, Ovine, Embryo, Development, Na+/K+/ATPase, Expression.*

O-50
Melatonin improves development of early mouse embryos impaired by actinomycine-D and TNF-a

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Introduction: Melatonin, a reactive oxygen species (ROS) scavenger and an antioxidant, has been shown to inhibit apoptosis. Administration of melatonin may improve embryo development. It can be suggested to use in couples who undergo assisted reproductive technology (ART). The main aim of this study was to evaluate the role of melatonin in inhibition of spontaneous and induced apoptosis by TNF-a and actinomycin-D during preimplantation development of mouse embryos.
Materials and Methods: Female BALB/c mice were super ovulated with pregnant mare serum gonadotropin (PMSG) followed by human chorionic gonadotropin (HCG), then allowed to mate with male mice. The resultant 2-cell embryos were divided into six groups as follows: control, melatonin, actinomycin-D, actinomycin-D + melatonin, TNF-a, and TNF-a + melatonin. We recorded the numbers and developmental rates of the 4-cell, 8-cell, morula and blastocyst embryos. Blastocysts were stained with acridine orange in order to assess for embryo quality.
Results: The actinomycin-D +melatonin group showed a significantly higher developmental rate of blastocysts compared to the actinomycin-D group. The number of dead blastomers was significantly decreased in the actinomycin-D + melatonin group in comparison to actinomycin-D. Both the TNF-a and TNF-a +melatonin groups had a lower developmental rate and lesser quality of blastocysts compared with the control group. There was no significant difference in the developmental rate of blastocysts from the melatonin group compared to the control group.
Conclusion: Supplementation of embryo culture media with melatonin can improve the quality and developmental rate of 2-cell embryos to blastocysts. Melatonin can prevent cell death in embryos.
Key words: *Melatonin, Embryo, Actinomycine-D, TNF-a*

O-51
Investigation of ovine embryo development in the presence of FGF2

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Introduction: Fibroblast growth factors are a great family of growth factors with variety of functions in vertebrate's including cell growth, survival and differentiation. FGFRs are tyrosine kinase receptors transmitting FGF signals. Four types of FGFRs exist in vertebrates. FGF2is one of the FGFs detected in ovine uterus flushes, supposing its effects on embryo development.
Materials and Methods: In vitro produced ovine embryos via IVF obtained at different stages (zygote, 2-4cell, 8-16 cell, morula, and blastocyst) for genetic analysis. In further investigations, from day1, embryos were divided into two groups (control or 500 ng/ml FGF2) in serum-free conditions. FGF2 was present whole day's and different aspects of development were assessed until day 8.
Results: All four types of FGFRs evinced dominant expression at morula stage while in the other stages FGFRs expression was in low levels. FGF2 supplementation did not significantly change the blastocyst formation rate and total cell numbers compared to control. Although FGFRs were present in ovine embryos, their expression were in low levels except in morula and it is unclear whether FGFRs are in adequate levels to transduce FGF2 signals in ovine embryos. Also it does not seem that FGF2 exerts any proliferative or developmentally amending effect on ovine embryos up to day 8.however, there is merit to investigate whether proliferative respond to FGF2 will appear from hatched blastocyst stage onward, one in which high proliferation rates prevail.
Conclusion: We neither found aprominent effect of FGF2 on blastocyst formation rate nor proliferation in ovine embryos up to day 8 post fertilization
Key words: *Ovine embryo development, FGF2.*

O-52

In vitro development of ovine oocytes cultured in the presence of GDF9 at chemically defined or undefined maturation medium

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Introduction: The major factor that affects oocyte developmental competency is regulation of oocyte in vitro maturation. According to the literature, oocyte-secreted and exogenous growth differentiation factor 9 (GDF9) have little influence on ovine IVM. This result may have been masked by the presence of serum or other additive in the maturation medium. Thus, we aimed to compare the developmental competency of ovine oocyte cultured in the presence of GDF9 at chemically defined or undefined maturation medium.
Materials and Methods: Abattoir-derived ovine ovaries were transported to the laboratory in saline. After aspiration of follicles, good qualities cumulus oocyte complexes (COCs) were cultured with and without serum in the presence of exogenous and endogenous GDF9. Then, morphological cumulus cell expansion, cleavage rate and blastocyst yield were evaluated.
Results: The use of chemically defined maturation media leads to significantly lower cumulus expansion. Cumulus expansion index in the presence of endogenous GDF9 and serum was lower than its control whereas in the absence of serum, exogenous and endogenous GDF9 had little influence on cumulus expansion. In the presence of exogenous GDF9 and absence of serum, cleavage rate was lower than exogenous and endogenous GDF9 in the presence of serum. Blastocyst rates showed no significant difference between groups. Factorial analysis of the effect of GDF9, serum and their interactions on cleavage and blastocyst rates revealed no significant difference between groups.
Conclusion: This study provides evidence that GDF9 was not predominant factor in ovine cumulus expansion and oocyte development. Moreover, our results suggest that GDF9 under certain conditions might have interacted with serum born factors.
Key words: *Oocyte maturation, GDF9, Serum, Developmental competency.*

O-53

Effect of phosphodiesterase type 3 inhibitor, cilostamide, on the developmental competence of ovine oocytes isolated by glucose 6-phosphate dehydrogenase activity

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Introduction: The developmental competence of oocytes matured in vitro (IVM) is yet far below than in vivo counterparts. Recent studies suggest that the asynchrony between nuclear/cytoplasmic maturation and the initial low/heterogeneous quality of oocytes are the most important factors affecting IVM success. We investigated whether selection of growing oocytes (based on their glucose 6- phosphate dehydrogenase (G6PDH) activity) and chemical induction of

nuclear/cytoplasmic synchrony (through transient inhibition of meiosis resumption with cilostamide) can improve developmental competence of sheep oocytes.
Materials and Methods: Abattoir-derived oocytes were stained with 26µM BCB for 45 minutes to isolate growing (high G6PDH activity) and fully grown (low G6PDH) oocytes according to their differential capacities in breaking BCB and retaining colorless (BCB-) or blue (BCB+) ooplasm, respectively. BCB- and BCB+ oocytes were then incubated with 1 ng/ml cilostamide for 6h before culture in normal IVM medium. Matured oocytes were then used for embryo development assessment using parthenogenesis activation.
Results: Cilostamide delayed meiotic progression in BCB- ovine oocytes. The cleavage, blastocyst and hatching rates in BCB- oocytes that treated by cilostamide were higher than the control group, although these increases were not statistically significant.
Conclusion: We concluded that increase of ovine oocyte cAMP concentration during two-step culture partially improves yield and quality of in vitro embryo. This also may suggest that phosphodiesterase type 3-mediated inhibition of cAMP activity is not the only mechanism that controls the process of nuclear maturation in ovine oocyte.
Key words: *Ovine, BCB- oocytes, Phosphodiesterase, Two-step culture system, Embryonic development.*

O-54
Relationship of hyaluronic acid-bound spermatozoa with conventional semen parameters, lipid peroxidation, intracellular ROS, DNA fragmentation and mitochondrial membrane potential

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Introduction: This study was performed to evaluate association of hyaluronic acid – bound spermatozoa with conventional semen parameters, lipid peroxidation (LPO) , intracellular reactive oxygen species (ROS), DNA fragmentation (DF) and mitochondria membrane potential (MMP) .
Materials and Methods: Semen samples were obtained from 99 patients who underwent seminal fluid evaluation at Royan Institute. The seminal plasma was separated for analysis of LPO and the sperm cells was employed for flowcytometric study of intracellular ROS, DF (sperm chromatin structure assay) and MMP.
Results: The bound spermatozoa to hyaluronic acid showed the positive significant correlation with all conventional semen parameters consist of count ($p<0.01$), total motility ($p<0.01$), progressive motility ($p=0.004$), normal morphology ($p<0.01$), grade A, C of motility (respectively $p<0.01$, $p=0.021$) and the percentage of high DNA stain ability (HDS). In addition, it displayed a significant negative relationship with grade D of motility ($p<0.01$). However, after linear regression analysis, only normal morphology ($p=0.001$), grade A of motility ($p=0.015$) and HDS (0.021) effectively communicated with bound spermatozoa.
Conclusion: The selection of spermatozoa by hyaluronic acid is strongly related to integrity of morphology, chromatin condensation and sperm maturity and there is no relationship with intracellular ROS and MMP level.
Key words: *HBA, Lipid peroxidation, Intracellular ROS, DF, MMP.*

O-55
Globozoospermic samples showed high rates of sperm chromatin abnormalities

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Introduction: It is estimated that male factor infertility consists 15% of infertility cases in reproductive age. Globozoospermia is a severe form of teratozoospermia, with very low incidence in normal population which is characterized by round sperm head and lack of acrosome. The aim of present study was to evaluate the semen parameters and chromatin integrity of ejaculated spermatozoa in globozoospermic patients.
Materials and Methods: Semen samples were obtained from nineteen patients with globozoospermia which were referred to andrology laboratory during a three years period. Semen analysis was carried out according to WHO criteria. Papanicolaou staining was applied to assess sperm morphology. Sperm chromatin integrity was assessed using Aniline Blue (AB) and Toluidine Blue (TB) assays. Statistical analysis was done by SPSS and the data were showed as mean± SD.
Results: The mean semen volume of patients was 2.8±1.4 ml. Sperm count and normal sperm morphology were 54.3±36.7 (mil/ml) and 0.2±0.7 (%), respectively. The progressive motility was also 22.6±16.8 (%) in these patients. Regarding sperm chromatin structure, our data showed the high levels of AB and TB positive spermatozoa in globozoospermic men (81.3±12.3 and 78.1±16, respectively).
Conclusion: The results showed that sperm count does not impair by globozoospermia but sperm motility and morphology were lower than the standard values. AB and TB tests showed that globozoosperm samples may have high rate of sperm with less chromatin condensation. It seems that ART treatment failure in

these patients may be a result of sperm chromatin/DNA anomalies.

Key words: *Globozoospermia, Male infertility, Sperm chromatin.*

O-56

Epigenetic evaluation of promoter regions of some critical post-meiotic genes in testis tissues of infertile men referred to Royan Institute

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During post-meiotic stages of spermatogenesis, sperm chromatin undergoes extensive epigenetic remodeling as replacement of histones by transition proteins (TNPs) and protamines (PRMs) to condense nucleus and produce functional sperm. Expression of *TNPs* and *PRMs* are activated after their promoters become modified by histone modifying enzymes such as JMJD1A, a highly expressed demethylase in testis, and CDY1, a testis specific acetyle transferase. Also master genes such as *CREM* have important role in regulation of post-meiotic genes. Regarding the critical roles of *TNPs* and *PRM* in male (in) fertility, the role of JMJD1A, CDY1 and CREM on regulation of these genes was aimed. Consent was obtained from infertile men referred to Royan institute according local ethical approval then, based on spermogram and pathological features, testis tissue samples were collected from four groups including sever oligoasthenoteratozoospermia, complete maturation arrest, sertoli cell only syndrome, and hypospermatogenesis (positive control). Expression of *TNPs, PRMs, JMJD1A, CDY1* and *CREM* were evaluated by qRT-PCR. Also ChIP- real time PCR was performed to evaluate the incorporation of JMJD1A, CDY1 and CREM into promoters of *TNPs* and *PRMs*. Results showed significant decrease in expression of the three candidate genes as well as *TNPs* and *PRMs* in all groups compared to positive control. These findings also confirmed by ChIP data, *via* decreasing incorporation of JMJD1A, CDY1 and CREM into regulatory regions of *TNP* and *PRM* genes in three spermatogenic failure groups *vs.* control. Current study implies that disruption of epigenetic factors involved in sperm chromatin condensing pathway, is associated with male infertility.

Key words: *Epigenetic of spermatogenesis, Male infertility, Transition proteins, Protamines.*

O-57

Vitrification of human spermatozoa with seminal fluid and artificial seminal fluid

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Introduction: Vitrification is a new method that has been recently introduced in ART. This study investigated the ability of patient's seminal fluid and artificial seminal fluid against cryo damage. These media were compared with routine medium (HTF supplemented with sucrose).

Materials and Methods: Spermatozoa were isolated using the swim-up procedure performed using three different media: (a) HTF with 5% HSA and 0.25 M sucrose; (b) patient seminal fluid; (c) artificial seminal fluid. From each group, 30 µl suspensions of cells were dropped directly into liquid nitrogen and stored for at least 24 h. Cells were thawed by quick submerging the spheres in base medium (group a and b in HTF; group c in artificial seminal fluid) at 37^{o}C with gentle agitation. Both sperm motility and viability were assessed pre- and post- vitrification. Motility was categorized into fast and slow (progressive), non- and immotile spermatozoa.

Results: Viability of spermatozoa was not different significantly in three vitrified groups. The numbers of progressive motile spermatozoa were similar in three vitrified groups. But, fast progressive motile sperms were significantly higher in patients' seminal fluid and artificial seminal fluid (36.2±12.7 and 34.06±8.8, respectively), when compared with HTF supplemented with sucrose (18.4±9.2).

Conclusion: Vitrification of human spermatozoa with patients' seminal fluid and artificial seminal fluid can effectively preserve the quality of motility in comparison with routine procedure.

Key words: *Sperm, Vitrification, Seminal fluid.*

O-58

Is there any difference between commercial and home-made culture media on human sperm parameters after sperm preparation?

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Introduction: There are several techniques for sperm preparation in order to use in assisted reproductive technology. Several sperm preparation media such as commercial and home-made may be used in infertility clinics. To compare the effects of commercial and home-made human sperm preparation media on sperm parameters following direct swim-up method.

Materials and Methods: ten normal semen samples were analyzed according to WHO guidelines. Makler chamber was used for evaluation of sperm count and

motility. Sperm morphology was assessed using Giemsa staining method. Direct swim-up was supplied for sperm preparation. There were three groups in our study: a) sperm preparation medium from GYNEMED, b) Ham's f10 supplemented with 5 mg/ml human serum albumin and c) Ham's f10 supplemented with 10 mg/ml human serum albumin. Sperm parameters were evaluated at different time intervals: 0, 1, 3, 24 hr.

Results: there were insignificant differences in sperm parameters after sperm preparation between different groups. Progressive motility after 1h between commercial and home-media culture was 62.71±1.83% vs. 64±1.02% respectively. Also between commercial and home-media culture was no significant increase in progressive motility after 24h (23.95±0.7% vs. 22.45±1%, respectively).

Conclusion: our data showed that there are no significant differences for conventional sperm parameters between commercial and home-made human sperm preparation media. It is suggested to compare sperm chromatin structure following different sperm preparation media.

Key words: *Commercial culture media, Home-made culture media, Human sperm, Sperm preparation.*

O-59

Evaluation of CD52 positive sperm in semen samples and effects on outcome of IUI procedure

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Introduction: Proteins which should be located in sperm membrane have high impression in sperm maturation and in male fertility. CD52 is one of the antigens on sperm membrane and is a GPI (glycosylphosphatidylinositol) anchored protein that express on lymphocytes and epididymal cells. The aim of this study was to obtain any association between the percentage of CD52 positive sperm with semen parameters and also evaluation of correlation between the percentages of CD52 positive sperm with outcome of IUI.

Materials and Methods: A total number of 120 semen samples were collected randomly from infertile couples who were undergoing IUI procedure. Samples were evaluated according to WHO 2010 guidelines. Sperm were washed and immunostaining with the monoclonal antibody CAMPATH-1G for CD52 then analyzed by flowcytometry.

Results: This study indicates that mean percentage of CD52 expression was 79.25% in ejaculated sperm. The results show that there is a significant correlation between the percentage of CD52 expression and viability of spermatozoa (r=0.454, p=0.000). Furthermore, the percentage of CD52 expression and sperm motility were analyzed and a significant correlation between them was perceived. (r=0.597, p=0.000). Regarding to the results the area under the ROC curve is equal to 0.546 and CD52 is not a good predictor variable for fertility status (area=0.546, p=0.547).

Conclusion: The results indicate that the correlation between the percentage of CD52 positive sperm with viability and motility was positively significant. However the results can not show any relation between the proportion of CD52 expression and pregnancy in couples candidate for IUI.

Keywords: *CD52, Infertility, Sperm parameters, IUI.*

O-60

(+) Pulegone-induced damages in mice testicular tissue; evidence for RNA damage and apoptosis

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Introduction: Pulegone (PGN) is a natural organic compound in variety of plants that is widely used in different areas for flavoring foods, drinks, and dental products. However, it is known to impact stroidogenesis processes by affecting aromatase enzymes mRNA expression and synthesis. Present study aimed in order to evaluate PGN's impact on testicular tissue and sperm parameters in mice model.

Materials and Methods: Twenty four mature mice were randomly divided into four groups as control-sham (received 0.3mL normal saline, ip) and test groups including: low dose (25 mg/kg, ip), medium dose (50 mg/kg, ip) and high dose (100mg/kg, ip)-PGN-received groups. After 35 days, serum levels of testosterone were evaluated. Germinal cells RNA damage, tubular differentiation (TDI), repopulation (RI) and spermiogenesis (SPI) were analyzed by epifluorescent and light microscopes, respectively. Moreover, sperm count, motility, chromatin condensation and DNA damage were assessed.

Results: PGN decreased ($p<0.05$) serum level of testosterone and significantly ($p<0.05$) reduced the percentage of tubules with positive TDI, RI and SPI indexes. Epifluorescent analyses showed that PGN resulted in severe RNA damage in germinal epithelium. Sperm count, motility, chromatin decondensation and DNA disintegrity remarkably ($p<0.05$) elevated in PGN-treated animals in a dose dependent manner.

Conclusion: Our data showed that, PGN exerts it impact partly via down-regulating the endocrine status of the testicles, which in turn considerably impacts the

spermatogenesis and spermiogenesis processes. Ultimately, last impairment affects the sperm parameters. Defected chromatin condensation provokes the sperm DNA damage.

Key words: *Pulegone, RNA Damage, DNA Damage, Chromatin Condensation.*

O-61

Zearalenone-induced apoptosis in rat's testicular tissue correlates with oxidative stress and p53 expression

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Introduction: Zearalenone (ZEA) as a myco-estrogen is recurrently implicated in reproductive disorders. ZEA has been reported for hyperoestrogenic syndromes in human. Moreover, it is metabolites are able to pathologically impact the testicular endocrine status by involving in Leydig cells steroidogenesis disorders. Present study was conducted in order to uncover other probable pathways for ZEA-induced damages in testicular tissue.

Materials and Methods: Twenty four mature male rats were divided into four groups including; control-sham (2mL, normal slain, ip), low dose ZEA-treated (1 mg/kg, ip), medium dose ZEA-treated (2 mg/kg, ip), high dose ZEA-treated (4 mg/kg, ip). All animals received chemicals for 21 continuous days. The testes were analyzed for tubular differentiation (TDI), repopulation (RI) and spermiogenesis (SPI) indexes by using Iron-weigert staining. Immunohistochemical expression of the p53, tissue levels of total antioxidant capacity (TAC) and malondialdehyde (MDA) contents of testes were analyzed.

Results: ZEA-treated animals showed a significant ($p<0.05$) increase in percentage of seminiferous tubules with negative TDI, RI and SPI as well as increased expression of the p53 in germinal cells. ZEA reduced testicular TAC level ($p<0.05$) and significantly ($p<0.05$) elevated tissue MDA contentin a dose dependent manner.

Conclusion: Taking together, our data showed that ZEA increased germinal cells degeneration via down-regulating the testicular antioxidant status, which in turn resulted in provoking p53 expression. Ultimately, elevated oxidative stress enhanced lipid peroxidation level that was marked with dose dependently elevated MDA contents in ZEA-treated animals.

Key words*: Zearalenone, Testicular Tissue, p53, Malondialdehyde, Antioxidant capacity.*

O-62

Increased DNA fragmentation in patients with partial globozoospermia

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Introduction: Infertility is estimated to affect up to 15% of couples of reproductive age. Globozoospermia is a rarely described morphologic disorder of spermatozoa observed in <1% of infertile men. Globozoospermia is characterized by the absence of acrosome in round-headed spermatozoa, leading to a complete inability to fertilize the oocyte, thus the affected males suffer from infertility. Moreover, sperm DNA fragmentation and protamine deficiency is shown to be associated with teratozoospermia. The aim of this study was to evaluate the sperm DNA damage and protamine deficiency in men with partial globozoospermia and men with normal spermogram referred to Royan institute.

Materials and Methods: Sperm samples were obtained from 24 patients with partial globozoospermia and 41 normozospermic men and semen analysis was carried out according to WHO criteria. Protamine deficiency and DNA damage was assessed using Chromomycin A3 (CMA3) and terminal desoxynucleotidyl transferase-mediated deoxyuridine triphosphate biotin nick-end labeling (TUNEL) assay, respectively.

Results: Data analysis revealed that percentage CMA3 positivity ($p<0.001$) and TUNEL-positive spermatozoa ($p=0.003$) were higher in the individuals with partial globozoospermia than the men with normal spermogram.

Conclusion: Several studies have attempted to correlate DNA fragmentation rate with sperm characteristics. However, there is just some case reports about DNA fragmentation rate in globozoosprmic men. This is cohort report of round-headed sperm that has shown an elevated number of sperm with protamine deficiency and DNA strand breaks compared to control group.

Key words: *Partial globozoospermia, DNA fragmentation, TUNEL assay, CMA3 assay.*

O-63

Comparison of septin14 expression in testes of patients with positive and negative testicular sperm retrieval

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Introduction: The septins are a family of GTPase expressed in a variety species, ranging from unicellular yeasts to humans. In mammals, 14 septin genes have been identified so far. They have diverse cellular roles including polarity determination, vesicle trafficking, mitosis, and exocytosis. Disruption of septin functions has been implicated in the pathology of many diseases, including cancers, neurodegenerative diseases, and male infertility. Here, we study about one of the new member of septin family called septin14 that specially expressed in testis. SEPT14 maps to 7p11.2 in humans. The objective of the study was to evaluate the expression pattern of Septin 14 in testis tissue of men with and without spermatogenic failure.
Materials and Methods: Testicular tissues were obtained from biopsies of azoospermic men and subdivided into two groups: 10 patients with positive result in Testicular Sperm Extraction (TESE+) and 10 patients with negative result (TESE-). Total RNA was extracted using trizol reagent. Septin expression level was assessed by real-time reverse transcription-polymerase chain (RT-PCR) and it was normalized to expression of the GAPDH.
Results: The testicular tissues of men with positive result of TESE had higher levels of septin 14 transcripts than those with negative results. According to pathology report tissues in negative group were subdivided to maturation arrest & sertoli cell only groups.
Conclusion: It was indicated that the expression levels of septin 14 are critical for normal spermatogenesis and decreased expression of this gene is associated with the pathogenesis of male infertility.
Key words: *Septin14, Expression, Spermatogenesis, Male infertility.*

O-64
Evaluation of sperm chromatin structure and morphology in different patterns of HOST positive sperm

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Introduction: One of the effective methods for the treatment of infertility caused by the male factors is the ICSI. In this method, the embryologists select the best sperm based on its morphology and motility, and then, is injected into mature oocyte. However, this selection doesn't necessarily guaranty the sperm DNA integrity. Based on the existing relation between the membrane and the intracellular damage, the HOS test with the capability of assessing the membrane integrity, has been chosen as one of the methods for selecting normal sperm. In this test, the sperm are exposure hypo-osmotic condition. According to the difference between the membrane reactions, the swelling of the sperm tails occur in different pattern. Therefore the chromatin, apoptosis, morphology evaluations in different HOS patterns for selecting the best sperm has become the main purpose of this study.
Materials and Methods: Semen samples were washed, exposed to hypotonic condition, then fixed and simultaneously assessed for abnormal morphology, DNA fragmentation and protamine deficiency using papanicoulau, TUNEL and CMA3 staining, in different HOST grades, respectively. For the assessment of membrane integrity or early apoptosis, the remaining semen samples were washed with Ca buffer and stained by Annexin V. Subsequently, Annexin stained samples were exposed to hypo osmotic conditions.
Results: Obtained results of this study indicated the highest level of damage in the (a) and (g) patterns, and lowest damage level were in (d) and (c) patterns respectively.
Key words: *Sperm selection, HOST, DNA damage.*

O-65
Human spermatogonial stem cells tracking ex vivo

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Introduction: Evaluation of viability, proliferation and differentiation of human spermatogonial stem cells (hSSCs) and finally assessment of cell behavior after transplantation are main examples that help to predict their status in vivo.
Materials and Methods: A control versus treatment study provide by 40 randomly selected mice. After the in vitro enrichment and proliferation of isolated hSSCs obtained from Testicular biopsies, they were transplanted to azoospermia mice models and after 4 months the weight of testes, spermatogenic cell numbers as well as epididymal sperm parameters were assessed and donor sperm were detected by human CatSper gene expression with quantitative PCR.
Results: After one month of transplantation, Donor SSCs could home on the basal part of the seminiferous tubules. Weight testes, epididymal sperm number and also spermatogenic cell numbers in transplanted testes was significantly higher than other groups ($p \leq 0.05$). Expression profile of human CatSper after 16 weeks

showed that the donor cells could involved in mice endogenous spermatogenesis.
Conclusion: Our result was indicated that evaluation of transplanted testes is useful to predict hSSCs status in vivo.
Key words: *Spermatogonial stem cell, Tracking, Transplantation, Ex vivo*

O-66
Effect of vitrification on high magnification morphology of human spermatozoa cells

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Introduction: Human sperm vitrification is a new technique of cryoprotectant-free cryopreservation that has been developed recently. Motile sperm organelle morphology examination (MSOME) is a technique that analysis viable sperm morphology exactly. This study aimed to investigate the influence of vitrification on sperm vacuolization by MSOME technique.
Materials and Methods: 30 normozoospermic ejaculated samples were obtained after at least 48h of sexual abstinence. Semen was prepared by direct swim-up technique. The prepared spermatozoa were divided into two parts: fresh and vitrified groups. For vitrification, sperm suspension was mixed with equal volume (1:1) of Hams f10+HSA+0.5 M sucrose and 30 µl sperm suspension was dropped directly to liquid nitrogen. Warming was performed by quickly submerging spheres one by one (not more than ten spheres) into 5ml Hams f10 with 5%HSA pre-warmed at 37^{o}C accompanied by gentel vortexing for 5-10s. Sperm motility, viability & MSOME were evaluated for each sample. For MSOME, we loaded 2µl sperm suspension into 4 µl polyvinylpyrrolidone (PVP) in different culture dishes (GWST 5040; Will Co, Wells BV) and covered with oil.
Results: Our formula is (Normal head score=2)+ (Lack of vacuole score=3)+ (Normal base score=1)= (Total score=6) for a morphologic ‘‘normal top’’ spermatozoon. For MSOME analysis, 3 grades were considered: normal spermatozoa with no vacuoles (grade1), ≤2 small vacuoles (grade2), and at least one large vacuole or >2 small vacuoles and morphometrically abnormal spermatozoa (grade3). There was no significant difference between the rates of MSOME in class1 (1±2.7), cla ss2 (-0.5±3.1), class3 (-1.11±3.6) before and after vitrification**.**
Conclusion: Vitrification has adverse effect on sperm parameters, but this technique does not cause vacoulisation of head and does not increase the abnormal morphology of head.
Key words: *Human sperm, Vitrification, Motile sperm Organelle morphology examination (MSOME).*

O-67
Vitamin C can protect spermatozoa from detrimental effects of diabetes mellitus; effects on sperm parameters and DNA integrity using different cytochemical tests

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Introduction: The main goal was to evaluate the protective effects of vitamin C on sperm parameters, chromatin condensation and apoptosis in experimentally-induced diabetic mice. Also the correlation between different DNA integrity tests was assessed.
Materials and Methods: 21 adult male Syrian mice were divided randomly into 3 groups (n=7). Group 1 were included diabetic mice that received a single dose of Streptozocin (STZ) (200 mg/kg) intra-peritoneal (IP), group 2 were diabetic mice that received vitamin C (10 mg/kg/daily, IP) and group 3 were considered as controls. After 35 days, the sperm samples were collected from cauda epididymis and analysed for sperm count, progressive motility, and morphology. Aniline blue (AB), toluidine blue (TB), chromomycin A3 (CMA3), acridine orange (AO), and terminal transferas-emediateddeoxyuridine triphosphate-biotin end labelling (TUNEL) tests were used in order to evaluate sperm DNA status.
Results: The data showed that diabetes can significantly reduce sperm count, motility as well as normal morphology and vitamin C can attenuate these effects ($p<0.0001$). Regarding sperm DNA quality, the data showed that there is a significant increase in AO^{+}, TB^{+} and $TUNEL^{+}$ spermatozoa in group 1 compared to others. The rate of spermatozoa with abnormal DNA were significant reduced in group 2 ($p<0.0001$). The significant positive correlation was seen between TUNEL and TB, AO (Pearson correlation: 0.86 and 0.82, respectively, $p<0.0001$) and between AO and TB as well (Pearson correlation: 0.87, $p<0.0001$).
Conclusion: Vitamin C can be used as a protective agent in diabetic patients to improve sperm parameters especially sperm DNA integrity.
Key words: *Diabetes Mellitus, Sperm DNA integrity, Vitamin C.*

O-68
Evaluation of tempol effects on semen quality during human sperm cryopreservation

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Introduction: Cryopreservation causes physical and chemical damages and it can effect on sperm vitality, motility and lipid composition of sperm membrane. Increase of imbalance between production of reactive oxygen species (ROS) and semen antioxidant levels may responsible for this damage. Tempol considered as antioxidant with ability to penetrate membrane and reduce stress oxidative, especially hydrogen peroxide. Therefore aim of this study for the first time was to evaluate effect of Tempol during human sperm cryopreservation on sperm parameters and ROS level.
Materials and Methods: Semen sample from 42 normozoospermic men were collected and divided two groups. In control group, semen samples were cryopreserved accordingly vitrolife protocol. In test group, Tempol (5µM) was added in sperm freeze solution. Motility, viability and stress oxidative assessed with computer-aided sperm analysis (CASA), eosin-nigrosin staining, and H2DCFDA (2′,7′-dichlorodihydrofluorescein diacetate) probe respectively. Data was analyzed with SPSS 18.5 software
Results: Sperm motility and viability were significantly ($p<0.05$) higher in the test group (33.61±2.6, 45.63±1.95) compared to control group (33.94±2.52, 23.10±2.17) after freeze and thawed sample. In addition in Tempol group, stress oxidative insignificantly lower than control group (38.29±4.6 *vs.* 45.99±4.4, $p>0.05$).
Conclusion: Tempol may preserve sperm motility and vitality after cryopreservation via inhibition of sperm membrane peroxidation. Tempol with anti-oxidant activity like super oxide dismutase function may decrease the level of ROS and hydrogen peroxide generation than control group.
Key words: *Sperm, Cryopreservation, Tempol, ROS.*

O-69
αvβ3 entegrin Express on mid-luteal human endometrium: an immunogold and immunofluorescent staining study

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Introduction: The implantation is a complex procedure that involves many molecules. One of these molecules is integrin specially αvβ3 which serves as receptor for components of extra cellular matrix to act as bridging molecules between the blastocyst and the endometrial surface during the implantation process.
Materials and Methods: The endometrial biopsies obtained from the anterior wall of the uterine cavity of 12 women. Each biopsy divided into three pieces: 1- Fixed in 10% neutrally buffered formaldehyde for light microscopy and immunofluorescent study. 2- Fixed in 4% paraformaldehyde in 0.1 M phosphate buffer (pH 7.4) for immunogold electron microscopy and 3- Fixed in 2.5% glutaraldehyde in 0.1 M phosphate buffer (pH 7.4) for scanning electron microscopy. Afterwards, the biopsies evaluated by Immunofluorescent, Immunogold and scanning electron microscopy techniques.
Results: Immunofluorescent staining demonstrated that αvβ3 integrin express only on luminal surface epithelium and glandular epithelium of mid-luteal phase. Immunogold staining images in mid-luteal phase samples showed that αvβ3 integrin express on ciliated, non- ciliated (pinopdes) cells and junctional complexes. While, no reactivity observed on the endometrial surface, using the negative control antibody or in specimens incubated without primary antibody in any of the specimens.
Conclusion: The results showed that αvβ3 integrin express only on luminal surface epithelium and glandular epithelium in the mid-luteal phase of human endometrium. Targeting integrins may provide a new avenue for the development of contraceptive technologies and the loss of this integrin in certain infertility states may signify the presence of implantation defects that reduce cycle fecundity in women.
Key words: *αvβ3 Integrin, Mid-luteal Phase, Endometrium, Immunogold, Immunofluorescent staining.*

O-70
Effect of acrylamide and glycyrrhizo globra on rat offspring

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Introduction: Acrylamide (ACR) has been used to synthesize polyacrylamide for laboratories and monomer for industrial products. This material has been identified as a food-borne toxicant produce during the heating process of carbohydrate containing foods. In the traditional medicine Glycyrrhizo Globra (GG) used clinically for their anti-inflammatory and anti oxidant usage. The aim of this study was to evaluate morphological changes in rat offspring following administration ACR during pregnancy and lactation.
Material and Method: Plug positive female Wistar rats were divided into four groups: group A: (control group); group B: (ACR administration 10 mg/kg/day orally); group C: (GG administration 150 mg/kg/day orally); group D: (ACR+GG). After 21 days of born mothers and their pups evaluate for morphological changes and the weight were measured by digital scale. The results were analyzed by SPSS software (15) and $p<0.05$ was considered significant.

Results: The results showed that ACR treatment produce severe sign of body weight loss in both mothers and their offspring. The newborn on group ACR were hairless also food and water intake reduce in this group.
Conclusion: Our findings demonstrated that prenatal and perinatal ACR induced morphological changes in developing rat and GG had protection role from these changes.
Key words: *Acrylamide, Glycyrrhizo Globra, Body weight, Rat, Offspring.*

O-71
Does women's age influence zona pellucida birefringence of metaphase II oocytes in in-vitro maturation program?

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Introduction: In vitro maturation (IVM) is a promising treatment option for certain infertile women. Nowadays, with the aid of PolScope, it has become possible to evaluate zona pellucida (ZP) characteristics as a parameter of oocyte quality. Moreover, quality of oocytes can be influenced by many factors, such as patient's age. The PolScope system is a non-invasive technique to assess birefringent structures such as the meiotic spindle and ZP in living oocytes. The aim was to determine the influence of the woman's age on ZP birefringence, a sign of oocyte quality, and morphology of in-vitro matured human oocytes using non-invasive polarized light (PolScope) microscopy.
Materials and Methods: ZP birefringence and morphology were determined in 105 retrieved oocytes from 58 women undergoing ICSI in two age groups (≥30 years and <30 years). The immature oocytes were selected and after IVM, the quality of metaphase II (MII) oocytes was assessed. The oocytes abnormalities were classified as intracytoplasmic and extracytoplasmic abnormalities.
Results: Oocyte maturation rates were significantly reduced in ≥30 year's women (56%) in comparison with other age group (80.7%). In addition, the ZP birefringence was significantly higher in MII oocytes in the younger group compared with the older group (76.2% vs. 38.1%; p=0.00). Following morphologic assessment, the rates of oocytes with extracytoplasmic (p=0.02) and both abnormalities (extra- and intracytoplasmic) (p=0.01) were higher in aged versus the younger women.
Conclusion: There was a positive relationship between advanced maternal age with decreased ZP birefringence and oocyte morphological quality in in-vitro matured human oocytes.
Key words: *ZP birefringence, Morphology, Human oocytes, Female age.*

O-72
TLRs are a new insight in physiology of maternal interaction with sperm

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Introduction: Toll Like Receptors are the major compartment of innate immune system. It was revealed that the TLRs have physiological relevance in ovulation, sperm capacitation, fertilization and pregnancy. So, in this study the expression of TLRs in human fallopian tube cell line under effect of the sperm was evaluated.The effect of sperm physical contact with fallopian tube epithelial layer or just presence of sperm without physical contact on TLR expression also was evaluated.
Materials and Methods: Sperms from 8 healthy donors were added in 4 groups for 24 hours:1- sperm group: coculture of normal sperm with OE-E6/E7 cell line, 2- sperm + membrane group: coculture of normal sperm with OE-E6/E7 by using membrane supports, to prevent contact between the epithelial cells and spermatozoa, 3- Control group and 4- control + membrane group. Afterward, Toll like receptors expressions were compared in these groups by Q- PCR. In the next part, the level of TLR, their adaptor molecule and cytokines were compared with Q- PCR in sperm and control group and supernatant were used for ELISA assay.
Results: OE-E6/E7 expressed TLR1-6 genes and proteins. The mean relative expression of TLR 2, 4, 5 and 6 in sperm+ membrane group were higher significantly in compare with 3 other groups. TLRs expressions in OE-E6/E7 under effect of sperm were significantly increased in TLR3 and TLR5. Also, their signaling pathways as well as cytokine production were higher in sperm group than control (p<0.05).
Conclusion: TLRs are a new insight in physiology of maternal interaction with sperm.
Key words: *Female reproductive tract, Innate immunity, Sperm, TLRs.*

O-73
Variable localization of TLRs in human fallopian tube epithelial cells

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Introduction: Infections of the female reproductive tract may contribute to infertility to a various extent depending on the site of inflammation, especially in fallopian tube. Histologically, fallopian tube is formed by a ciliated and non-ciliated epithelium. The immune system related to epithelial cells of the FRT provides the first reaction to sexually transmitted pathogens. Recognition of these pathogens is attributed to the family of Toll like receptors (TLR) as a major part of the innate immune system. This study clarifies the different expression and localization of the TLRs in fallopian tube epithelial cells.
Materials and Methods: We firstly investigated TLRs localization in fallopian tube epithelial cells by immunostaining, surprisingly we found the intensity of staining was not equal in epithelial cells, then after primary cell culture of fallopian tube epithelial cells was performed. Ring cloning was used to isolate colonies of ciliated from non- ciliated epithelial cells and then the expression of TLR1-10 was examined by Quantitative real time PCR.
Results: We found TLR1-10 to be expressed in Fallopian tube epithelial cells, our studies revealed enriched localization of TLRs in Fallopian tube ciliated epithelial cells. We showed that TLRs expression in fallopian cells, with a higher level in the cilia cells versus non-ciliated cells ($p<0.05$).
Conclusion: TLRs is localized in human Fallopian tube epithelial cells, particularly in the ciliated cells, and is likely to have a cilia-specific role in protection of reproductive tract.
Key words: *Ciliated cell, Fallopian tube, TLRs, Innate immunity.*

O-74
Ultrastructure of in vitro matured human oocytes

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Introduction: Approximately 20% of recovered oocytes are immature and discarded in intracytoplasmic sperm injection (ICSI) procedures. These oocytes represent a potential resource for both clinical and basic science application. The aim of this study was to evaluate the ultrastructure architecture of in vitro matured human oocytes using transmission electron microscopy (TEM).
Materials and Methods: A total of 204 immature oocytes from infertile patients who underwent ICSI cycles were included in this prospective study. Immature oocytes were divided into two groups: (I) GV oocytes (n=101); and (II) MI oocytes (n=103). Supernumerary fresh in vivo matured oocytes (n=10) were used as control.
Results: The rates of maturations were 61.38% for GV and 73.78% for MI oocytes in IVM medium ($p=0.07$). However, the rate of oocyte arrest was significant between groups ($p<0.05$). Ultrastructurally; in vitro and in vivo matured oocytes appeared round, with a homogeneous cytoplasm, an intact oolemma and an intact zona pellucida. However, immature oocytes indicated numerous large mitochondria-vesicle complexes (M-VC).
Conclusion: Ultrastructural changes of M-VC in IVM groups emphasize the need for further research in order to refine culture conditions and improve the implantation rate of in-vitro matured oocytes.
Key words: *In vitro Maturation, Germinal Vesicle Oocytes, Metaphase-I Oocytes, Ultrastructure.*

O-75
Comparision of stress and apoptosis-related genes expression between vitrified and fresh human GV oocytes after in-vitro maturation

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Introduction: The aim of this study was to assess the effects of vitrification on maturation as well as apoptotic, DNA methyl transferase and stress genes expression of immature human oocytes retrieved from ICSI cycles.
Materials and Methods: 213 immature GV oocytes obtained from infertile patients and divided into two groups: (I) GV oocytes (n=106) matured in-vitro (fIVM), and (II) GV oocytes (n=107) that were first vitrified, then warmed and matured in-vitro (vIVM). Ham's F10 supplemented with FSH+LH plus human follicular fluid used as the maturation media. After 36 hrs of incubation the oocytes assessed for nuclear maturation and quantitative Real Time PCR used for expression patterns of stress (Sod1 and Hsp70), DNA methyl transferase (Dnmt1) and apoptosis-related (Bcl2 and Bax) genes.
Results: The percentage of oocyte maturation was reduced ($p<0.001$) in vIVM (50.52%) as compared to

fIVM oocytes (85.84%). The percentages of degeneration were significantly higher in vIVM compare to fIVM group (41.05% vs. 4.71%). Analysis of gene expression by real time PCR showed higher expression of stress and apoptosis-related genes in vIVM compared to the fIVM group. However DNMT1 expression indicated reduction in vIVM.

Conclusion: IVM process was significantly impared in the virtified immature oocytes compare to fresh oocytes. Additionally, the expression of stress and apoptosis related genes increased after vitrification of immature human oocytes. The differential expression of apoptosis and stress related genes profile may be usefull to evaluate effectiveness of cryopreservation program for immature human oocytes.

Key words: *Vitrification, In-vitro maturation, Human oocytes, Stress genes, Apoptotic genes.*

O-76
Open versus closed oocyte vitrification system: effect on survival rate and spindle visualization.

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Introduction: Vitrification has been successfully applied in the cryopreservation of oocytes and embryos. Prevention of cross contamination is critical in vitrification procedure that is possible with closed system. But few reports have been published regarding oocyte vitrification in closed systems. The aim of this study was evaluate the effect of a closed and open vitrification approach for oocyte cryopreservation on survival rate and spindle visualization

Materials and Methods: 87 vitrification-warming cycles were performed on MII mouse oocyte. Cryotop were used for open system and Rapid-i™ Vitrification System was used for closed system.

Results: Survival rate was significant different in closed system and open system (60.9% versus 90.2%, $p<0.001$). But no statistically significant differences were observed in spindle visualization rates between the closed and open groups (60.0% vs. 46.3%, $p=0.15$).

Conclusion: Closed system for vitrication did not adverse effect on spindle visualization in MII oocyte, but this system had lower survival rate than open system.

Key words: *Mouse oocyte, Vitrification, Open system, Closed system.*

O-77
Isolation and enrichment of mouse female germ line stem cells

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Introduction: The existence of female germ line stem cells (FGSCs) has been the subject of a wide range of recent studies. Successful isolation and culture of FGSCs could facilitate studies on regenerative medicine and infertility treatments in the near future. Our aim in the present study was evaluation of the most commonly used techniques in female germ line stem cell enrichment and establishing the best procedure.

Materials and Methods: After digesting neonate ovary from C57Bl/6 mice, we performed 2 different isolation experiments: Magnetic activating cell sorting (MACS) and preplating. MACS was done by two different antibodies against MVH and SSEA1 markers. Then to characterize colony forming cells by RT-PCR (for analysis of expression of *Oct4*, *Nanog*, *C-kit*, *Fragilis*, *Mvh*, *Dazl*, *Scp3 andZp3)*, AP activity test and Immunocytochemistry, they were passaged and proliferated in vitro.

Results: Data showed that colonies can be seen more frequently in preplating technique than that in MACs. Using the SSEA1 antibody with MACS, 1.98±0.49% (Mean±SD) positive cells were yield as compared to the total cells sorted. The colonies formed after preplating expressed pluripotency and germ stem cell markers (*Oct4*, *Nanog*, *C-kit*, *Fragilis*, *Mvh and Dazl*) but did not express *Zp3* and *Scp3* at the mRNA level. Immunocytochemistry in these colonies further confirmed the presence of OCT4 and MVH proteins and alkaline phosphatase activity measured by AP-kit showed positive reaction.

Conclusion: We established a simple and efficient preplating technique that allows culture and enrichment of female germ line stem cells from neonatal mouse ovaries.

Key words: *Germ line stem cell, Mouse, Ovary, Culture and enrichment.*

O-78
Daidzein and Trifolium pratense hydroalcoholic extract negatively affected the testis structure and functions

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Introduction: Red clover (*Trifoliumpratense*) belongs to the plant family Leguminosae, which its estrogenic effects long before have been reported. Besides its beneficial effects, there are increasing evidence indicating phytoestrogens related detrimental effects in

female reproductive system including breeding problems of sheep grazing on red clover pastures and fertility failure in cattle fed with red clover silage. During the last decade, exclusive debates and controversial studies were conducted to show the potential detrimental effects of phytoestrogens on male reproductive system. We in the present study aimed to show any potential effects of daidzein as a known phytoestrogen and hydro alcoholic extract of red clover flowers on the testis structure and the serum level of testosterone in adult male rats.

Materials and Methods: The animals in five groups were exposed against saline (control group), daidzein (10 mg/kg, orally) and/or various dose levels of red clover extract (20, 40 and 80 mg/kg, b.w. orally) for 28 days.

Results: Our results showed that 28 days exposure to 10 mg standard daidzein and/or high dose of red clover flowers extract resulted in 6- and 5-fold increase of germinal epithelium dissociation, respectively, when compared to the control group. At the same time germinal epithelium height and seminiferous tubules diameter were reduced in test groups significantly ($p<0.05$) in a dose-dependent fashion. Determination of serum level of testosterone confirmed the fact that the lower leydig cells number, the lower testosterone concentration.

Conclusion: Our data suggest that phytoestrogens and red clover extract with known phytoestrogens do have negative effects on male reproductive system including structural and functional disorders.

Key words: *Daidzein, Phytoestrogen, Reproductive system, Testis.*

O-79

Effect of sildenafil citrate on endometrial preparation and outcome of frozen-thawed embryo transfer cycles: a randomized clinical trial.

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Introduction: Sildenafil citrate may increase endometrial thickness and affect the outcome of frozen-thawed embryo transfer cycles. Objective: The aim of this study was to estimate the effect of sildenafil citrate on ultrasonographic endometrial thickness and pattern and to investigate the estrogen level on the day of progesterone administration, the implantation rate and chemical pregnancy rate in frozen embryo transfer cycles.

Materials and Methods: This randomized controlled trial was conducted on 80 patients who had an antecedent of poor endometrial response and frozen embryos. 40 patients were given estradiol by a step up method with menstruation to prepare the endometrium, and the other 40 were given sildenafil citrate tablets (50 mg) daily in addition to the above treatment protocol from the first day of the cycle until the day progesterone was started. This was discontinued 48-72 hours prior to the embryo transfer.

Results: The endometrial thickness was significantly higher in the sildenafil citrate group ($p<0.0001$), the triple line patterns of the endometrium were significantly higher in the sildenafil citrate group ($p<0.0001$), while the intermediate patterns of the endometrium were not significantly different in the two groups. The echogen patterns of the endometrium were significantly higher in control group ($p<0.0001$). Finally, implantation rate and the chemical pregnancy rates were higher in the sildenafil citrate group but not significantly.

Conclusion: As our study shows, the oral use of sildenafil citrate is a good way to improve the endometrial receptivity. We recommend the routine use of oral sildenafil citrate in patients with a previous failure of assisted reproduction technology cycles due to poor endometrial thickness.

Key words: *Embryo transfer, Endometrial thickness, Sildenafil citrate.*

O-80

Establishment of oxidative stress model during spermatogonial stem cells cultivation treated with different doses of H_2O_2

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Introduction: Nowadays, spermatogonial stem cells (SSCs) cultivation has been used as an effective tool for infertility treatments, by many researchers. Oxidative conditions can be effectiveness on cell proliferation and differentiation of these cells. So, the aim of this study was establishment of oxidative stress model for antioxidant activity of some drugs investigation during SSCs in vitro culture.

Materials and Methods: Neonatal NMRI male mice (3-5 day) were used for isolation of SSCs. The cell suspension was prepared by twice enzymatic digestion. The cell suspension contents were spermatogonial and sertoli cells and treated by different doses of H_2O_2 logarithmic concentrations from 0-1000 μM after 24 hours. To access the optimal dose, extra doses from 10-100 μM was evaluated. After 2 hours of H_2O_2 treatment, viability was determined by MTT assay. The data was analyzed using SPSS software and One-way ANOVA test.

Results: Our data showed that spermatogonial cells colonies appeared after 4 days of isolation. These cells expressed OCT4 and PLZF proteins. Many of spermatogonial cells were removed after using of higher doses of H202. The results showed that 50 μM

concentration of H_2O_2 could induce oxidative stress in spermatogonial stem cell during in vitro culture.
Conclusion: According to this study, 50 μM concentration of H_2O_2 can cause cell death lower than 50% of total number of cells and increase oxidative stress in cultivation of SSCs. This model is a suitable tool for studying of some new antioxidant drugs.
Key words: *Spermatogonial cells, Oxidative stress, Hydrogen peroxide, Stem cell, In vitro culture.*

O-81
Effect of different concentrations of GDNF on proliferation and differentiation of goat spermatogonia

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Introduction: The access to sufficient number of undifferentiated spermatogonia in vitro is a prerequisite for the study of their regulation and further biomanipulations. In spite of the biologic significance of undifferentiated type A spermatogonia, little is known about their behavior, properties and growth requirements. The present study was aimed to investigate the effect of different concentrations of GDNF on colony characteristics and purification rate of goat undifferentiated type A spermatogonia.
Materials and Methods: One month goat testes were transported to the lab in transition media at 37°C. Donor cells were isolated through two-step digestion method and purified by discontinuous percoll density with different gradients. The purified cells were propagated in culture media supplemented with different concentrations of GDNF (0, 20 and 40 ng/ml) for 2 weeks. At the end of each week, the morphological characteristics of colonies and purification rate of undifferentiated type A spermatogonia were evaluated by immunocytochemical staining.
Results: The number and size of colonies in group containing 40ng GDNF were significantly ($p<0.01$) higher than corresponding values in the other groups (0 and 20 ng/ml). Higher concentration of GDNF induced logarithmically self-renewing divisions of type A spermatogonia and decreased the number and chain length of colonies into 4-5 clumps. In immunocytochemical evaluation, the proportion of c-kit and PGP9.5 positive cells were significantly ($p<0.001$) higher in groups containing 0 and 40 ng/ml GDNF, respectively.
Conclusion: The medium including 40 ng/ml GDNF was superior with respect to the population of undifferentiated type A spermatogonia, self-renewal of goat spermatogonia, and its propagation in culture system.
Key words: *GDNF, Spermatogonia, PGP9.5, c-kit*

O-82
Goat spermatogonial xenotransplantation into the mouse testes

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Introduction: Germ cell transplantation apart from its application as an alternative strategy in producing transgenic livestock with higher efficiency has a potential application in individuals with azoospermia and in pre-pubertal males. The present study was aimed to investigate transplantation efficiency of goat germ cells into the mouse testes as a recipient of xenogenic sperm.
Materials and Methods: One month old goat testes were subjected to two-step digestion method and the spermatogonia were purified by using discontinuous percoll density gradients. Adult C57BL/6 mice, 6 weeks after receiving an injection of busulfan (30 mg/kg) to deplete endogenous germ cells, were used as recipient mice. The spermtogonia (450×10^3 cells/30μl/each injection) was transplanted into the rete testis of one testis of each recipient mice; the other testis served as control. Testis capsular thickness, tubular diameter and cell viability were evaluated before and after injection. The testes of busulfan-injected mice were recovered, fixed, and examined for histological and immunohistochemical staining (using an antibody against PGP9.5) after 80 days.
Results: The capsular thickness was increased and the walls of the majority of the seminiferous tubules became thinner after busulfan treatment because of the depletion of premeiotic and meiotic germ cells. Donor goat spermatogonia, PGP.5 positive round cells with spherical big nucleus, were able to survive and colonize in depleted recipient's testis after 80 days.
Conclusion: Mice can serve as a suitable model for development and evaluation of spermatogonial transplantation techniques in goat.
Key words: *Spermatognia, Transplantation, Goat, PGP9.5.*

O-83
hCG regulates human endometrial epithelial cell adhesion through L-selectin ligand, MECA-79

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Introduction: Molecular interactions at the human embryo-endometrium interface play critical roles during embryo implantation. L-selectin and its carbohydrate ligand are important in the human embryo-endometrial apposition stage and blastocyst-derived hCG plays a significant roles during implantation. We aimed to determine the effects of hCG on the L-selectin ligand (MECA-79) in implantation using an *in vitro* co-culture model.
Materials and Methods: Human choriocarcinoma cell (JEG-3) spheroids co-cultured with the human endometrial epithelial cell line (HES) were used to model blastocyst-endometrial interactions.
Results: Our findings demonstrated that hCG increased the attachment of trophoblast-like spheroids to HES cells in a concentration-dependent manner. HESC cells treated with hCG at 1 and 5 IU/ml did not affect spheroid adhesion, however when cells were treated with 50 IU/ml hCG there was a significant increase in adhesion compared to control. MECA-79 is produced both by human endometrial epithelial cells and HES cells and addition of a MECA-79 blocking antibody during spheroid-HES co-cultures decreased spheroid adhesion to HES cells compared to control. Addition of the MECA-79 neutralising antibody to hCG treated HES cells significantly reduced spheroid attachment to HES cells compared to the hCG alone treatment group. These data demonstrate that hCG increased JEG-3 spheroid to HES cells and further that this occurred via MECA-79.
Conclusion: These data is the first to demonstrate that hCG and the L-selectin ligand, MECA-79 regulated endometrial epithelial cell adhesion and extends our knowledge in embryo–maternal interactions during implantation. It suggests that targeting endometrial MECA-79 may be useful to facilitate implantation.
Key words: *Embryo implantation, Endometrial receptivity, Adhesion, L Selectin, hCG.*

O-84
Deltamethrin-induced RNA damage resulted in follicular cells apoptosis in rats ovary

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Introduction: Deltamethrin (DMT) is a broad-spectrum pyrethroid insecticide that acts by interfering with nervous system of insects and pests. Several reports indicated that insecticides are able to impact reproductive system and exert adverse effects on spermatogenesis and follicular growth processes, both in male and female genders. Present study was carried out in order to evaluate the effect of AMT on follicular growth, RNA content of follicular cells as well as serum levels of estrogen and progesterone.
Materials and Methods: Twenty four mature female rats were randomly divided into 4 groups as; control-sham (received 0.5 mL corn oil, orally), low dose (1 mg/kg, orally), medium dose (3 mg/kg, orally) and high dose (7 mg/kg, orally) DMT-received groups. After 14 days, the ovarian tissue dissected out and total follicles and total normal follicles were counted per ovary. The follicular cells RNA damage was assessed by using epi-fluorescent analyses.
Results: DMT resulted in significant ($p<0.05$) decrease total follicle contents of the ovaries as well as total normal follicle distribution in a dose dependent manner. Animals in DMT-treated groups showed intensive RNA damage in granulosa and theca cells. No histological changes were manifested in control-sham animals.
Conclusion: Our data suggest that, DMT reduces follicular growth as well as total normal follicles on the ovary. Moreover, DMT exerts its impact partly via enhancing RNA damage especially in granulosa and theca cells.
Key words: *Deltamethrin, Ovary, Follicle, RNA damage.*

O-85
Adoptive transfer of in vitro and pregnancy-induced CD4+CD25+ regulatory T cells prevent fetal rejection in abortion-prone mice

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Introduction: During pregnancy the mother tolerates an allograft expressing paternal antigens (the fetus), which requires substantial changes in immune regulation over a programmed period of time. $CD4^+CD25^+$ T cells play a major role in tolerating conceptus antigens and therefore may contribute to the maintenance of pregnancy. Here, we investigated whether fetal rejection could be prevented by adoptive transfer of Tregs from *in vitro* generated or isolated from normal pregnant mice.
Materials and Methods: Isolation of Mouse Mononuclear Cells was done with ficoll separation protocols and $CD4^+$ T cells was purified on the MACS Cell Separator. Purified naïve T cells were stimulated in anti-CD_3 coated plates and soluble anti-CD_{28} in the presence of TGF-b, retinoic acid and IL-2 for 4 days. Induction of regulatory T cells was surveyed by flow cytometric analysis. CBA/J female mated with DBA/2J male mice (abortion model) and with BALB/c male (control mice). In addition, $CD4^+CD25^+$ Tregs freshly isolated from CBA/J pregnant mice (CBA/J x BALB/c). Pregnant CBA/J mice (CBA/J x DBA/2J) were injected intravenously with the freshly isolated or in vitro generated Tregs ($2Í10^5$ cell per mouse) on day 1- 4 of pregnancy.

Results: In vitro stimulation of naïve T cells resulted in up to 70% Foxp3 expression. The purity of isolated $CD4^+CD25^+$ T cells were estimated around 98%. Adoptive transfer of invitro generated Tregs in day 1-4 of gestation resulted in 89% pregnancy rate. Fetal rejection completely prevented by adoptive transfer of Tregs from normal pregnant mice.
Conclusion: We suggest that generated Tregs could be seen as therapeutic method in prevention of abortion.
Key words: *Abortion, Abortion-prone mice, In vitro generated Regulatory T cells.*

O-86
Effect of vitrification on ultrastructure of cumulus cells of human mature oocyte

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Introduction: Cryopreservation of the intact cumulus oocyte complex is problematic because the optimal times for equilibration are likely different for the oocyte than its diminutive cumulus cells effects of cumulus cells on oocyte survival after freezing and thawing are controversial. The purpose of this study was to explore the effects of vitrification cryopreservation on ultrastructure of cumulus cells of human mature oocytes.
Materials and Methods: The samples were divided into group A (cumulus cells of human mature oocytes without oocyte were vitrification) and group B (cumulus cells of human mature oocytes with oocyte were vitrified). Based on no significant differences in age, duration of infertility, infertile causes. Transmission electron microscopy was used to compare the fine structure of vitrified cumulus cells of human mature oocyte without oocyte and cumulus cells of human mature oocytes with oocyte were vitrified and ultrastructural changes using transmission electron microscopy (TEM).
Results: The ultrastructural changes cumulus cell showed: Increasing amount of lipid droplets and cytoplasm has become non-homogeneous, the number of vesicles and smooth endoplasmic reticulation membranes have been increased in vitrified cumulus cell, cytoplasm membrane have been intact in cumulus cell without oocyte but cytoplasm membrane and nucleus membrane have been damage in cumulus cell with oocyte and all of the organelles Scattered in the surrounding oocyte.
Conclusion: Vitrification damaged the organelles in cumulus cells of intact human mature oocytes. Therefore, it is recommended to vitrify MII oocytes free of cumulus cells.
Key words: *Vitrification, Ultrastructure, Cumulus cell, Mature oocyte*

O-87
Prediction models for infertility treatment

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Introduction: About 10% of couples are infertile. They are faced with several problems that affect their marital life. Infertility treatment is expensive and time consuming and occasionally isn't simply possible. Because, prediction of treatment success is important this paper has reviewed effective predictors based on previous studies.
Materials and Methods: This study has been conduct as a systematic review in Avicenna Research Institute in 2014. Six data base searched base on WHO and international committee of monitoring ART definitions and MESH key words. Papers about prediction models in infertility were evaluated.
Results: Fifty five papers were eligible for study. Papers covered years after 1986 and studies were designed retrospectively and prospectively. IVF prediction models have more shares in papers. Common predictors were age, duration of infertility, ovarian and tubal problems.
Conclusion: Prediction model can be clinically applied if the model would be statistically evaluates and has a good validation for treatment success. To achieve better results the physician and the couples needs estimation for treatment success rate based on history, the examination and clinical tests. Models must be check for theoretical approach and appropriate validation. Applying impact of prediction models are decreasing the cost and time saving, avoiding pain treatment for patients, assessment of treatment approach for physicians and decision making for health managers and massive governmental policy makers. Design and applying of prediction models in infertility treatment has been recently considered by researchers and is a new approach. Approach to the design and use of these models is inevitable
Key words: *Prediction model, Infertility treatment, Treatment success, ART.*

O-88
Laser assisted zona hatching does not improve live birth rate in patients undergoing their first ICSI cycles

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Introduction: Routine use of assisted hatching (AH) following ICSI is a controversial issue in the literature.

There are rare studies regarding the effect of laser assisted hatching (LAH) on live birth rate. Our main goal was to evaluate the effect of LAH on delivery rate as well as congenital anomaly in patients undergoing their first ICSI cycle.

Materials and Methods: A total of 182 patients subjected to ICSI were randomly aliquot into two groups of experiment and control. In experiment group, the embryos were subjected to LAH to open a hole in ZP (about 10-12 μm) while in control group, the transferred embryos were intact with no AH. The patients were followed for clinical pregnancy and delivery rate as well as congenital anomaly. All the patients were infertile due to male factor infertility and LAH and embryo transfer were done on day 2.

Results: Laboratory and clinical characteristics of two groups of experiment and control were the same. There were insignificant differences between two groups of experiment and control for clinical pregnancy rate (20% vs. 23.9%, respectively, p=0.3) and live birth rate (11.11% vs. 8.6%, respectively, p=0.6). Also no significant differences were observed between two groups of experiment and control for multiple pregnancy as well as congenital anomaly.

Conclusion: Routine use of LAH in first ICSI cycle for male factor patients may have no beneficial effects on clinical pregnancy and live birth rate.

Key words: *Laser assisted hatching, Delivery rate, Clinical pregnancy, ICSI.*

O-89

The effects of estradiol and ECG on oocyte morphology and fertilization rate in mouse oocyte

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Introduction: Ovarian stimulators make some changes on ovarian follicle development and they crucial role in the field of reproductive biology. On the other hands, some oocyte features consist of Zona Pellucida and Perivitelline space (PVS) morphology have an impact on fertilization rate, embryo quality and implantation. Therefore our attempts have been made to delineate the effects of combined Estradiol and eCG on oocyte morphology and fertilization rate in here.

Materials and Methods: Sixty female NMRI mice in the three groups intraperitoneally received normal saline, eCG (10IU) and also eCG (10IU) + Estradiol (E_2) (1 μg) in same injection volumes respectively. After 48-hour, they received hCG (10IU) due to ovulation induction. The half of yielded oocytes designed for achieving IVF and another one for measuring ZP3 and PVS diameters.

Results: There were significant differences in the mature oocytes, PVS diameter in the group which were only received eCG in comparison with others.

Conclusion: It concluded that eCG alone is more effective on yielding more mature oocytes and PVS diameter rather than eCG+E2.

Key words: *Estradiol, eCG, IVF, zp3, pvs.*

O-90

Effect of GDF-9 supplement on in vitro maturation of human GV oocytes: spindle visualization and ZP birefringence

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Introduction: GDF-9 is an oocyte-secreted GF which is critical for promotion of ovarian follicle growth in vitro and preovulatory cumulus expansion, in addition it is mitogenic factor for granulose and theca cells and anti-apoptotic in preantral follicles. So supplementation of GDF-9 in IVM medium may enhance embryo development and fetal viability. The aim was to investigate the effects of exogenous GDF9 during IVM of human GV oocytes retrieved from stimulated ICSI cycles, on oocyte maturation, fertilization and subsequent embryo development.

Materials and Methods: Retrieved GV oocytes divided in 2 groups. In group I, oocytes cultured in commercial IVM media (SAGE) and group II, oocytes cultured in media that supplemented with 200 ng/ml exogenous GDF-9 (Sigma) at 37°C in, 5% CO_2 with high humidity. Maturation was considered when they had the first polar body. Matured oocytes were screened for ZP birefringence and existing of miotic spindles with Polar Aide Microscope. After ICSI, normal fertilization and further cleavage was analyzed up to 4 cell embryo.

Results: 140 GV oocytes were cultured in group I and 59 GV oocytes in group II. The overall maturation rate was 68.57% vs. 66.10% in groups I and II respectively. Although, there were not any significant differences between groups in terms of spindle visualization, ZP birefringence and the fertilization rates, but the rate of embryo formation was significantly higher in group II compared with group I (55.3% vs. 34.8%; p=0.02).

Conclusion: Application of exogenous GDF9 during clinical IVM improved embryo development. It seems a promising approach for improving human IVM.

Key words: *Human oocyte, IVM, GDF-9, Spindle, Zona pellucid.*

O-91
Comparison of Bax, Bcl-2 and ErbB4 genes expression in vitrified and re-vitrified mouse blastocysts

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Introduction: Nowadays, using of vitrification to preserve of embryo is a routine technique. Re-vitrification, is applied in some situations like unprepared paitient's endometrium. In this study profiles of Bax, Bcl-2 and ErbB4 genes were evaluated in vitrified and re-vitrified mouse blastocysts.
Materials and Methods: 5-8 cell embryos were collected from female mature mice, 60-62 h post hCG injection. The embryos were divided to three groups included: fresh, vitrified at blastocyst stage, vitrified (in 5-8 cells stage) and then re-vitrified at blastocyst stage. Vitrification was done using cryolock method according Kuwayama report. The relative quantification of Bax, Bcl-2 and ErbB4 genes was carried out by real time PCR. Total RNA was isolated from blastocyst embryos using QIAzol. RAN was transcribed to cDNA. Then real time PCR was performed. The data analyzed with ANOVA.
Results: Our data showed that expression of Bax (pro apoptotic gene), Bcl-2 (anti apoptotic gene) had a significant difference ($p<0.05$) between re-vitrified and fresh embryos. Although; there was no significant difference between re-vitirified and vitrified embryos. Similar to pervious genes, ErbB4 gene expression had also a significant difference ($p<0.05$) between re-vitrified and fresh embryos. Re-vitrification down regulated the expression of ErbB4 (implanting gene). Although there was no significant difference between re-vitirified and vitrified embryos regarding genes expression.
Conclusion: Based on our study, re-vitrification like vitrification could reduce expression of implanting gene and altered apoptotic genes expression compared to fresh embryo.
Key words: *Vitrification, Blastocysts stage, Apoptotic genes.*

O-92
Comparison of total oxidative status of mouse vitrified preantral follicles and drived from vitrified whole ovarian tissue.

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Introduction: Today, pre-antral follicles and ovarian tissue cryopreservation can be offered as an effective way to preserve the fertility of cancer patients. This study evaluated the reactive oxygen spieces (ROS) and total antioxidant capacity (TAC) of mouse vitrified preantral follicles in comparison to those drived from vitrified ovaries.
Materials and Methods: The isolated pre-antral follicles and immature ovaries were exposed to equilibration solution (7.5% ethylene glycol (EG) and 7.5% dimethyl sulfoxide (DMSO) in DPBS+20% FBS) for 5 and 10 min respectively and then exposed to vitrification solution (15% EG, 15% DMSO and 0.5M sucrose in DPBS +20% FBS) for 30 sec and 2 min respectively, and those were immersed in LN2 using the cryotop method. Finally, to examind the developmental competence, the samples were cultured 12 days. Moreover, after 0.24, 48, 72, 96 h of culture, ROS and TAC were measured by spectoflorometry and FRAP methods respectively.
Results: The rates growth, survival, antrom formation and MII oocytes of vitrified pre-antral follicles were significantly higher than those which were isolated from vitrified ovaries, while were significantly lower than non-vitrified follicles ($p<0.05$). ROS production of pre-antral follicles in vitrified and non-vitrified groups was increased, and TAC levels were decreased. While, ROS production of vitrified pre-antral follicles was significantly lower and TAC level was significantly higher than those were isolated from vitrified ovaries ($p<0.05$).
Conclusion: Pre-antral follicles cryopreservation less damage than freezing ovarian tissue will be followed by a more effective method would be to preserve fertility.
Key words: *Preantral follicles, Ovary, Vitrification, ROS, TAC.*

O-93
Pinopode formation upon progesterone and hCG treatments as luteal phase support

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Introduction: Induction of ovulation is one of the primary steps in assisted reproduction while considered as one of the main reasons for endometrial inadequacy. Hormonal treatment as a luteal phase support appeared to improve pregnancy rates, however, little is known about endometrium status following hormone therapies.
Materials and Methods: Study participants were randomized into designed experimental groups receiving progesterone or hCG following ovarian hyperstimulation with a long protocol method of a GnRH agonist. One piece of endometrial biopsies was used for dating and other biopsy samples were processed for scanning electron microscopy and were examined for the area-related numerical densities of pinopodes and were statistically evaluated.

Results: Statistical analysis indicated that density of pinopodes in biopsies taken from patients who received progesterone treatment as a luteal phase support were significantly ($p<0.05$) higher than those who received hCG treatment and those who received no treatment as well as those in natural control group. There was no significant difference between pinopode density of patients who received hCG or no treatment following GnRH agonist-stimulated cycles with those of the natural control group.
Conclusion: To the best of our knowledge, this is the first prospective randomized study to provide morphological information regarding the area-related numerical density of pinopodes as one of the histological criteria of endometrium following hormone therapy in ART cycles. These data demonstrated that progesterone following GnRH agonist-stimulated cycles increased density of pinopodes which are the first embryo-fetal contact sites and considered as potential biomarker of endometrial receptivity.
Key words: *Endometrial Receptivity, Steroid Hormone, Luteal phase support, hCG, Progestrone.*

O-94
Relationship between oocyte perivitelline severe debris abnormality and intracytoplasmic sperm injection outcomes

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Introduction: One of the extracytoplasmic oocyte dysmorphisms is presence of debris in perivitelline space. Reason for this phenomenon is still not exactly clear. Only one article had been published that showed the relation between perivitelline space debris and high doses of gonadotropins in ICSI cycles. Our study had focused on the effects of sever perivitelline debris on the ICSI outcome.
Materials and Methods: In this retrospective study 1164 metaphase II oocytes were assessed in 100 ICSI cycles from April 2012 to December 2013 in Novin Infertility Treatment Center (Mashhad, Iran). Patients were grouped as follow: A: whom does not have any clear dysmorphisms in their all oocytes (As control group), and B: whom have sever granularity in the perivitelline space of all oocytes (as polar body could not be diagnosed clearly). Both groups received similar stimulation protocols. Oocyte morphology was assessed just before sperm injection (3-4 hours after retrieval) using inverted microscope under 400 magnification. SPSS 19 was used to data analysis.
Results: There were no statistical significant differences between two groups in embryo quality, MII oocyte and pregnancy rate. But Normal fertilization rate was significantly lower in experimental group and was affected by this abnormality.
Conclusion: Our result demonstrated that sever perivitelline debris, in spit of reducing fertilization rate, doesn't have any effect on embryo quality and pregnancy rate. The mechanism to explain this result is not clear.
Key words: *Perivitelline debris, Oocyte dysmorphisms, ICSI, Pregnancy rate, Fertilization Rate.*

3- Urology

O-95
Successful treatment of retarded ejaculation in an unconsummated couple: A brief report

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Introduction: Retarded ejaculation (RE) is probably the least common, and one of the most challenging male sexual disorders. It may contribute with the persistent or recurrent delay or absence of orgasm after a normal sexual excitement phase.
Materials and Methods: We describe a successful treatment of an unconsummated couple for 18 months, which was associated with RE and secondary erectile dysfunction in male partner and primary vaginismus in woman, in Isfahan psychosexual clinic.
Results: The young woman, who complained about sever pain during several penetration attempts, diagnosed as vaginismus. She reported that never have seen her husband to ejaculate during sexual contacts and complained about a recently developed erectile disorder for her partner. Young man claimed that he can ejaculate during his recurrent masturbation with an idiosyncratic method. He attributed his recurrent ejaculation failure to high level of anxiety during his first sexual intercourse (FSI); and fear of contamination and conception during unprotected sex. The RIGI scan test showed normal results. The couple reported full vaginal penetration with ejaculation after a period of gradual exposure exercises assisted by a female sexologist. Furthermore, the male partner taught to alter the style of masturbation through his partner stimulation to experience increasing levels of arousal.
Conclusion: The family expectation about conducting FSI during the wedding night, conservative sexual upbringing and limited sexual knowledge in Iran may elicit negative emotionality towards sexual cues and, exert pressure on young people. Individual and dyadic sexual education programs may help newly married couples to overcome their sexual problems.
Key words: *Retarded ejaculation, Unconsummated marriage, Idiosyncratic masturbation, Sex therapy.*

O-96
Study of Wnt3a protein concentration and expression of frizzled10 (FZD10) and GSK3-β genes in testicular tissue of obstructive and non-obstructive azospermic men

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Introduction: The Wnt/β-catenin signaling pathway controls many developmental processes during the entire lifetime where its disorders can cause a wide range of pathologic defects including cancer in both animals and humans. It has some key roles in reproductive processes. The aim of this study was to compare expression of FZD10 gene (the main receptor) and GSK3-β gene (the key regulator) of this signaling pathway in obstructive and non-obstructive azoospermic men.
Materials and Methods: WNT3a protein concentration, expression level of FZD10 and GSK3-β genes were measured and compared between two groups of infertile men (with obstructive and non-obstructive azoospermia). Samples were obtained by testicular biopsy and screened for the most common mutations (84, 86 and 255) in the SRY region and CFTR before analyzing. FZD10 and GSK3-β gene expression was assessed quantitatively by real time-PCR.
Results: The WNT3a protein concentration had no significant difference between the two test groups and controls. Expression level of FZD10 gene had no significant difference between two patient groups and control, however was slightly less in non-obstructive azoospermic men. Expression of GSK3-β was down-regulated in non-obstructive azoospermia compared with normal and obstructive azoospermia groups ($p<0.05$).
Conclusion: Down-regulation of GSK-3β may cause to non-obstructive azoospermia in which the spermatogenesis is impalanced. Regulation and modification of GSK-3β gene expression by drugs could be used as a therapeutic solution.
Key words: *Azoospermia, Wnt/β-catenin signaling pathway, GSK3-β and Spermatogenesis.*

O-97
The change of serum testosterone level after varicocelectomy

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Introduction: To ascertain if testosterone levels increase after varicocelectomy and whether the varicocele grade, age and testicular volume are related to the degree of improvement in serum testosterone levels after varicocelectomy.
Materials and Methods: We measured preoperative testosterone levels in 79 men with palpable varicoceles and in 70 fertile men who served as a comparison group and Patients were categorized into two age groups (Less than 35 years, More than 35 years). Also the testis volume of patients has been examined which were divided into two groups included the men with testis volume less than 16ml and more than 16ml.
Results: The mean of serum testosterone levels before surgery in infertile men with varicocele and fertile men were respectively 590 (230) vs. 583 (237) ng/dl. No statistically significant changes were noted in serum testosterone levels for any of the groups. Mean serum testosterone levels were significantly increased in infertile men with varicocele compared with preoperative levels. The serum testosterone levels increased after repair from 590 (230) to 663 (242) ng/dl ($p=0.009$).
Conclusion: Varicocelectomy resulted in significant increases in the serum testosterone level and improves testicular leydig cell function.
Key words: *Androgen, Testosterone, Varicocele, Varicocelectomy, Infertility.*

O-98
Evaluation of tempol effects on semen quality during human sperm cryopreservation

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Introduction: Cryopreservation causes physical and chemical damages and it can effect on sperm vitality, motility and lipid composition of sperm membrane. Increase of imbalance between production of reactive oxygen species (ROS) and semen antioxidant levels may responsible for this damage. Tempol considered as antioxidant with ability to penetrate membrane and reduce stress oxidative, especially hydrogen peroxide. Therefore aim of this study for the first time was to

evaluate effect of Tempol during human sperm cryopreservation on sperm parameters and ROS level.
Materials and Methods: Semen sample from 42 normozoospermic men were collected and divided two groups. In control group, semen samples were cryopreserved accordingly vitrolife protocol. In test group, Tempol (5µM) was added in sperm freeze solution. Motility, viability and stress oxidative assessed with computer-aided sperm analysis (CASA), eosin-nigrosin staining, and H2DCFDA (2′,7′-dichlorodihydrofluorescein diacetate) probe respectively. Data was analyzed with SPSS 18.5 software
Results: Sperm motility and viability were significantly ($p<0.05$) higher in the test group (33.61±2.6, 45.63±1.95) compared to control group (33.94±2.52, 23.10±2.17) after freeze and thawed sample. In addition in Tempol group, stress oxidative insignificantly lower than control group (38.29±4.6 vs. 45.99±4.4 $p>0.05$).
Conclusion: Tempol may preserve sperm motility and vitality after cryopreservation via inhibition of sperm membrane peroxidation. Tempol with anti-oxidant activity like super oxide dismutase function may decrease the level of ROS and hydrogen peroxide generation than control group.
Key words: *Sperm, Cryopreservation, Tempol, ROS.*

O-99
Evaluation of sperm global DNA methylation and chromatin structure in infertile men with varicocele and fertile men

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Introduction: DNA methylation is an important event in the processes such as embryonic development, genomic imprinting, X-chromosome inactivation, and chromosome stability. Studies suggested stress oxidative in infertile men especially in individuals with varicocele is higher than fertile individuals. In this regard, a negative correlation between DNA methylation and stress oxidative in infertile men were reported. In addition sperm DNA damage could result from aberrant chromatin packaging during spermatogenesis, defective apoptosis and/ or excessive production of reactive oxygen species. We aimed to evaluation correlation between stress oxidative, DNA methylation and DNA damage in individual with varicocele.
Materials and Methods: Semen sample from 44 individuals with varicocele II, III were collected. Sperm parameters (WHO criteria), protamine deficiency (CMA3 staining), stress oxidative cell (DCFH-DA staining), global methylation DNA (Immuno staining) and DNA damage (TUNEL assay) were evaluated.
Results: Correlation analysis revealed that there is a negative significant correlation between DNA methylation and DNA fragmentation ,but not with degree of protamine deficiency and ROS production . Suggesting that in sperm with high DNA damage , percentage DNA methylation is low.
Conclusion: DNA hypomethylation in individuals with varicocele prone sperm to DNA damage, independent of ROS production .
Key words: *Varicocele, Global methylation, DNA fragmentation, Protamine deficiency, ROS.*

O-100
Comparison of Zaditen and NAC on semen parameters of individuals with varicocele after varicocelectomy

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Introduction: Varicocele is considered as defect in pampiniform vein and correlate with poor semen quality, increase of mast cells as corporate cells in inflammatory and ROS levels. Varicocelectomy, the surgical correction of varicocele, and can be along with/without drug treatment. Some studies suggested that drug application after surgery may be useful for improvement of semen quality. Therefore we aimed to compare NAC (N-Acetyl cysteine) as an anti-oxidant and Zaditen drug as mast cell blocker after varicocelectomy in individuals with varicocele.
Materials and Methods: Individuals with varicocele (N=67) in the day of varicocelectomy randomly were divided in two groups: Zaditen and NAC. These drugs were used 3 month after varicocelectomy and semen sample were collected. Improvement rate of semen volume, concentration, total and progressive motility, and sperm morphology were assessed according world health organization (WHO 2010) guidelines and data was analyzed with SPSS 18.5 Software.
Results: Semen parameters were improved significantly after surgery compared to before surgery in both groups ($p<0.05$). But rate of improvement in Zaditen group was significantly ($p<0.05$) higher than NAC group in sperm concentration, total and progressive motility and total sperm count, after surgery.
Conclusion: Zaditen as mast cells blocker improved semen quality rather than NAC as anti-oxidant via reducing inflammatory in testis and seminiferous tubule. We proposed application of Zaditen after varicocelectomy. For more reliable recommendation, studies on large population of individuals with varicocele were suggested.
Key words: *Varicocele, Varicocelectomy, Semen parameters.*

O-101
Effect of simultaneity exogenous and endogenous factors on semen quality

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Introduction: Studied showed that many factors affect spermatogenesis include Exogenous factor such as type of job, environmental factor, smoking tc. And endogenous factor such as childhood diseases, inherited abnormality, varicocele and etc. Previous studies evaluated one or more parameters on semen parameters separately. So the aim of this study was to evaluate both exogenous and endogenous factor on semen parameters simultaneity.
Materials and Methods: Semen parameters from 300 patient referring to Isfahan fertility and infertility center were evaluated with WHO criteria. Patient history and same question were achieving with oral question. SPSS 11.5 used for data analyzing.
Results: Result of this study revealed that both exogenous and endogenous factor such as smoking, long exposure to heat, chemotherapy, varicocele, overweight and childhood disease decreased semen significantly. But simultaneity of some parameters such as smoking and overweight significantly decrease semen quality. For example overweight smoker showed decrease in semen quality than smoker or overweight patient lonely.
Conclusion: Although both exogenous and endogenous factors affect semen quality simultaneity, but some of these parameters may had sever effect on semen parameters. It's suggested that for clinical treatment with eliminated some parameters, improved semen quality.
Key words: *Semen quality, Exogene, Endogen factors.*

O-102
Does anti-oxidant therapy add any extra benefit to standard inguinal varicocelectomy in terms of DNA damage or sperm quality factor indices? A randomized study

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Introduction: Varicocele is the leading cause of male factor infertility, responsible for up to 40% and 80% of primary and secondary infertilities, respectively. Disturbance in oxidative stress, DNA damage and semen parameters has several possible factors that can also define varicocele impact on fertility. It was documented that varicocelectomy will improve semen analysis parameters and DNA damage in infertile patients with varicocele. We proposed to investigate the role of adding anti-oxidant to this therapy in terms of improving semen parameters and DNA damage.
Materials and Methods: 100 patients enrolled in this study and were randomly divided into two groups (50 patients in each group). In Group 1, standard inguinal varicocelectomy and in group 2, standard inguinal varicocelectomy plus oral anti-oxidant therapy (oral L-Carnitine 250 mg three times a day) was performed for six months. For all patients, routine semen analysis plus DNA damage test of spermatozoa (by two methods of TUNEL and Protamine Damage Assay) were performed at baseline and three and six months post operatively.
Results: In both groups, the improvement in semen analysis parameters and DNA damage was observed but there was not any statistically significant difference between the two groups in these parameters, although the slope of improvement in DNA damage was slightly better in Group 2 (that was not statistically significant).
Conclusion: We observed that adding anti-oxidant therapy to standard inguinal varicocelectomy does not add any extra benefit in terms of semen analysis parameters to DNA damage.
Key words: *Varicocele, Anti-oxidant therapy, DNA damage, TUNEL, Protamine damage.*

O-103
Auriculotherapy effect on fertility of infertile couples attending to Mehr-e-Modar Clinic from 2012 to 2013

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Introduction: Infertility means not fertile couples during the year without any preventing methods for pregnancy. Infertile couples may experience various methods of medications. The purpose of this study was to determine the effect of Auriculotherapy (as a Complementary and Alternative Medicine) on the treatment of infertility.
Materials and Methods: This clinical trial was performed on 30 infertile couples. Auriculotherapy was done two times per week and each session 20 minutes on both ears of both couples by the instrument pointer Plus. Couples who were treated in this way did not use other medications methods. Data analysis was performed with the software 15 SPSS.
Results: The results showed that duration of Auriculotherapy treatment was at least four sessions and maximum time was 24 sessions. Chi-square test showed from the total number of couples participating in Auriculotherapy group, 25 women became pregnant ($p<0.03$). Results in the detailed will be presented at congress.

Conclusion: Auriculotherapy as a method of Complementary and alternative medicine is recommended among infertile couples, as an effective technique to reduce infertility.
***Key words**: Infertility, Auricolotherapy, Iran.*

O-104
The effect of curcumin on lipid peroxidation and antioxidant capacity in serum and testes in cadmium chloride- treated mice

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Introduction: Cadmium is an environmental pollutant and heavy metal that exerts their destructive effects through the induction of oxidative stress. Curcumin is known as a strong antioxidant inhibits that is able to oxidative stress.The aim of present study was to investigate the effect of curcumin on the adverse effect of cadmium on lipid peroxidation and antioxidant capacity in serum and testes in mouse.
Materials and Methods: Adult mice were divided into 4groups: 1.Control 2. Cadmium (5 mg/kg) 3. Curcumin (100 mg/kg) 4. Curcumin+ Cadmium. At the end of treatment (24 hours), blood serum was prepared from animals and their testes were dissected. To study lipid peroxidation of serum and testis, the amount of malonyldialdehyde (MDA) was measured by thiobarbituric acid while antioxidant capacity of serum and testis were measured using Ferric Reducing/Antioxidant Power (FRAP).
Results: Cadmium significantly increased the level of MDA in serum and testis compared to control group. In curcumin + cadmium group, curcumin was able compensate the level of serum and testis MDA to cadmium compensate significantly the control. In addition, cadmium caused a significant reduction in serum and testis antioxidant capacity compared to the control. In curcumin + cadmium group, curcumin could significantly compensate reduced antioxidant capacity in serum and testis compared to cadmium.
Conclusion: Curcumin as a potent antioxidant can reverse the adverse effect of cadmium on lipid peroxidation and antioxidant capacity.
***Key words:** Cadmium, Curcumin, MDA, FRAP, Mice.*

O-105
The role aspirin on the spermatogenesis and blood level of Testosterone and ICSH, FSH in mouse

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Introduction: Aspirin is a drug which is commonly used in relief of pains from slight to moderate status. The present research investigated the role of Aspirin on number and motility of sperm, spermatogenesis, and ICSH, FSH, testosterone hormones in mature male NMRI mouse.
Materials and Methods: In this research, the number 24 mature male NMRI mouse were divided in to 4 groups (n=6) including control group, sham group, experimental group 1(received 300 mg/kg in human) and experimental group 2 (received 450 mg/kg in human). The treatments were injected intraperitoneally for 6 days. Data were compared analyzed with Spss software tukey test.
Results: No morphological change in results between control group and treated with aspirin showed testicular. Also in number and motility of sperm count between these groups no significant changes were observed. But the number of spermatogonia A, B, primary spermatocyt, spermatids and permatozoa cells in the testes tissue and spermatozoa in the epididymis experimental group was significant decrease than the control group. Result Significant increase in both the experimental group than control group in the thickness of tunica albuginea showed. But no significant change in ICSH, FSH and Testosterone hormones level.
Conclusion: In a general conclusion that aspirin could reduce spermatogenesis decrease and thickness of tunica albuginea increase.
***Key words:** Aspirin, Spermatogenesis, Testosteron, ICSH, FSH.*

O-106
Prevalence of varicocele among primary and secondary infertile men in Babol: occupation, smoking, and drinking alcohol associated with varicocele

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Introduction: Existing data suggest that varicocele plays a central role in progressive infertility. Accordingly, it is important to elucidate both occupation and lifestyle factors to the development of varicocele among male infertile so as to prevent and manage the varicocele in a much better way.
Materials and Methods: Data of all males who consulted for infertility at Fatemezahra Infertility and Reproductive Health Research Center from April. 2010 to Feb. 2011 were examined. Male's occupation, smoking, and drinking alcohol, presence or absence of varicocele were evaluated. Thus lifestyle factors associated with varicocele were analyzed.
Results: The data of 816 men, aged 21-71 years, were in clouded in the study. There were 261men (32%) with

varicocele and 555 (68) men without varicocele. Percentage of varicocele was higher in smoker compare with non-smoker male (p=0.035). The adjusted OR for varicocele in smoker men was significantly higher than in non-smoker (OR=2.420; 95% CI=1.04, 5.61). No significant associations were found between varicocele and occupation's men or alcohol drinking.

Conclusion: The findings of the present study indicated that a high frequency of varicocele was indentified among male infertile. Therefore, it is necessary to allow ever men with smoking cigarette more closely to evaluate their fertility and varicocele problem.

Key words: *Infertility, Male infertile, Varicocele, Smoking.*

O-107

Evaluating the level of reactive oxygen species in seminal fluid of men with recurrent pregnancy loss; does it have any role?

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Introduction: It is estimated that about 50% of spontaneous abortion might have preventable causes. The main goal of this study was to compare concentration of ROS in seminal fluid between RPL and fertile groups.

Materials and Methods: In this case control study we selected 28 men with history of RPL who were referred to our clinic and 27 fertile men who had normal sperm parameters and also had a child one year as case and control groups, respectively. Makler chamber and phase contrast microscopy at ×200 magnification was used for evaluation of sperm count, sperm motility and morphology. Evaluation of ROS was done by chemilumine scence assay. Independent sample t-test and Mann-Whitney U test were used to compare the data between groups.

Results: There was insignificant difference between age of men in case and control groups (mean± SD: 31.7±4.8 and 34.4±5.4, respectively). Sperm count, motility and morphology were comparative in both groups with no significant differences. Although the ROS level showed the increasing trend in the case group compared to controls (median (min-max): 126.5(10-785) and 49.6(7-658), respectively) but the difference was insignificant.

Conclusion: Our data showed that the ROS level may have increased level in RPL cases. More studies are needed to elucidate the probable role of ROS in etiology of RPL.

Key words: *Recurrent pregnancy loss, Reactive oxygen species, Male infertility.*

O-108

Validation of the partner version of the multidimensional vaginal penetration disorder questionnaire: A tool for clinical assessment of lifelong vaginismus in a sample of Iranian population

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Introduction: Although, the role of spousal response in woman's experience of pain during the vaginal penetration attempts believed to be an important factor; studies are rather limited in this area. A mixed-methods sequential exploratory design was used to develop and investigate the psychometric indexes of the partner version of a multidimensional vaginal penetration disorder questionnaire (PV-MVPDQ); hence, the clinical assessment of spousal psychosexual reactions to vaginismus by specialists will be easier.

Materials and Methods: During the first qualitative phase, the findings from a thematic qualitative research with 20 unconsummated couples, which followed by an extensive literature review used for development of PV-MVPDQ. A consecutive sample of 214 men who their wives' suffered from lifelong vaginismus (LLV) based on DSM-IVTR criteria, completed the questionnaire and additional questions regarding their demographic and sexual history. Validation measures and reliability were conducted by exploratory factor analysis (EFA) and Cronbach's alpha coefficient through SPSS version 16 manufactured by SPSS Inc.

Results: After conducting EFA, PV-MVPDQ emerged as having 40 items and 7 dimensions: Helplessness, sexual information, vicious cycle of penetration, hypervigilance and solicitous, catastrophic cognitions, sexual and marital adjustment and optimism. Subscales of PV-MVPDQ showed a significant reliability (0.71-0.85) and results of test-retest were satisfactory.

Conclusion: The present study shows PV-MVPDQ is a multi-dimensional valid and reliable self-report questionnaire for assessment of cognitions, sexual and marital relations related to vaginal penetrations in spouses of women with LLV. It may assist specialists to base on which clinical judgment and appropriate planning for clinical management

Key words: *Multidimensional vaginal penetration disorder, Vaginistmus.*

4- Nursing & Midwifery

O-109
The impact of Valerian root extract on psychological and behavioral symptoms in premenstrual syndrome

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Introduction: Premenstrual syndrome (PMS) is a common disorder and although the etiology of the PMS is not clear, to relief from this syndrome different methods are recommended. One of them is use of medicinal herbs. This study was carried out to evaluate the effects of Valerian Root Extract psychological and behavioral symptoms In Premenstrual Syndrome
Materials and Methods: This study was a clinical trial, double-blind and participants were randomly allocated to intervention (n=50) and control (n=50) groups. To determine persons suffering from PMS, participants completed daily record scale questionnaire for two consecutive cycles. After identification, each participant received two capsules daily from seven days before menstruation for three cycle and they records the severity of the symptoms by daily record scale questionnaire. Data of before intervention compared with 1, 2 and 3 cycles after intervention.
Results: Before intervention there were no significant differences between the mean scores of PMS in the two groups. After intervention, there was a significant difference between psychological and behavioral symptoms in two groups.
Conclusion: Results of this study showed, Valerian Root Extract is effective in the psychological and behavioral symptoms of premenstrual syndrome.
Key words: *Premenstrual syndrome, Valerian root extract, Psychological and behavioral symptoms.*

O-110
Comparison of follicular fluid and MEM in maturation and fertilization of immature mouse oocyte

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Introduction: Induction of in vitro maturation and development of immature oocyte is one of the methods that has been frequently used recently in artificial reproduction techniques and has drawn attention of many investigators. This method is useful especially in women who are affected by cancer and polycystic ovary syndrome. Despite using many types of in vitro media, an appropriate environment has not been reported yet. Present study has been designed to assess the effect of heated human follicular fluid (hHFF), which is similar to in vivo environment for oocyte, on the maturation and fertilization potential of mouse immature oocytes.
Materials and Methods: Healthy female mice were sacrificed via cervical dislocation. Immature oocytes were placed in an incubator for 24 hours. Then, the stages of oocyte maturation were assessed by invert microscope and mature oocytes in each group were transferred to sperm-contained drops. After 24 hr, rate of two-cell embryos was recorded using invert microscope. Data was analyzed by Chi square test.
Results: Maturation rate of oocytes in the second group (83.7%) was significantly higher than first (59.8%) and third (67.3%) groups ($p<0.0005$). The formation rate of two-cell embryo in the second group (83.1%) was higher than first (47.2%) and third (54/3%) groups ($p<0.002$ and $p<0.01$, respectively).
Conclusion: It seems hHFF could improve in vitro maturation and fertility potential of immature oocytes and consequently the formation rate of two-cell embryos in mice.
Key words: *Maturation, Fertilization, Follicular fluid.*

O-111
Exploring infertile women's experiences about sexual life: A qualitative study

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Introduction: Infertility is a serious problem in a couple's life that affects their marriage relationships. So, dissatisfaction with sexual function resulting from interpersonal problems is common among these couples. This qualitative study aimed to explore the experiences of infertile women in their sexual life.
Materials and Methods: This is a qualitative study with a phenomenological approach. The participants were 20 infertile women referring to the health care centers and infertility clinics of Isfahan and were selected through purposive sampling. Data were collected by tape recording of deep interviews and analyzed by Colaizzi's method.
Results: Analysis of the participants' experiences led to five main concepts: "disturbed in femininity-body image," "discouragement of sexual relations," "sacrifice of sexual pleasure for the sake of getting pregnant," "confusion in sexual relation during infertility treatment," and "striving to protect their marriage."

Conclusion: Findings revealed that infertility affects women's different aspects of sexual life, especially disturbance in femininity-body image and sexual reluctance. With regard to women's willingness to protect their matrimonial life and prevent sexual trauma as a destroying factor for their family's mental health, it seems sexual counseling is necessary for infertile couples.

Key words: *Experiences, Infertility, Iran, Phenomenology, qualitative research, Sexual life.*

O-112
Pretreatment essential interventions in infertile couples

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Introduction: Preconception interventions in infertile couples can increase the chance of pregnancy and lower its complications. The success in infertility treatment and achieving a successful pregnancy is of great importance among infertile couples compared to others. This study has tried to investigate necessary preinfertility treatment interventions before among infertile couples.

Materials and Methods: This is a cross-sectional study of 268 individuals presenting to fertility clinics (Moshtagh and Shahid Beheshti) across the city of Isfahan, Iran. Simple sampling method was used. Questionnaire and patients' medical records were used to collect data. Descriptive and analytic statistical methods and SPSS software were used for analysis.

Results: The results showed that the interventions related to diseases treatment and prescription of folic acid before the beginning of infertility treatment were complete for most of the subject (47.06% and 79.9% respectively), but referral for genetics counseling had not been conducted in most of the cases(98.9%). Specific interventions in relation with the infertility treatment before beginning the treatment cycle had been conducted in 50% of the subjects.

Conclusion: The results of this study showed a weakness concerning necessary preconception interventions before beginning of infertility treatment cycle in most of the studied subjects. With regard to the effect of preconception interventions on outcome of infertility treatment, and with consideration of high importance of pregnancy success in infertile couples, paying more attention to conduct this manner is necessary.

Key words: *Infertility, Preconception care, Pregnancy outcome, Sub fertility-interventions.*

O-113
Evaluation of the effect of saffron oral capsules on duration of the active phase of labor first stage

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Introduction: Long delivery process is one of the reasons for pushing women to cesarean delivery. Today, a variety of pharmacological methods of analgesia used to shorten the delivery process; all of these methods have been associated with morbidity and even mortality. According to the medicinal properties of saffron and what is expressed in the traditional medicine saffron can be effective in the delivery process. According to present studies on herbs and medicines, the aim of this study was to determine the effect of oral capsules saffron on during the active phase of labor.

Materials and Methods: This triple blind clinical trial was accomplished on 30 qualified primiparous women. Sampling was convenient and women were randomly divided into two group's intervention (250 mg saffron capsule) and control (placebo capsule). Mothers consumed a number of prescribed capsules (saffron or placebo), In the Beginning active phase of labor and theme. If needed, capsules were administered every 2 hours, Maximum to three doses. Data were analyzed with SPSS software version 16, Mann-Whitney tests, T, Chi-square and Fisher exact.

Results: The mean duration of the active phase of labor first stage to Minute was 178±65.56 in the saffron group and 283±69.11 in the placebo group and significantly different There is between the two groups (p=0.001). Thus, during the active phase of labor in Saffron consumer group, has been shortened to 105 minutes.

Conclusion: It seems that Saffron can shorten the delivery process, without having adverse effects on the mother and fetus

Key words: *Saffron, Active phase.*

O-114
Effects of effleurage massage plus breathing techniques on childbirth satisfaction in primiparous women referring to lolagar Hospital in Tehran

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Introduction: A women's satisfaction with the childbirth experience may have immediate and long-term effects on her health and her relationship with her infant, so this study aims to investigate the Effects of

effleurage massage plus breathing techniques on childbirth satisfaction in primiparous women referring to Lolagar Hospital in Tehran.

Materials and Methods: A Randomized controlled study was conducted between August and December 2010. 64 primiparous women with single fetus aged 15-35 years with cervical dilatation of 4CM and gestational age of 37-42 weeks at Lolagar hospital in Tehran, Iran were randomly assigned to either the experimental (n=32) or the control (n=32) group. The experimental group received Effleurage abdominal massage plus Lamaz breathing techniques during the thirty first minutes of active (4cm) and transitional (8cm) phase whereas the control group didn't. Satisfaction was measured by Mackey childbirth Satisfaction Questionnaire. The data was analyzed using descriptive and analytical independent T-test, Mann-witney and chi-square by SPSS software.

Results: Results showed that rate of satisfaction in the 2 groups had significant. The highest satisfaction rate was the consent of the neonate dimension (4.66±0.60) (p=0.000) and the lowest level of satisfaction (3.65±0.91) in the consent of yourself during delivery (p=0.5).

Conclusion: According to the findings, it seems that massage with breathing techniques has some effect on delivery satisfaction on primiparous women.

Key words: *Effleurage massage, Breathing techniques, Satisfaction, Childbirth.*

O-115
Maternal death due to placenta percreta with bladder involvement: A case report

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Introduction: Placenta accreta is a life-threatening complication after previous cesarean delivery. The aim of this case report is to present a case of placenta percreta with bladder involvement and subsequent maternal death.

Case: The patient was a 37-year old who had an unwanted pregnancy due to tubectomy failure two years afterwards. She was hospitalized at 26th and 30th week of gestation because of gross hematuria. Sonography reported placenta previa. Cesarean section was performed at 34th gestational week. Due to severe hemorrhage, hysterectomy with resection of some part of the bladder was done. She died at the operating room after four hours of severe uncontrollable hemorrhage.

Conclusion*:* The increasing prevalence of different forms of placenta accreta is the result of the ever-increasing rate of cesarean deliveries. One of the strategies to prevent this catastrophic obstetric complication is decreasing the number of cesarean deliveries without appropriate indications.

Key words: *Bladder, Maternal mortality, Placenta percreta.*

O-116
Women's experience of female infertility

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Introduction: Approximately 15% of all couples in the reproductive ages are involuntarily childless, and infertility is the third cause of divorce in Iran. The purpose of this study was to explore women's experience of female infertility.

Materials and Methods: Descriptive phenomenological method was used to determine these experiences. The data was collected by deep interviewing with 14 interfile women.

Results: In related with infertility phenomenon we obtained four general concepts: 1) Personal anxiety. 2) Challenge with communications. 3) Effects of believes and religion. 4) Problems associated with treatment process.

Conclusion: According to our emerged result in this study, it seems that all aspects of infertile women's life are affected by infertility. Thus, designing and accomplishment of consultive and supportive programs play very important roles for giving better cares to infertile women.

Key words: *Lived experience, Women, Infertility.*

O-117
Perceived quality of the marital relationship in infertile couples referring to Isfahan fertility and infertility Center

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Introduction: Document about the effects of infertility on marital relationships is discrepant. So this study was designed to investigate the Perceived quality of the marital relationship in infertile couples**.**

Materials and Methods: In this cross-sectional study, 262 couples (131 men and 131 women) who referred to Isfahan Fertility and Infertility Center in December 2013- March 2014 were selected. Data were collected by the Perceived Relationship Quality Components Inventory (PRQC) (Fletcher 2000). The data were analyzed by SPSS software. A $p<0.05$ was considered significant.

Results: Mean score of PRQC in infertile women and men was 84.1 and 88.5 respectively. Significant difference was found among Mean score of PRQC in two groups ($p<0.001$). The results showed that the minimum and maximum mean score of PRQC were been in infertile couple with cause of female factor and unexplained infertility. Significant relationships was seen between PRQC and cause of infertility ($p<0.02$)
Conclusion: Perceived quality of the marital relationship in infertile women is low. Efforts should be made to consider infertile women as a target group for Couples Counseling.
Key words: *Infertility, Marital relationship, Perceived relationship quality components.*

O-118
The effect of stretching exercise on changes of blood pressure in nulliparous

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Introduction: Hypertension in pregnancy is one of the prevalence factors in maternal death. The aim of this study was to investigate the effect of stretching exercise on changes of blood pressure of nulliparous women during pregnancy.
Materials and Methods: It was a quasi-experimental trial, consisted of two groups who took part in pre and posttests. We used a simple sample randomized, including 89 pregnant females (stretching exercise: 30 subject's control: 59 subjects). The data was collected via the demographic check list and blood pressure was measured in every week. The SPSS -16 was used to analyze the data by one way ANOVA and Repeated measure ANOVA.
Results: No significant difference was found among the demographic characteristics of two groups. Mean systolic and diastolic blood pressure in two groups (stretching exercises, and routine care) in three intervals (pretest, first posttest, and second posttest) were significantly different ($p<0.05$). In this case, Tukey test showed that systolic and diastolic blood pressure in stretching exercises group significantly decreased compared to the routine care group ($p<0.05$).
Conclusion: The result of the study showed that stretching exercise reduces systolic and diastolic blood pressure in the second trimester of pregnancy and controls it in third trimester of pregnancy.
Key words: *Pregnancy, Blood pressure, Stretching exercise.*

O-119
Effect of infertility on female sexual function

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Introduction: 49% of women and 15% of men described infertility as the most upsetting event of their lives. The aim of this study is to determine the impact of infertility on female sexual function.
Materials and Methods: This study is a case-control study on 218 women with infertility disease. This study was conducted in kowsar hospital in 2013. One hundred nineteen women with infertility and 99 healthy female controls without infertility between the ages of 18 and 45 years were included in this study. Interventions were Anonymous survey and Female Sexual Function Index. Main outcomes measurement was Female Sexual Function Index scores, frequency of sexual intercourse and masturbation, and sex-life satisfaction.
Results: Twenty-seven percent of our control group had Female Sexual Function Index scores that put them at risk for sexual dysfunction (<27.55), whereas 43% of our patients with infertility met this criterion. Compared with the control group, the patients with infertility had significantly lower scores in the desire and arousal domains and lower frequency of intercourse and masturbation. The patients with infertility retrospectively reported a sex-life satisfaction score that was similar to that of the controls before their diagnosis, whereas their current sex-life satisfaction scores were significantly lower than those of the controls
Conclusion: Women with a diagnosis of infertility were found to be at higher risk for sexual dysfunction on the basis of their Female Sexual Function Index scores compared with women without infertility. The interaction of sexual function and infertility is complex and deserves further study.
Key words: *Infertility, Sexual function, Sexual dysfunction, Female sexual function index scores, Frequency of sexual intercourse.*

O-120
Investigation of the causes of maternal mortality using root cause analysis (RCA) in Isfahan- Iran in 2013-2014

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Introduction: Many maternal deaths are due to preventable causes during pregnancy and childbirth. Therefore, the detailed analysis of the root causes, was provides develop a plan and appropriate interventions to prevent these deaths occurring in the health system. This study aims to determine the causes of maternal mortality using by "RCA" method.

Materials and Methods: This research is a descriptive study of a case series. The data and information required in the case collected from; and file maternal health center, interviews with relevant personnel. The causes of maternal mortality and related reasons were determined by team expert's opinions and standard check list's root analysis.
Results: Reasons of research were classified in human factors, structural factors in the area of planning and management and social status of mothers. The results show that human factors were consist of; lack of knowledge and skills in the medical team, personnel not familiar with their duties, lack of care or advice based on health protocols, non-compliance with referral system and abstinence of using procedures and policies. Structural factors in the area of planning and management including were; shortage of specialized personnel, lack of follow-up care after discharge, inadequate supervision of inspectors on academic qualified doctors, or how to visit of the patients by doctors. Maternal social and family status, affected on mother admitted to the health center for care work.
Conclusion: Based on the root cause analysis process, the most fundamental factor in creating these deaths was management errors in level universities and the Ministry of Health.
Key words: *Maternal mortality, Root cause analysis, Pregnancy, Iran.*

O-121
Evaluating different types of malpractices in midwifery records referred to the legal medical commission and medical council between 2006 and 2011 in Isfahan province, 2013

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Introduction: Medical malpractices in obstetrics are the main health concerns. This study was conducted to evaluate different types of malpractices in midwifery records referred to the legal medical commission and medical council in Isfahan province.
Materials and Methods: In this cross-sectional descriptive study, we evaluated the data from all midwifery cases referred to the legal medical commission and medical council in Isfahan province between 2006 and 2011 with at least one lawsuit confirmed by the jury.
Results: The results of the present study revealed that out of 206 evaluated cases in the legal medical commission and medical council in Isfahan, 66 cases of malpractices- 38 in medical council and 28 in the legal medical commission were included; i.e. 32% of all malpractices in midwifery services between 2006 and 2011. Out of all malpractices, negligence, with 39.2%, imprudence and not considering governmental frames, with 23.5% and 19.6% respectively, stood amongst the most common reported malpractices. Our findings also suggest that the most common malpractices happened in the post-partum period with a frequency of 44.7%; in addition, governmental hospitals were shown to have the most common malpractices with a frequency of 50%.
Conclusion: According to our results, malpractices in midwifery services during and after delivery are so common leading to irreversible complications to mothers and neonates' health in the society. On the other hand, considering this point that most of these malpractices are preventable, related education, pertinent plans and correcting surveillance systems to prevent repetition of these malpractices are highly recommended.
Key words: *Malpractices, Complaint, Medical council, Midwifery.*

O-122
Effect of Auriculotherapyon serum hormones in single girls (18-35 years old) suffering from PCOS (1392)

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Introduction: One of the most common endocrine disorders with 10.5% prevalence is polycystic ovary syndrome. This study aimed to evaluate the effect of medication on changes Auriculotherapy and serum LH, FSH, Free Testosterone, DHEAS was unmarried girls with PCOS.
Materials and Methods: This clinical trial was conducted on 60 female, 18 to 35 years old in two groups (Auriculotherapyand modern medicine). Auriculotherapy group were treated for 2 months. The results were analyzed in three phases and were analyzed with the software 15SPSS
Results: Chi-square test showed changes in LH and FSH in both groups before intervention (p=0.9) and (p=0.3) and after intervention (p=0.8) and three months later (p=0.8) was not statistically different. Abnormal changes in FSH was significantly decreased (p=0.02) in Auriculotherapy group, but these changes did not show a significant reduction in the medication group (p=0.58). Chi-square test showed that the frequency of abnormal changes in DHEAS was significantly different in the two groups before intervention (p=0.02), immediately after the intervention was significantly different (p=0.05) but no significant difference was observed after three months of intervention (p=0.22).

Conclusion: Auriculotherapy is more effective than medication in reducing abnormal hormone such as DHEAS, LH and FSH. So Auriculotherapyis recommended in the treatment of PCO approach.

Key words: *Auricular acupuncture, Polycystic ovarian syndrome, Follicle stimulating hormone, Luteinizing hormone, Free testosterone, Iran.*

O-123

Comparison the effects of two month exercise of Pilates, aerobic and vitamin B6 intake on the symptoms of premenstrual-syndrome in Sedentaryadult girls

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Introduction: Premenstrual-syndrome (PMS) is a set of painful physical, psychological and behavioral changes that occur in the luteal phase of period and lead to disordering in individual relationships and normal activities. Physical activity is the most important factor in curing the PMS and is the best way to decrease stress and to make balance in chemical splash in brain.

Materials and Methods: This quasi-experimental study was conducted on 80sedentaryadult girls of Khorasgan Islamic Azad University (Isfahan, Iran). They aged 18-25 years old and had been diagnosed with PMS. Symptoms of PMS were recorded using Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV), the General Health Questionnaire (GHQ-28), Beck Depression and Anxiety Inventory, and a menstrual diary. After collecting personal and medical information, the participants were allocated to three experimental groups (Pilates, aerobic and pyridoxine) and a control group. Assessments were performed during the first-third menstrual periods (pre-test, mid-test, and post-test, respectively). One way and repeated measures analysis of variance (ANOVA) were used to analyze the data.

Results: The results show that physical and psychological symptoms reduced after 4 ($p \leq 0.001$) and 8 ($p \leq 0.001$) weeks exercise. Also the results indicate that the mean score in decreasing physical symptoms in Pilates exercise and Aerobic was the same but the mean score in decreasing psychological symptoms in Pilates was more than Aerobic exercise and both of them were more than vitaminsB6 and control group ($p \leq 0.05$).

Conclusion: Results indicate that physical activities and vitaminsB6 lead in reducing the symptoms of PMS.

Key words: *Premenstrual-syndrome, Pilates exercise, Aerobic exercise, Vitamin B6.*

O-124

Auriculotherapy effect on the duration and severity of dysmenorrhea in women attending obstetric clinic of Mehr-e-Madar in Isfahan

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Introduction: Dysmenorrhea is a common problem for women. According to Tavalaee *et al* study, prevalence of dysmenorrhea was reported 91% in Iran. Dysmenorrhea can affect women's quality of life. Given the prevalence of dysmenorrhea and its side effects, this study aimed to determine the effect of auriculotherapy on the duration and severity of dysmenorrhea was applied.

Materials and Methods: This study is a randomized clinical trial. The study population consisted of women of Isfahan in the sample of patients with dysmenorrhea, referred obstetric clinic of Mehr-e-Madar. A total of 19 patients randomly were asked to complete questionnaires. Data were collected by questionnaire and VAS index. Data analyzed was performed by descriptive and analytical statistics (SPSS 16).

Results: In 19 cases, the mean age and age at menarche were 31 and 13 years and BMI23.57and the average auriculotherapy sessions, 8 sessions were calculated. Paired t-test showed that the length of the menstrual cycle ($p<0.047$), duration ($p<0.035$) and menstrual pain ($p<0.001$) after the intervention has decreased. Wilcoxon test also showed that the amount of medication ($p<0.003$) and stress ($p<0.001$) were significantly decreased and the level of freshness and vitality ($p<0.005$), mood ($p<0.008$) and hair growth ($p<0.046$) was also significantly increased. The auriculotherapy average duration of sustainability was 5.5 months.

Conclusion: Auriculotherapy effects on the duration and severity of dysmenorrhea, mood, vitality and growth of hair and this method can be used as a complementary and alternative medicine in patients with dysmenorrhea.

Key words: *Auriculotherapy, Dysmenorrhea, Iran.*

O-125

Water Birth; method, benefits and indications in comparison with normal vaginal delivery in women parturient in Isfahan University of Medical Sciences' hospitals

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Introduction: Water Birth is a method to achieve painless delivery. As it has been used in many developed countries for many years but it is unknown method in Iran yet, so we decided to study this method of delivery. Water Birth is a type of alternative obstetrics method for natural normal vaginal delivery; it is associated with low risks for both mother and child when obstetrical guidelines are followed.
Materials and Methods: In this descriptive comparative study, we compare water births with normal vaginal delivery in some multiparous women who referred to Isfahan University of Medical Sciences' hospitals for delivery. All cases had previous normal vaginal delivery and in this pregnancy had no history of medical and surgical disease, using drugs, vaginal bleeding, preeclampsia and any obstetrics complications. Fetal heart rate checked in both first and second stage of labor in water.
Results: We did not prove any life or health threatening complication and occurrence of bleeding hypotonic uterus, infections or hypotension by parturient or by their newborns. Experience of birth itself is more satisfying after a birth in water. The episiotomy rate has dropped from a previous rate higher than 80% to a rate lower than 15% (7).
Conclusion: According to the results that significant differences in problems during and after labor have not been reported in our study, and also this type of delivery have no risk for mother and babies, it is better to do this method as a principal method for our countries parturient.
Key words: *Water birth, Contraindication, Labor duration.*

5- Psychology

O-126
Identification of contributing factors in success rate of ovum donated art cycle

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Introduction: The purpose of this study is to evaluate of characteristic factors in donated IVF cycles and relation between this and cycles success rate.
Materials and Methods: One hundred women who were candidated for ICSI with donor oocyte in infertility treatment centers in Tehran between 1391-1392 were evaluated and characteristic factors of their cycle including age and BMI of donor &recipient and endometrial thickness in recipients, number of oocyte and embryo and result of BHCG test were recorded.
Results: In our study PR was 59%. The age of both donor and recipient have negative correlation with PR. Max PR was in donor with the age of 25-28 (80.6%) and recipient with the age of 31-37 (69.2%). BMI of both donor and recipient have negative correlation with PR. In donor max PR was with the BMI<22 (91.7%) and in recipient with the BMI<25 (78.6%). There was positive correlation between number of oocyte & embryo with PR.in >10 oocyte and 6-15embryo have max pregnancy and in oocyte >20 PR declean. Max success rate was with 3 embryo transfer. In endometrial thickness>8 mm PR was higher but no statistically significant difference was seen.
Conclusion: Our results showed that PR was 59%.donor with the age of (25-28) recipient with the age of (31-37), donor BMI (<22) recipient BMI (<25), number of oocyte (10-20) and embryo (6-15) and number of transferred embryos (=3) and endometrial thickness >8mm have positive effect on increasing PR. BMI of donor and recipient and donor age have statisticaly significant difference but in others is not so.
Key words: *ART, Oocyte donation, Pregnancy rate.*

O-127
Altruism or earning: motivations of surrogate mothers

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Introduction: Surrogate motherhood represents an increasingly common method of human reproduction which helps overcome successfully the obstacles of infertility. Altruistic surrogacy refers to cases that the surrogate mother is motivated by care or concern for an infertile couple but she is not paid. Commercial surrogacy is usually arranged through an agency and the surrogate mother is paid a fee. Although both forms of surrogacy are morally controversial, the dominant view is that altruistic surrogacy is morally superior or at least less problematic. The aim of this study was therefore motivations of surrogate mothers.
Materials and Methods: This was a qualitative, phenomenological study. We selected 8 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 two main concepts: Altruistic motivation (valuable gift

to another person or couple) and financial motivation (being unemployed wife, the high cost of living).
Conclusion: Many women who become surrogate mothers state that their motivation in doing so is to contribute the unique and valuable gift of parenthood. Various studies of the motives of paid surrogate mothers have shown that contrary to popular belief about money as a prime motive, women say that they choose to bear children for others primarily for altruistic reasons. It is recommended for the prevention of social consequences and the abuse of women as a goods, surrogate mothers receive professional counseling before pregnancy.
Key words: *Altruism, Earning, Motivations, Surrogate Mothers.*

O-128
Assessment of infertile patient's attitude toward educational effectiveness (A descriptive study)

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Introduction: Patient education can be defined as the process of improving knowledge and skills in order to influence the attitudes and behavior required to maintain or improve health. Effective patient education entails providing patients with health information that will improve their overall health status.
Materials and Methods: A researcher developed questionnaires in three parts including: 1. Patient's information about infertility treatments, 2. Patient's attitude toward the importance of those mentioned information and its effects and 3. Patient's satisfaction from educational program, completed before and after the program. 140 infertile patients selected through accessible sampling who were referred to the clinic for the first time. Educational program was a session containing a lecture by a gynecologist with slides, an educational film and question and answers.
Results: The (Wilcoxon Signed Ranks Test) is used to assess the mean of the two variables for stress reduction and willingness before and after education. Willingness to cooperate variable on the level of p=0.195 for women and p=0.582 for men before and after education had no significant difference. There were No significant difference among men (p=0.682) and among women (p=0.647) regarding Attitude toward effect on stress. Furthermore, there were no significant difference regarding stress reduction (p=0.536) as well as no significant difference regarding Attitude toward effect on cooperation (p=0.528) before and after our evaluation.
Conclusion: People moderately believe that educational programs are valuable for stress reduction and cooperation with clinicians; mostly in women who are the main point of the treatment.
Key words: *Infertility, Patient education, Health care, Treatment, Effects.*

O-129
From sexual ill-health to well-being in infertile couple

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Introduction: In spite of the ICPD's (International Conference on Population and Development) call for services that promote helpful sexual health choices and well-being, sexual health interventions in many countries are limited to the prevention, treatment and care of primary sexual health concerns. Infertility makes an important challenge to the sexual life of couples. The performance of sexual health is joined to the extent to which human rights are respected, protected and satisfied. This article indicates the relations between infertility and sexual problems and effect of sexual dysfunction on infertility.
Materials and Methods: A literature research was conducted from 1990 to 2014 in valid databases such as PubMed, Scopus, ProQuest, Medline Plus, Springer and The Cochrane Library with the keywords "infertile" or "infertility" and "sexual problem" or "sexual satisfaction" or "sexual dysfunction" and "couple therapy" focused on sexuality in infertile couples.
Results: Sexual problem are more common in infertile women than men, but rarely sexual dysfunction were caused non organic infertility.
Conclusion: One of key elements of sexual health is sexual dysfunction and infertility. Sexual counseling in infertile couples conducts their life from sexual ill-health to well-being and pleasure sexual life.
Key words: *Infertile couples, Sexual dysfunction, Sexual health.*

O-130
Relationship between sexual function and individual fertility characteristics in infertile women

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Introduction: Sexual function is reduced in an infertile couple. Female sexual function is affected by several factors. This study aimed to identify the relationship between sexual function and individual fertility characteristics (age, spouse's age, occupation, spouse's occupation, education, spouse's education, cause of infertility, duration of awareness of infertility and

treatment failure) in infertile women referring to the medical centers in Isfahan in 2012.

Materials and Methods: This study is a descriptive correlational. 120 infertile women were selected by convenience sampling. Data were collected cross-sectional. Woman sexual function index (FISI) Scale and Individual Fertility questionnaire were used to collect the data. Data were analyzed by inferential statistical tests (Pearson correlation, Spearman correlation coefficient, T-independent, one-way ANOVA) through SPSS version 20.

Results: Analysis of the results showed high correlation between women's education, duration of awareness of infertility, treatment failure and sexual function, while there is no correlation between age, spouse's age, occupation, spouse's occupation, education, spouse's education, cause of infertility and sexual function.

Conclusion: The findings of this study showed increasing duration of awareness of infertility and treatment failure decreased sexual function, while increasing education increases sexual function in infertile women .The present result necessitates paying more attention to the role of individual fertility towards achieving appropriate Counseling and treatment and preventing the occurrence of sexual dysfunction.

Key words: *Sexual function, Individual fertility characteristics, Infertility.*

O-131
PGD technology and necessity of psychological supportive approach

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The inability to conceive healthy children is experienced as a stressful situation with high-risk couples, especially who have affected child or children. This inability as a phenomenon has its own psychological consequences. These couples concerned about reproduce another patient, losing their welfare, medical cost and etc. Advances in ART parallel to medicine genetics offer hope to many couples to ensure that their children will not inherit a faulty gene. Preimplantation genetic diagnosis to be considered a highly acceptable treatment and is an established procedure. It makes possibility for couples to avoid the difficult choice of whether to abort a pregnancy if testing of a fetus detects a genetic problem and devastating psychological consequences. Although it is well-established and highly reliable procedure, it is not an easy solution. Despite all advances, PGD remains a technically challenging and have own limitations. We knew that despite of any progression in ART, there is some ambiguous factor that it doesn't result completely successful outcome. This event is associated with traumatic psychosocial consequences. Affirmative technical tools and diagnosis inefficiency increased psychological adverse emotions like depression, guilt, anxiety, isolation, lowered self-esteem. Sometimes these are more than to be controlled without psychological support. Psychological supportive approach is thought to be effective within before and after days of PGD plan. Insight-oriented psychotherapy is necessary in pre-PGD counseling and supportive psychotherapy is very useful in post-PGD plan. It aims to reinforce these couples' healthy and adaptive patterns of thought behaviors in order to reduce the conflicts. This summary highlights the revision in such couples treatment plan and psychological support influence.

Key words: *Preimplantation Genetic diagnosis, Assisted reproductive technologies, Psychological supportive plan.*

O-132
Identification of psychological problems in infertile patients as an important step toward infertility treatments: a review of Alexithymia and social anxiety in infertile women.

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Introduction: Difficulty in identifying and describing feelings, lack of emotional capacity to identify and describe emotions that make the Word (Alexithymia) and anxiety or social phobia may be associated with psychological problems in infertile women. Purpose of this study was to evaluate Alexithymia and social phobia in infertile women and Relation between them.

Materials and Methods: This study is a cross-sectional study on a sample of 100 Infertile Women who attended to gynecology clinic in 2 months. Data gathering was from to Toronto Alexithymia questionnaire with 20 question in 3 dimension and social phobia questionnaire with 17 question in 3 dimension, data analysis by using descriptive statistics, Pearson correlation and regression analysis was performed

Results: According to the results duration of infertility one to four years and the age range was 20 to 30 years . the results showed that the mean of torrent subs calls were difficulty in identifying feelings (22.4±8.03), difficulty describing feelings(14.7±4.5), thinking with Orientation (21.2±4.4) the rate of Alexithymia in participant 54% reported. Rate of social phobia in this samples was 46% also social phobia subscale fear (6.4±4.50), avoiding (8.40±5.52) and Physiology Signs (5.28±3.07) was reported. Relationship between DDF and phobia (p=0.03), DDF and Physiology Signs (p=0.01) were significant.

Conclusion: Due to relation between social phobia and Alexithymia, we recommended attention to psychological problem in infertile patient inside other

medical treatments. This could be playing a major role in developmental of health in this patients.

Key words: *Psychological problems, Infertility, Alexithymia, Social phobia.*

Poster presentation

1- Infertility, Gynecology

P-1
Assessment of some endometrial cytokines association with In Vitro fertilization (IVF) outcome

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Introduction: Cytokines which produce by fetal and uterine mucus are responsible for regulation interactions between mother and fetus that improve uterus receptivity and leads to higher success rate of in vitro fertilization (IVF). The aim of the present study was to evaluate the relationship between levels of some cytokines (IL-1β, TNF-α, IP-10, and MCP) in endometrial secretion with success rate of IVF procedures.
Materials and Methods: In a nested case-control study, 50 consecutive women who were candidate for IVF due to infertility and referred to the clinics of Fatemieh Teaching Hospital in Hamadan were enrolled. Aspiration of endometrial secretion was performed in all women prior to embryo transfer using trans-cervical catheter insertion. The level of cytokines in aspirated fluid was determined by ELISA assay and using especial standard kits.
Results: Among 50 enrolled women, 5 samples initially excluded because of contact bleeding within sampling and thus aspirated endometrial secretions of 45 women were analyzed to assess level of the cytokines. Comparing levels of cytokines in aspirated endometrial secretions showed lower concentrations of TNF-α, IP-10, and MCP in the group who experienced successful clinical pregnancy (n=9) than the group with failed pregnancy (n=36), however no significant difference was revealed in level of IL-Iβ between the two groups.
Conclusion: In IVF patients with implantation failure, an elevated level of TNF-α, IP-10, and MCP cytokines are observable. Low levels of these cytokines can be valuable predicting markers for successful IVP pregnancy.
Key words: *Pregnancy, In Vitro Fertilization, Cytokine, Implantation.*

P-2
The effects of antioxidant supplement on human sperm after the freezing-thawing process

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Introduction: The aim of this study was to determine the effects of antioxidants Butylated Hydroxi Toluene and Glutathione on microscopic semen parameters, lipid peroxidation, the level of Reactive Oxygen Species and DNA fragmentation following freezing- thawing of human semen.
Materials and Methods: Semen samples were obtained from sixty normospermic donors and each three semen were pooled. The pooled semen samples were processed with density gradient method using pure sperm. After processing, the pellet was divided to three parts. The first parts were freezing medium containing BHT (0.5 mM) and the second parts were diluted with Glutathione (5 mM) and the third parts were diluted in freezing medium with no antioxidant (control). Then all samples were frozen and stored in liquid nitrogen. After 3 weeks samples warmed for two min in a water bath (37^{o}C) for evaluation the effects of antioxidants on sperm.
Results: Freezing extenders supplemented with 0.5 BHT and Glutathione (5mM) led to higher sperm motility and viability compared to the control ($p<0.00$). The addition of antioxidants decreased malondialdehyde ROS formation, MDH formation and DNA fragmentation compared to the controls.
Conclusion: Our results showed that the addition of GSH and BHT to the freezing extender could be of partial and limited benefit in improving the function of frozen human spermatozoa.
Key words: *Antioxidant, Glutathione, Sperm freezing, DNA fragmentation, Reactive oxygen species, Butylated hydroxytoluene.*

P-3
Comparison of serum matrix metalloproteinase-9 (MMP-9) and NGAL/MMP-9 complex activity in polycystic ovary syndrome (PCOS) and control women

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Introduction: Epidemiological studies estimates the prevalence of 6.5-8% for PCOS in women of reproductive age, using biochemical and/or clinical evidence, while ultrasound-based studies have reported a prevalence of 20% or more. The syndrome is associated with dyslipidemia, obesity, insulin resistance, hypertension, and metabolic syndrome. The remodeling of the ovary extracellular environment is dependent upon the breakdown of the follicular extracellular architecture by matrix metalloproteinase (MMP) enzymes such as MMP-9 ad Neutrophil Gelatinase-Associated Lipocalin (NGAL) complex with MMP-9. The current study investigates the role of MMP-9 and NGAL/MMP-9 complex activity in PCOS patients.

Materials and Methods: In this case- control match-paired study, 40 patients with polycystic ovaries and 40 normally ovulating women were enrolled. Blood samples were collected and serum was separated. Circulating levels of FBS and lipid profile were measured using enzymatic methods, whereas ELISA kits were used to determine the concentration of LH, FSH, testosterone, esteradiol, and sex hormone binding globulin (SHBG) as well as serum MMP-9 , NGAL/MMP-9, and tissue inhibitor of matrix metalloproteinase-1 (TIMP-1). Additionally, the zymography technique was applied to obtain the enzymatic activity of MMP-9 and NGA/MMP-9 complex.
Results: No significant difference was observed in FBS, lipid profiles, esteradiol and SHBG between groups while significantly higher levels of LH, LH/FSH ratio, and testosterone were found in PCOS patients compared to controls.
Conclusion: The concentration of MMP-9, TIMP-1, and NGAL/MMP-9 complex did not differ between groups whereas patients with polycystic ovaries showed a significantly higher activity of MMP-9.
Key words: *PCOD, Matrix Metalloproteinase, Infertility.*

P-4
The correlation between IL-17 serum level and ambulatory blood pressure in polycystic ovary syndrome

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Introduction: Polycystic ovary syndrome (PCOS) is the most common endocrine disorder with inflammatory base and hyperandrogenism in women that could be associated with increased activity of the renin-angiotensin system (RAS). This is a major cause of infertility in approximately 5-10% of reproductive age women. We planned to investigate the correlation between IL-17 serum level and hypertension in these patients.
Materials and Methods: This cross-sectional study was performed in 85 patients with PCOS due to Rotterdam criteria. Informed consent was obtained from all participants. In all patients FBS, TSH, PRL, FSH, LH, DHEASO4, TG, Cholesterol, LDL, HDL, CRP, Fasting Insulin, Free testosterone, and 17-hydroxyprogesterone were checked, and 24-hour ambulatory blood pressure monitoring (ABPM) were evaluated. Serum levels of IL-17 in patients were measured by ELISA method
Results: The level of blood pressure during the day was high in 8 and normal in 72 patients. It showed a direct correlation to serum levels of IL-17 (77.1±17.94 versus 55.2±13.71 pg/ml in patients with high and normal blood pressure, respectively) (p=0.001). And hypertension in night time have significantly correlation with IL-17 (p=0.001). Hypertension in 24 hours ambulatory blood pressure monitoring (ABPM) has significant correlation with IL-17. We have 22 units rising in IL-17 in hypertensive patients. (p=0.001)
Conclusion: Our results showed a correlation between PCOS and inflammatory factors. Serum levels of IL-17 correlate with high blood pressure in patients with PCOS.
Key words: *IL-17, Polycystic ovary syndrome, Ambulatory blood pressure monitoring.*

P-5
Comparing the roles of sperm chromatin integrity and apoptosis in intrauterine insemination outcomes of couples with mild male and female factor infertility

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Introduction: Intrauterine insemination (IUI) is one of the therapeutic approaches for infertility. The objective of this study was to evaluate DNA integrity and apoptosis role in success of IUI in both mild male and female factor infertility.
Materials and Methods: Patients were divided into two groups: M (mild male factor; n=29) and F (female factor; n=31) undergoing single IUI. Ejaculates were analyzed and chromatin quality was assessed using chromomycin A3 (CMA3) staining. In addition, spermatozoal apoptosis was recognized using TUNEL assay. Statistical analyses were done using t-test and Mann Whitney test for sperm apoptosis and sperm chromatin by SPSS. Data were expressed in mean±SD for variables. P<0.05 was considered statistically significant.
Results: Sperm concentration and progressive motility were higher in F than M group. Sperm with normal morphology were statistically similar in M and F infertile patients (32.7±15.6% vs. 35.5±9.07%, p=0.39). Sperm chromatin immaturity was higher in patients with mild male infertility, when compared with the other group (p<0.01). Also, 32.0±5.6% and 30.8±6.1% of the spermatozoa showed signs of apoptosis in groups M and F, respectively (p=0.49). Very low (3.4%) clinical pregnancy rates were noticed in patients with mild male factor infertility.

Conclusion: Defect in sperm motility as well as high rates of DNA damage and apoptosis may be involved with very low rate of pregnancy outcomes in patients with mild male factor infertility. Therefore, it seems the application of IUI may have better outcomes in patients with female infertility compared to mild male factor infertility.

Key words: *Apoptosis, Infertility, Intrauterine transfusion, Male, Morphology, Sperm motility, Spermatozoa.*

P-6

Effects of metformin treatment on serum, follicular fluid parameters and oocyte quality in PCOS patients undergoing ICSI

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Introduction: Polycystic ovarian syndrome (PCOS) is usually distinguished by an increasing number of oocytes; however, these are often of low quality leading to lower fertilization, cleavage and implantation rates. The purpose of the present study was to investigate the effects of metformin on follicular fluid parameters, oocyte and embryo quality in PCOS women undergoing ovulation induction for ICSI.

Materials and Methods: A prospective randomized, placebo controlled trial study was conducted in the IVF Unit of Infertility Research Center of the ACECR Qom. 40 cases of PCOS in the age of 25-35, all patients with PCOS undergoing ICSI treatment using a long GnRH agonist protocol and were treated for six weeks with Metformin (MET Group; 500 mg three times daily, n=20) and Placebo (Control Group, n=20). In each cases, clinical and biochemical evaluations in serum and follicular fluid were performed. Data were analyzed with t-test and Mann-whitney tests.

Results: After treatment, levels of serum insulin, leptin, LH, TT, Cholesterol and Triglyceride were significantly differences in the MET group compared with the placebo. The levels of follicular fluid leptin, insulin and LH were significantly different in the MET group compared with placebo. Mature and normal oocytes significantly increased in the MET group compared to placebo.

Conclusion: It can be concluded that metformin promotes lipid profile, endocrine and hormonal levels, improvement of oocyte maturation and quality, ovulation, and consequently the long-term health status of women with PCOS.

Key words: *Polycystic ovary syndrome, Metformin, Follicular fluid, Oocyte, ICSI.*

P-7

Sperm separation in the presence of ascorbic acid and albumin

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Introduction: By placing the mouse spermatozoa in media containing certain concentrations of albumin and ascorbic acid, the medium effect on separation of spermatozoa containing X or Y chromosome, in IVF and embryo transfer was studied.

Materials and Methods: 15 adult NMRI mice were randomly chosen and divided into three groups, control group and experimental groups. Initial evaluation of sperm samples, in the presence of concentrations of ascorbic acid and albumin was done. In this case study, The mentioned mouse spermatozoa which were separated & located in IVF dish, Near the same race mice oocytes by the injection of PMSG (Pregnant Mare Serum Gonadotrophin) and HCG (Human Chorionic Gonadatrophin), fetuses were transferred to the surrogate mother (experimental group).

Results: The mean percentage of male infants born in the experimental group was significantly different from the control group ($p<0.05$). Of five surrogate mothers, which were pregnant with sperm separation in the presence of ascorbic acid (750 and 700 micromolar), and albumin concentrations, The amount of male achievement in the presence of 750 micromolars concentration of ascorbic acid was 75.4291%, 700 micromolars concentration of ascorbic acid was 76.2857%, and in the control group was 49.9%. Adding ascorbic acid (750 and 700 micromolar) and albumin resulted in fat peroxidation reduction of the spermatozoeid medium extracted from adult mouse.

Conclusion: This method is suitable for sperm containing X and Y chromosomes separation and male sex selection in fertile couple.

Key words: *Ascorbic acid, Albumin, IVF, Sex selection, Mouse.*

P-8

Evaluation of vaginal misoprostol effect on pregnancy rate after IUI

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Introduction: Intrauterine inseminator (IUI) is one of the most appropriate and cost-effective methods of

assisted reproductive technologies (ART). As, distinguishing factors which could elevate its efficacy is helpful, we aimed to investigate effect of vaginal misoprosul on pregnancy rate after IUI**.**

Materials and Methods: This is a double blind, placebo controlled trial which was conducted on 210 infertile women referred to infertility clinic of Alzahra Hospital by an indication for IUI during 2012-2013. Women were divided in 2 groups. 200 mg vaginal misoprostol and 200 mg vaginal placebo had been administered for first and second group after IUI, respectively. Patients were followed for 2 weeks and lack of menstrual period indicated performing β-HCG test**.**

Results: Pregnancy had been noted in 24 misoprostol (22.9%) and 27 placebo (25.7%) groups which showed no significant difference. Also, there were no significant difference between age groups regarding BMI, causes, types and duration of infertility, sperm motility, sperm count and number of follicoles (p>0.05). In misoprostol group, 3 nausea and vomiting (2.9%) had been observed.

Conclusion: According to the results, administering 200 mg vaginal misoprostol didn't have any effect on pregnancy rate. Also, there was no significant difference between groups in terms of other variables**.**

Key words: *Misoprostol, Pregnancy, IUI, Randomized clinical trial.*

P-9

The relation between anti-Mullerian hormone and antagonist protocol in women undergoing intracytoplasmic sperm injection

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Introduction: AMH levels correlated significantly with the number of antral follicles, so in high, normal and poor responders is decreased, respectively. AMH-tailored stimulation improved positive clinical outcomes, reduced the incidence of complications and financial burden in ART. Agonist and antagonist protocols administration in women with various range of AMH showed different outcomes therefore we intend to study of antagonist protocols' results. In This retrospective study we assessed 94 women with tubal factor infertility undergoing antagonist protocol.

Materials and Methods: In our study, patients divided into group 1 (AMH<1.1 ng/ml), group 2 (1.1≤AMH <2.8 ng/ml) and group 3 (AMH ≥2.8 ng/ml).

Results: The oocyte number in group 3 (15.6±0.68), group 2 (9.17±0.46) and group 1 (3±0.13) is significantly decreased. Embryos number in group 1 (2±0.19) is significantly lower than group 2 and 3(7±0.47 and 7.4±0.55, respectively). Pregnancy rate in group 2 is significantly higher than group 3 and 1(72%, 20% and 0%, respectively). Good quality oocytes average in group 3 is significantly higher than other groups (5.8±0.62) and in group 1 is lower than group 2 (2±0.13 and 3.53±0.29, respectively). Good quality embryos average in group2 and 3 (2.35±0.13 and 2.5±0.23, respectively) is significantly higher than group 1 (1±0).

Conclusion: Results determined increasing AMH levels associated with good quality oocytes and embryos. We observed the highest pregnancy rate in normal range of AMH, thus perhaps antagonist protocol in certain range of AMH levels can lead to optimal results. In AMH <1.1 ng/ml, antagonist protocol lead to suboptimal results, it can be concluded that it isn't proper for them. Therefore, AMH levels may be used for selection of optimal protocol.

Key words: *Anti-müllerian hormone, Embryo quality, Oocyte quality, Antagonist protocol.*

P-10

The predictors of single-dose methotrexate treatment failure in women with ectopic pregnancies

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Introduction: The aim of this study is to determine the predictors of treatment failure in single dose of MTX injection.

Materials and Methods: In this quasi-experimental trial, we studied 70 women with ectopic pregnancies who were treated with MTX, according to a single dose protocol. Patients were considered a treatment success if BHCG levels decreased ≤10 m IU/ml after first dose of MTX. Treatment failure was defined as the need for a second or third dose of MTX and or surgery. The following risk factors were compared between the two groups: serum BHCG on days 1 and 4, ≥15%falls in serum BHCG between days 1-4 treatment, age, parity, gravidity, and size of ectopic mass and endometrial thickness.

Results: The success rate of MTX treatment was 77.1%. There were no significant differences between two groups in regards with the age, parity, gravidity, size of ectopic mass and endometrial thickness, but the mean serum BHCG concentration on days 1 and 4 were lower in the success group rather than failure group. We also observed ≥15% fall in serum BHCG in 80.9% of

the women with success and 38.5% of the cases in which treatment had failure.

Conclusion: Among women with ectopic pregnancies, a high serum BHCG concentration on days 1-4 and ≤15% fall in serum BHCG between days 1-4 treatment are the most important factor associated with failure of treatment with a single dose MTX protocol.

Key words: *Ectopic pregnancy, Human chorionic gonadotropin, Methotrexate, Treatment failure.*

P-11

The effects of lead on motility, viability and DNA denaturation of cauda epididymal spermatozoa of mouse

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Introduction: Lead is one of the environmental contaminants. The aim of this study was to investigate the effects of lead on motility, viability and DNA denaturation of mouse spermatozoa.

Materials and Methods: 24 male mice were considered as case group and 24 mice as control group. The case group was injected by one dose of 200 mg/kg of lead acetate and control group was injected only by distilled water. Each group (case and control groups) was divided into three subgroups and the members of each subgroup were killed after 1, 2 and 3 weeks. Motility, viability and DNA denaturation of caudal epididymal spermatozoa were examined in all groups. Data were analyzed using Mann-Witney U and Kruskal-Wallis tests.

Results: Lead reduces the motility and viability of spermatozoa one week after the injection. These effects of lead were disappeared three weeks after the injection. In contrast to the effect of lead on motility and viability, it did not affect on DNA denaturation.

Conclusion: Contamination with lead can reduce motility and viability of sperms but these effects will be disappeared by the time. Lead cannot create any changes on DNA denaturation of spermatozoa.

Key words: *DNA denaturation, Lead Poisoning, Motility, Mouse, Spermatozoa.*

P-12

The epididymal sperm viability, motility and DNA integrity in dead mice maintained at 4-6°C

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Introduction: When male animals die, spermatozoa within their body will be degenerated. Because of unique chromatin structure of sperm, maybe this degeneration is different from other cells. However there is not any research which considered directly the integrity of sperm DNA by keeping the cadaver in refrigerator.

Materials and Methods: In this experimental study, 24 male Swiss white mice were killed by cervical dislocation and then kept in refrigerator (4-6°C) for up to 12 days. On the 0 (immediately after death as control group), 1st, 2nd, 3rd, 5th, 7th, 10th and 12th days after death cauda epididymis were removed and squeezed in Ham's F10 medium. The proportion of viable, motile and double stranded DNA spermatozoa was examined. Viability and DNA integrity of sperm cells were examined consecutively by eosin-nigrosin and acridine orange staining.

Results: The data obtained from this study showed that viability and total motility of sperm cells were significantly decreased during 12 days after death ($p<0.001$). In contrast with viability and motility, DNA integrity was without significant changes (even 12 days after death).

Conclusion: We suggest that the integrity of sperm DNA would not change even after 12 days after death if the cadaver kept in refrigerator.

Key words: *DNA, Chromatin, Epididymis, Mouse, Spermatozoa.*

P-13

Association of obesity with polycystic ovary morphology

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Introduction: To evaluate the relevance of body mass index (BMI), with Polycystic ovary morphology in polycystic ovary syndrome (PCOS) women.

Materials and Methods: We reviewed the medical records of all women visited in the PCOS Clinic of Babol, Iran, from 2008-2012. A retrospective cross-sectional study was conducted on 175 PCOS women; 18-38 years diagnosed based on the Rotterdam criteria.

Results: Positive finding of polycystic ovaries was observed in 89.1% of PCOS women with by using sonography. A total of 69.2% overweight/obesity patients had polycystic ovary morphology on ultrasound image. Compared with non- overweight/obesity, the

adjusted OR of PCOS women for sonographic view of polycystic ovaries was 4.33 (95% CI, 1.42-13.15, p=0.010), Nevertheless, the adjusted odds ratio (OR) showed no significant associations between LH, FSH, and LH/FSH ratio with clinical symptoms in these women.

Conclusion: The findings of the present study indicated that the overweight/obese women with PCOS are at an increased risk for sonographic view of polycystic ovaries. Therefore, it is suggested that successful weight loss is the most effective method of restoring ovulation, menstruation that should be used as major advice in obese PCOS patients.

Key words: *BMI, Polycystic ovary syndrome, Polycystic ovaries.*

P-14

Routine use of EmbryoGlue® as embryo transfer medium does not improve the ART outcomes

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Introduction: The aim was to investigate the assisted reproductive technology (ART) outcomes in unselected patients after the routine use of EmbryoGlue® as a human embryo transfer (ET) medium with high concentration of hyaluronan (HA, hyaluronic acid).

Materials and Methods: A total of 229 unselected patients were retrospectively enrolled in the present study. They were divided into two groups: study group (n=117) that day 2 embryos were transferred in EmbryoGlue® and control group (n=112) that day 2 embryos were transferred in a conventional ET medium (with low concentration of HA).

Results: Patients in both groups, in regards to the mean of day 3 FSH levels, etiology of infertility, and history of previous implantation failure, and high rate of good quality embryos were similar. There were no significant differences between two groups in regards to clinical and ongoing pregnancies, implantation, and delivery and live birth rates. In spite of decreased abortion rate and increased multiple pregnancy rates in study group, the differences were insignificant.

Conclusion: Routine use of EmbryoGlue® as a HA enriched transfer medium for cleaving stage embryos may not be a beneficial option for all patients undergoing ART.

Key words: *Hyaluronan, EmbryoGlue®, Embryo transfer, Pregnancy rate.*

P-15

Comparison of GnRH agonists and antagonists in the outcome of IVF/ICSI in women with polycystic ovary syndrome

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Introduction: To compare the outcome of using gonadotropin-releasing hormone (GnRH) antagonists versus agonists in women with polycystic ovary syndrome (PCOS) who underwent controlled ovarian hyper stimulation (COH) for assisted reproductive techniques (ART).

Materials and Methods: A total of 120 patients with PCOS were randomly allocated to undergo COH with a GnRH antagonist (Buserelin) (60 patients) and GnRH agonist (Cetrorelix) (60 patients).The primary Outcome measure was pregnancy occurrence. Basal characteristics of the participants, stimulation cycle responses, pregnancy outcomes and incidence of OHSS were considered in both groups.

Results: The mean age and the mean of duration infertility of all patients was 28.6±4.4, 5.8±4 respectively. There was no significant difference between the antagonist and agonist arms in the Pregnancy rates, duration of ovarian stimulation, numbers of retrieved oocyte and fertilization rates. Number of gonadotropin ampoules consumed per cycle and incidence of ovarian hyper stimulation syndrome (OHSS) was significantly lower in the antagonist group.

Conclusion: It seems because of not significant difference in pregnancy rate between two treatment protocols and positive effect of antagonist in consumed gonadotropin ampoules and OHSS incidence, GnRH Antagonist is more preferable for PCOS women.

Key words: *Assisted reproduction, GnRH agonist, GnRH antagonist, Intracytoplasmic sperm injection, Polycystic ovary syndrome.*

P-16

Comparison of GnRH antagonist versus GnRH agonist on ART outcomes in patients with poor ovarian response

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Introduction: Studies revealed that 9-24% of women who underwent ovarian stimulation induced by gonadotropins for infertility treatment represented weak ovulatory responses. The aim of the study was to compare IVF outcomes in poor-responder patients undergoing GnRH agonist protocol versus administration of GnRH antagonist protocol.
Materials and Methods: One hundred poor responder's women were randomly assigned into two groups of GnRH agonist recipient and GnRH antagonist. Trans-vaginal ultrasound and measurement of serum estradiol E_2 were utilized in order to assess the maturity of the follicles. Ultimately, cancellation rate, number of oocytes retrieved, and clinical pregnancy rates and features of cycle between two groups.
Results: Comparing duration of gonadotropin-induced stimulation, number of retrieved acolytes, total rate of cycle abolition, and incidence rate of clinical pregnancy were not significantly different between two groups.
Conclusion: According to our findings, GnRH agonist appears to be as efficacious as GnRH antagonist protocol in poor responder women undergoing ovarian stimulation in IVF process.
Key words: *GnRH agonist, GnRH antagonist, Ovarian response.*

P-17
Follow up of infertile patients after failed ART cycles: a preliminary report from Iran and Turkey

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Introduction: Assisted reproductive technology (ART) has become an established and increasingly successful form of treatment for infertility. However, significant numbers of cycles fail after embryo transfer (ET) and it becomes necessary to follow up the infertile couples after failed ART treatments. The aim was to follow up the infertile patients after failed IVF/ICSI+ET treatments in Iran and Turkey.
Materials and Methods: 198 infertile couples from Iran and 355 infertile couples from Turkey were followed up after IVF/ICSI failures. The patients' demographic data, the couples' decisions about continuation of treatment and the spontaneous pregnancy rates were compared in the two countries.
Results: The drop-out rate was higher in Iran (28.3%) than in Turkey (23.4%). The reasons for treatment discontinuation in Iran and Turkey were: financial problem (33.9% vs. 41%), hopeless (10.7% vs. 22.9%), fear of drug side-effects (7.1% vs. 12%), achieving pregnancy (37.5% vs. 19.6%), child adoption (5.4% vs. 2.4%), lack of spouse cooperation (5.4% vs. 2.4%), and divorce (0% vs. 2.4%). Spontaneous pregnancy was significantly higher in Iran (10.1%) than in Turkey (3.9%). There was correlation between duration of infertility and female factor infertility with spontaneous pregnancy.
Conclusion: Since the majority of couples that discontinued treatment had financial problems, it is essential for health professionals to support infertile couples during their childlessness crisis.
Key words: *ART, Follow-up, Infertility, Iran, Turkey.*

P-18
The prevalence of metabolic syndrome and insulin resistance according to the phenotypic subgroups of polycystic ovary syndrome in a representative sample of Iranian females

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Introduction: Polycystic ovary syndrome (PCOS) is associated with metabolic abnormalities which are also parts of metabolic syndrome (MetS). It is debated whether all women with PCOS should be screened for MetS and Insulin resistance (IR), since they may vary in terms of PCOS phenotype, ethnicity and age. This large scale study aimed to determine the prevalence of MetS among Iranian women diagnosed with different phenotypic subgroups of PCOS based on the Rotterdam criteria.
Materials and Methods: This study was conducted from January 2006 to June 2008 in Isfahan, Iran. The study population comprised females diagnosed with PCOS referred to the infertility clinic. The subjects were divided into for subgroups according to different phenotypes of PCOS based on the Rotterdam criteria. They underwent metabolic screening according to NCEP ATP III guidelines and IR screening based on homeostasis model assessment (HOMA) of insulin resistance.
Results: The prevalence of MetS and IR were 24.9% and 24.3%, respectively. A significant difference in the prevalence of MetS was documented between anovulatory women having PCOS with or without hyperandrogenism (23.1% and 13.9%, respectively; p=0.001). Likewise, in PCOS women with hyperandrogenism, the MetS prevalence differed among those with or without polycystic ovary (23.1% and 63.8%, respectively; p=0.001).
Conclusion: The prevalence of MetS and IR varies between the phenotypic subgroups of PCOS. Hyperandrogenemia PCOS phenotypes of Iranian women, in particular those without sonographic polycystic ovary, are highly at risk of MetS and IR.
Key words: *Polycystic Ovary Syndrome, Rotterdam Criteria, Metabolic Syndrome, Insulin Resistance.*

P-19
The evaluation of infertility duration on the outcomes of IVF-ET

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Introduction: To determine the effects of the women's infertility duration in the different age groups following IVF-ET.
Materials and Methods: Infertile couples were divided into four groups according to their infertility duration (G1: <5 years, n=193; G2: 6-10 years, n=176; G3: 11-15 years, n=87; and G4: >16 years, n=45) in 2011-2014. Then, the members of each group was considered as four groups based on their age (I: <35 yr, II: 35-37 yr, III: 38-40 yr, and IV: >40 yr). The rates of the normal fertilization, embryo quality, and clinical pregnancy were compared by the chi-square test.
Results: The comparison among the groups of G1I, G2I, G3I, and G4I showed that the fertilization rate is not different among these groups ($p>0.05$) but the embryo quality and pregnancy rate are higher in G1I and G2I groups ($p<0.05$). These results repeated for G1II and G2II, and G1III and G2III groups. In the other hand, the fertilization and pregnancy rates were different and higher for G1IV group ($p<0.05$).
Conclusion: The increase of the infertility duration decreases the embryo quality and pregnancy rate. It looks that the increase of infertility duration of couples, the rate of stress, unhappiness, and irritable was increased. Of course, due to the low number of infertile couples in the ages lower than 37 yr and the infertility duration of higher than 16 yr, we were unable to collect sufficient data. Therefore, we were unable to compare its effect in these groups.
Key words: *Infertility duration, IVF, ART success.*

P-20
Proper time of ultrasonography in the diagnosis of endometrial polyps in the menstrual cycle

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Introduction: An endometrial polyp is a lesion in the lining of the endometrium that takes up space within the uterine cavity. Incidence of endometrial polyps is up to 10%.of women. They may have a large flat base (sessile) or pedanculated. Pedunculated polyps are more common than sessile ones. The aim of this research is to determine the optimal time for detection of endometrial polyp during the menstrual cycle in transvaginal sonography (TVS).
Materials and Methods: Prospective clinical trial study carried out on 930 women with AUB who were referred to Dr Rasekh clinic during the 6 months. 81 (8.7%) patients are suspected to have endometrial polyps. The average age of them is 35.06 years. TVS was performed. If a lesion was detected, it was further evaluated by hysteroscopy.
Results: TVS was performed on the day 9 -14 of the menstrual cycle. Polyp size was estimated between 4.3 mm to 2.60 cm. Patients were operated BY hysteroscopy that it was confirmed the diagnosis of endometrial polyps. Accuracy of TVS during different phases was largely dependent on the time of undergo ultrasonography and the size of the lesion. TVS falsely detected one (1.2%) lesions.
Conclusion: Accuracy of TVS in detection of endometrial polyp is highly dependent on the menstrual cycle phase. The day 9-14 of the menstrual cycle being the optimal time for this examination, because endometrial cavity is three layer and transparent at this time.
Key words: *Menstrual cycle, Endometrial polyp, Transvaginal sonography.*

P-21
The relationship between serum anti-Mullerian hormone level and endometriosis to ovarian response during Assisted Reproductive Technology cycles

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Introduction: AMH is not only associated with the oocyte yield after IVF but also is associated with oocyte quality and embryo number, making it a prognostic factor for the chance of a pregnancy and live birth. Several investigators demonstrated lower basal AMH levels among women with endometriosis. However, there are few studies for correlation between serum AMH and ovarian response to COH in women with endometriosis.
Materials and Methods: Retrospective data were collected from 126 infertile women undergoing ICSI treatment with the long stimulation protocol. Patients

divided into two groups: 66 women with endometriosis diagnosed by laparoscopy and 60 women with tubal factor (study and control groups). AMH level, oocyte and early cleavage embryo number and pregnancy rate were measured.

Results: Serum AMH levels were significantly lower in endometriosis compared to the control group (1.99±0.16 vs. 2.65±0.23 ng/mL). In endometriosis patients the mean of retrieved oocytes (7.47±0.61) and embryo number (4.58±0.45) were significantly lower compared with control group (10.12±0.85, 6.78±0.62). The chemical pregnancy rate in women with and without endometriosis was 15 and 37%, respectively.

Conclusion: Although ART procedures have been successful in infertile women with endometriosis, poorer results are still expected for these patients. Our data shows that endometriosis patients have a reduced reproductive potential because of decreased AMH levels and consequently, lower retrieved oocytes, embryo number and pregnancy rate. This finding suggests that endometriosis is associated with the reduction of ovarian reserve and poorer results in terms of Control Ovarian Hyperstimulation.

Key words: *Anti-Mullerian hormone, Endometriosis, Ovarian response, Pregnancy rate.*

P-22
Meiotic spindle integrity after IVM of oocytes retrieved from ovarian tissue of sheep

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Introduction: One of the fertility preservation methods for cancer patients would be in-vitro maturation (IVM) of oocytes with subsequent freezing. For fertility preservation, partial or total ovarian tissue can be removed. Follicular aspiration in order to segregate immature oocytes from ovarian cortex could be considered as a new technique along with freezing ovarian cortex. The aim was to evaluate the maturity rate and meiotic spindle status of matured oocytes following IVM of oocytes retrieved from ovarian tissue of sheep.

Materials and Methods: This is an ongoing study including 36 fresh ovarian tissues of sheep. 74 immature (GV) oocytes were retrieved following follicular aspiration from ovarian cortex. After oocytes retrieval, the immature oocytes were transferred into IVM medium (TCM 199) and incubated at 37^{o}C/5% Co_2. Oocyte maturity and integrity of meiotic spindle were checked using light microscopy and polescope, respectively.

Results: 54 oocytes with dark cytoplasm/ sign of degeneration were denuded following aspiration. These oocytes were then discarded. Only 20 GV oocytes had bright and normal cytoplasm and cumulus cells. These oocytes underwent IVM process, and 20% of these matured oocytes showed normal meiotic spindle with sign of maturity.

Conclusion: IVM technology can be advanced with assessment of meiotic spindle integrity, especially for fertility preservation purposes. More animal samples are needed to pinpoint the cause of oocytes degeneration in this study.

Key words: *IVM, Fertility Preservation, Ovarian tissue, Ovine oocyte.*

P-23
Risk of congenital heart defects associated with assisted reproductive technologies

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Introduction: Assisted Reproductive Technology (ART) is a fast growing field in the medical world that involves handling eggs, sperm, or both outside the human body. Congenital heart defects (CHD) are the most prevalent birth defects and comprise the most important cause of malformation related infant mortality.

Materials and Methods: For study of relationship between ART and CDH we searched in PubMed, sciencdirect, google scholar with key word for ART, CDH, risk factor.

Results: Studies demonstrate the presence of cardiac and vascular remodeling in fetuses and infants of pregnancies obtained by ART. Assisted reproductive technologies were specifically associated with significant increases in the odds of malformations of the outflow tracts and ventriculoarterial connections and of cardiac neural crest defects and double outlet right ventricle. In general, we found specific associations between methods of ART and subcategories of CHD. Mechanisms leading to congenital malformations in ART children: Point mutations, IHH and SOX2 mutations (idiopathic hypogonadotrophic hypogonadism), Cystic fibrosis, Chromosomal abnormalities, Ring Y, Aneuploidy, and Epigenetic abnormalities.

Conclusion: Cases with CHD were more likely to have been conceived following ART when compared with malformed controls. This higher risk for CHD varied specifically according to the method of ART and the type of CHD and may be due to ART per se and/or the underlying infertility of couples. ART contributes a significant risk of congenital malformation and may be more pronounced for multiples. Accurate counseling for parents considering ART and multidisciplinary coordination of care prior to delivery are warranted.

Key words: *Congenital heart defects, Assisted reproductive technologies, Risk factor.*

P-24
Evaluation of tumor necrosis factor alpha polymorphisms association with endometriosis

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Introduction: Tumor necrosis factor-alpha (TNF-α) is a multifunctional pro-inflammation cytokine, which has been considered as one of pathogenic factors for various diseases. The promoter-1031(T/C) and -238(G/A) polymorphisms in the TNF-α gene was reported that it plays a role in some reproduction-related diseases. Among these, endometriosis is known to be one of the most common gynecological diseases of women in reproductive age. Here, we performed a study of some polymorphisms of TNF-alpha gene's promoter in endometriosis.
Materials and Methods: The -1031(T/C), -238(G/A) and -308(G/A) polymorphisms in TNF-alpha gene's promoter was analyzed by polymerase chain reaction (PCR) on blood samples of a total of 65endometriosis patients and 65 matched female controls of healthy women. Statistical analysis was performed using Chi-square test. P-value under 0.05 was considered statistically significant.
Results: In this study we have demonstrated a strong association between the -1031(T/C) polymorphism in the promoter region of TNF-alpha gene and endometriosis ($p<0.05$). In addition, the frequency of C allele was significantly higher in endometriosis patients compared with controls. There was no significant association between -238 (G/A) and -308 (G/A) polymorphism with endometriosis.
Conclusion: This study suggests that -1031 (T/C) polymorphism could be used as a relevant molecular marker to identify women with risk of developing endometriosis in our population.
Key words: *Endometriosis, Gene polymorphism, TNF alpha.*

P-25
Application of anti-mullerian hormone (AMH) in female reproduction

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Introduction: Anti-Müllerian hormone (AMH) is a dimeric glycoprotein, a member of the transforming growth factor (TGF) superfamily. In the ovary AMH is produced by the granulosa cells of early developing follicles and seems to be able to inhibit the initiation of primordial follicle growth and FSH induced follicle growth.
Materials and Methods: This research designed based on evaluation of 35 articles for about AMH in variety of clinical situations.
Results: levels of AMH may represent both the quantity and quality of the ovarian follicle pool. Compared to other ovarian tests, AMH seems to be the best marker reflecting the decline of reproductive age. AMH values have greater sensitivity than Inhibin B, FSH and Estradiol values in predicting ovarian follicular reserve, but combining AMH, Inhibin B and FSH modestly improves the predictive statistics. This predictive value could be improved in poor responders by combining the measure of AFC with these biochemical markers. AMH measurement could be useful in the prediction of the menopausal transition, ovarian reserve; polycystic ovary syndrome (PCOS) and ovarian cancer .Furthermore predicted early menopause with AMH measuring could emphasize the need for timely prevention of bone demineralization and cardiovascular diseases. It could also be used to predict poor ovarian response and prognosis of in vitro fertilization (IVF) cycles.
Conclusion: In this article we have shown that AMH can be a novel marker to prediction or diagnosis a spectrum of clinical situations from ovarian reserve to ovarian cancer.
Key words: *Anti-Müllerian hormone, In vitro fertilization, Polycystic ovary syndrome, Menopausal transition.*

P-26
Sperm function tests speak louder than conventional semen analysis toward the dark edges of unexplained infertility

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Introduction: Reactive Oxygen Species (ROS) and DNA fragmentation have a great role in unexplained infertility.
Materials and Methods: We examined a great number of articles based on keywords such as DNA-Damage, Oxidative Stress, ROS, Acrosome Reaction ,Apoptosis, Varicocele and etc.
Results: The oxidative stress, varicocele and DNA fragmentation have important impacts on the male fertility potential.
Conclusion: Our observations indicate that with an exact and proper approach toward the monster of unexplained infertility with techniques such as Sperm Deformity Index (SDI), DNA Fragmentation Index (DFI), Acrosome Index (AI) and Magnetic Activated Cell Sorting (MACS), we will be able to overcome to some great problems about this important matter,

especially in the era of assisted reproduction and its outcomes

Key words: *Reactive oxygen species, DNA fragmentation, Sperm deformity index, DNA fragmentation index, Acrosome index, Magnetic activated cell sorting.*

P-27

The future of surrogacy as an infertility treatment in oponion of students

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Introduction: Surrogacy is one of the treatments for infertility; therefore, it seems necessary to know the opinion of people about it, especially the opinion of those who are engaged in infertility in their career. Students studying in some courses such as midwifery, medicine, psychology and law are involved in this process to various degrees. The aim of this study was to investigate the students' opinions about the perception of the society on using surrogacy.

Materials and Methods: This study was a descriptive cross-sectional survey. The sample of this study included 200 students of Isfahan University and Isfahan University of Medical Sciences from the following courses: Midwifery, Medicine, Psychology and Law. Since the number of students in different discipline was not equal, therefore we used Quota Sampling. Data collection instrument was a researcher-made questionnaire. The questionnaire included some questions on knowledge, attitude and surrogacy acceptance in the future in Iran.

Results: The students of medical course were mostly "very agree" and "agree" with surrogacy (43 students which constitute 79.6%), then, midwifery students (15 students which constitute 78.9%) and finally, the students of other courses were less agree with this method.According to chi-square test, there was no significance difference between attitudes of students (p=0.08). Individuals mostly assert their acceptance of this method through "increasing tends to this method in the future" (77.1%).

Conclusion: Students in this study had a positive attitude towards surrogacy and they accepted it as a norm; despite this, it is essential to make some changes in cultures to improve the situation.

Key words: *Social acceptance, Surrogate mother, Attitude.*

P-28

The relationship between fetal nuchal translucency (NT) in ultrasononography and neonatal outcome in Jahrom city

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Introduction: The aim is detection of association between Nuchal translucency, Quad marker test, amniocentesis and neonatal outcome.

Materials and Methods: This clinical study on 106 pregnant women referred to Dr Rasekh's clinic during 12 months, NT in 11-14 gestational weeks by ultrasonography. Quad tests performed at 15-18 weeks of gestational age.

Results: Mean of nuchal translucency 1.7 (max: 2.1 min: 1.4). Frequency of the negative screening test for Down syndrome was 88.7% and positive test was 11.3%. Group with positive screening test, 25%of them accomplished amniocentesis. All were reported normal and follow up, all neonates were normal. 8.3% of women with positive screening test, their fetus were dead. Others followed up by ultrasononography and with mean of apgar scores 9, completely normal neonate were born. Relationship between positive quad screening test and birth of neonate with Down syndrome, there was not virtual association (p=0.06), with different age group, the lowest percent of the positive screening test was found in 19-25 years group (3%) and highest percent of them in 35-40 years group(71.4%).The most of pregnant women were 25-35 years. Relation between high maternal age and positive quad screening test is considerable (p=0.005).

Conclusion: Significant association between positive quad screening test and birth of neonates with Down syndrome was not seen, but there is relationship between NT, amniocentesis and neonatal outcome. Factors which contribute in the false positive Quad screening test should be considered in laboratory and to minimize that the pregnant women are not undergone invasive and expensive procedures.

Key words: *NT, Ultrasononography, Quad marker, amniocentesis, Neonatal outcome.*

P-29

Comparison of two groups with combination drug regimens in infertile women with anovulatory cycles, best pregnancy rate with least complication

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Introduction: The aim of this research is comparison of two group's regimens in infertile women with anovulatory cycles, with the best pregnancy rate, least adverse effects.
Materials and Methods: Randomized control trial was done on 90 infertile women referred to Dr Rasekh clinic in Jahrom city during 1 year. Patients were 2 groups randomly and each group with 45 numbers of infertile women .The majority of patients (80.7%) in both group were in the age group 20-30 years (p=0.5). Group 1 treated with Tamoxifen+ letrozole +estradiol. Group 2 treated with clomiphene+ Tamoxifen + vitamin E. some of the patient became pregnant spontaneously before finishing ovulation induction protocol. Results are reported as number and percentage and the Chi-square test. Data was analyzed by SPSS 16.
Results: Group 1 were treated with Tamoxifen+letrozole+estradiol, Group 2 with clomiphene+Tamoxifen+vitamin E. pregnancy rate in group 1 was more than group 2, (17.8%:2.2%). Group 1 had better results for acceptable endometrial thickness (more than 8 mm: 91.11%) (p=0.08). OHSS in group 1 was 6.7%, which was less than group 2: (35%) (p=0.09). Patients who were treated with estradiol+Tamoxifen+letrozole had better follicular maturation (37.77% vs. 28%) (p=0.4). There are no significant statistical differences in age and size of the follicles in both groups.
Conclusion: Pregnancy rate in two groups had significant difference (p=0.01) which shows the efficacy of regimen in group 1. Group 1 had better results in endometrial thickness, follicular size and also lower rate of OHSS.
Key words: *Infertility, Tamoxifen, Letrozole, Estradiol, Vitamin E.*

P-30
The effect of endometrial volume on the day of HCG administration on the pregnancy rate

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Introduction: One of the determining factors in successful assisted reproduction technology is endometrial volume. The aim of this study is to evaluate the importance of endometrial volume on the day of HCG administration by live 3 dimensional ultrasound in predicting pregnancy in ART cycle.
Materials and Methods: Endometrial volume was measured by 3Dimensional ultrasound on the day of HCG administration. According to endometrial volume, patients were divided to 3 subgroups: (2cc, 2-4.5cc, 4.5cc). Pregnancy rate were compared between all groups.
Results: One hundred and sixty patients were included in the study. 73(36.5%) became pregnant after IVF. No significant cut-off value was found for endometrial volume.
Conclusion: Endometrial volume on the day of HCG administration could not be used as a predictor of implantation in ART successful.
Key words: *ART, Endometrial volume.*

P-31
Comparisons of the outcomes between two commercial embryo culture media: HTF vs. G1

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Introduction: Currently, there are many different culture media available in assisted reproduction program. The quality of culture media may affect in-vitro development of cleavage embryos. This study compared the in-vitro outcomes between two different embryo culture media using mouse embryo assay (MEA).
Materials and Method: Female mice were super ovulated with IP injection of 10 IU of PMSG followed by 10IU of HCG. Zygotes were collected 22-24 h after HCG administration. The oviducts with ampulla were dissected and placed in the MOPS-hepes media. The cumuli from zygotes were denuded until they were cumulus free. This process was performed 4 times until to achieve 80 zygotes. Zygotes were divided in experimental (HTF) and control (Vitrolife) groups. On day 5, the rates of expanded blastocysts were estimated. A safe label was assigned with min of 80% expanded blastocysts.
Results: 20% and 68.75 % of the zygotes in experimental groups were arrested in 2 and 8 cells, respectively. 6 zygotes (7.5%) reached to morula stage and only 3 zygotes reached to expanded blastocysts that it is not acceptable. However in control group, 88% of embryos reached to expanded blastocysts stage. The rest (12%) arrested in embryo with 4-8 blatomeres.
Conclusion: MEA is a useful and sensitive assay for quality control of human IVF culture media. It was obvious that commercial G1 media was appropriate for the in-vitro development of mouse embryos.
Key words: *Mouse embryo assay, Culture media, Expanded blastocysts.*

P-32
Polycystic ovarian syndrome and bipolar disorder

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Introduction: This study was designed to determine the prevalence of bipolar disorder in women with polycystic ovarian syndrome (PCO).
Materials and Methods: One hundred and ten women with definite diagnosis of PCO and one hundred and ten age-matched infertile women due to other reasons except for PCO were enrolled in this case control study. 10 ml fasting venous blood sample obtained to measure fasting glucose, LH and FSH. Height, weight and waist-to-hip ratio (WHR) were also recorded by an expert technician. A psychiatrist examined all 220 cases in order to determine the prevalence of depression and bipolarity.
Results: Mean age of each group participants were not significantly different while FBS, LH and LH/FSH levels were significantly higher in PCO patients. Eighty eight case were depressed in PCO group while 96 were depressed in control group (p=0.03). Bipolar disorder were higher in PCO group in comparison with controls (8 vs. 0, p=0.004).
Conclusion: Psychiatric disorders should be considered in PCO women.
Key words: *PCO, Bipolarity, BPD, Depression.*

P-33
A review of sperm preparation techniques; advantages and disadvantages

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Introduction : Intrauterine insemination (IUI) with or without controlled ovarian hyperstimulation (COH+IUI) is the first choice to treatment of infertility in the cases of mild or moderate male subfertility and female with mild or moderate endometriosis and some types of ovulatory dysfunction.
Materials and Methods: We reviewed texts and published articles since 2000 till 2014 about IUI and related subjects to determine the best practical techniques for preparation of high quality sperm sample to insemination.
Results: Based on semen sample characteristics we can choose one of the standard sperm wash (SSW), Swim-Up (SWU), Swim-Down (SWD), or Density Gradient Centrifugation (DGC) methods according to standard and Good Laboratory Practice (GLP) guidelines to prepare efficient and potent sperm sample for IUI or other assisted reproductive techniques
Conclusion: Each of the preparation techniques that mentioned has its own advantaged and disadvantages; clearly indicates that an exact and careful selection of proper preparation technique can improve the success of insemination.
Key words: *Intrauterine insemination, Standard sperm wash, Swim-up, Swim-down, Density gradient centrifugation, Assisted reproductive techniques.*

P-34
Global epigenetic modification profile of endometrial and endometriotic tissue shows significant alterations in endometriosis

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Introduction: Endometriosis is found in 2-8% of the general population but is present in 25-40% of women with infertility. Although endometriosis is a multifactorial disease and the exact etiology is not clearly understood, recently, it has been confirmed that epigenetic is associated with the molecular features of endometriosis. Two main epigenetic regulatory mechanisms, DNA methylation and histone modifications recognize the states of diseases. Therefore, the aim of this study was to investigate alterations of DNA methylation and histone acetylation/methylation levels in eutopic and ectopic endometrium of endometriosis patients.
Materials and Methods: Eutopic and ectopic endometrium samples (n=5) were collected from endometriosis patients undergoing surgery and biopsy, as well as endometrial tissues from healthy fertile women (n=5). Chromatin extracts from samples were prepared following fixation and then shearing into fragments by sonication. Nucleosome ELISA was performed on chromatin extracts, in order to identify Global histone H3K9 acetylation/methylation and DNA methylation, using antibodies against H3K9ac, H3K9me and MeCP2, respectively.
Results: We have identified global histone H3K9 hypermethylation in ectopic and eutopic endometrium, compared with controls. A significant hyperacetylation at histone H3K9 was observed in eutopic samples compared to ectopic and control groups. Furthermore, eutopic endometrial samples were globally DNA hypermethylated in comparison with controls.
Conclusion: These results clearly show an epigenetic switch in endometrial and endometriotic tissue of patients with endometriosis, in the way that aberrant DNA methylation and histone acetylation/methylation status may play a dynamic role in occurrence of endometriosis and support the opinion that epigenetic abnormalities have causative functions in endometriosis.
Key words: *Endometriosis, Epigenetic, Methylation, Acetylation.*

P-35
Relation between BMI and age on laboratory parameters in infertile women

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Introduction: Age is an important factor in the success of infertility treatment. Upper limit of the age that people can get into infertility treatments vary in different countries .This study investigated the relationship between age and BMI with laboratory parameters in women undergoing ART and Oocytes extracted from the ICSI procedure in Omid Infertility Center in Babol.

Materials and Methods: In this cross-sectional study of367cases from April 2009 until November 2013 infertile couples under treatment in Omid Infertility were selected using convenience sampling. A questionnaire including demographic, couple clinical hormonal tests, number and type of eggs and embryos, and results of treatment for each patient was completed.

Results: There is a relation between age, number of oocytes retrieved, MΠ oocyte, fertility success and FSH, 66.5%, $p<0.05$ of embryo formation related to MΠ oocyte. $R^2=0.6$ there is not a relation between BMI and the number of MI and MΠ oocytes, FSH, TSH, Estradiol, length of infertility and type of infertility $p<0.05$.The mean BMI level in people who had Hirsutism and Galaktore was more than others.

Conclusion: Age is an important factor in ART success. Age increasing cause decline the number of Oocytes extracted MΠ oocytes and pregnancy success.

Key words: *Infertile women, BMI, laboratory parameters, Age.*

P-36
Cytosolic and mitochondrial ROS: which one is associated with poor chromatin remodeling?

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Introduction: The aim of this study was to determine if there are any associations between impaired chromatin packaging and the origin of reactive oxygen species (ROS) production.

Materials and Methods: Cytosolic ROS, mitochondrial ROS, DNA protamination, and apoptosis were evaluated with dichlorofluoresce in diacetate (DCFH-DA), dihydrorhodamine 123 (DHR123), chromomycin A3 (CMA3), and YO-Pro-1 (Y1)/propidium iodide (PI), respectively, by flow cytometry (FCM) in 40 infertile individuals.

Results: Percentages DCF+ and R123+ sperm were positively associated with percentage CMA3+ sperm and negatively associated with percentage apoptotic sperm. No correlation was observed between CMA3+ sperm and the percentage of apoptotic sperm.

Conclusion: Under protamination of sperm is not associated with the origin of ROS production, but their relationship may suggest an association with general physiological dysfunction of sperm. Furthermore, under protamination does make sperm prone to apoptosis. Rather, it is likely that apoptosis is induced by ROS production. Considering that these conclusions are derived from correlative analyses, additional studies including an interventive approach are required.

Key words: *Apoptosis, DCFH-DA, DHR123, Protamine, ROS, Sperm.*

P-37
Evaluation of predictive factors for clinical pregnancy rate of intrauterine insemination (IUI) cycles: the role of infertility cause

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Introduction: This study was conducted to identify the prognostic factors for pregnancy rates (PR) in IUI treatments within different groups according to cause of infertility.

Materials and Methods: This retrospective study was performed in data of 1348 IUI cycles with ovarian stimulation by clomiphene citrate (CC) and/or gonadotropins in 632 women with five different infertility etiology subgroups at Akbarabbadi Hospital, Tehran University of Medical Science from 2008-2010.

Results: The (PRs)/ cycle were highest (19.9%) among couples with unexplained infertility and lowest (10.6%) in couples with multiple factors infertility. In cases of unexplained infertility, the best PRs were seen after CC plus gonadotropins stimulation (26.3%) and with inseminated motile sperm count>30×10^6 (21.9%), but the tendency didn't reach statistical significant. In the ovarian factor group, the best PRs were observed in women aged between 30 and 34 years (20.8%), with 2-3 preovulatory follicles (37.8%) and infertility duration between 1and 3years (20.8%), while only infertility

duration (p=0.03) and number of preovulatory follicles (p=0.01) were statistically significant. In male factor cases, ovulation induction with sequential CC/hMG had a significantly better result. Multiple logistic regression analysis determined that number of preovulatory follicles (p=0.02), duration of infertility (p=0.01), age (p=0.01), infertility etiology (p=0.05) and stimulation regimen (p=0.01) were significant independent factors in order to predict overall clinical PR.

Conclusion: The etiology of infertility is important to achieve remarkable IUI success. It is worth mentioning that within different causes of infertility, the demographic and cycles characteristics of couples did not show the same effect.

Key words: *Intrauterine Insemination, Clinical pregnancy Rate, Prognostic factor, Etiology of infertility.*

P-38

The effect of endometrial local injury and agonist GnRH for the pregnancy rate in patient with recurrent implantation failure

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Introduction: Infertility is seen in 15-10% of all couples. One of the ways to treat infertility is using assisted reproductive technology (ART). Recently, it has been shown that local trauma to the endometrium in IVF candidates increase implantation rates in these patients. The aim of this study was to evaluate the effect of endometrial injury on pregnancy rate in patients with recurrent implantation failure (RIF).In a clinical trial study that performed on patients with 2 time RIF in IVF in Department of Obstetrics and Gynecology of Tabriz University of Medical Sciences, the effect of endometrial injury on pregnancy rate in patients with RIF evaluated.

Materials and Methods: In this study, 76 patients with 2 time RIF in IVF evaluated and we examined endometrial trauma impact on pregnancy rate in patients with RIF that significant difference did not exist between the mean duration of infertility in patients with and without endometrial trauma before IVF.

Results: βHCG test was positive in 7 patient's endometrial trauma before IVF and in 6 patients without endometrial trauma before IVF.

Significant differences did not exist between βHCG test in patients with and without endometrial trauma before IVF.

Conclusion: Significant correlation was not found between the incidences of pregnancy after IVF in patients with other parameters.

Key words: *Endometrial rauma, IVF, Recurrent implantation failure (RIF).*

P-39

The relationship between follicular oxytocin and assisted reproductive outcome

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Introduction: In assisted reproductive technology it is necessary to use and measure hormones for induction and maintaining the pregnancy. Oxytocin that is secreted by hypophysis has a great role in biology of reproduction. This study was conducted to measure the relation between follicular oxytocin and reproduction outcome.

Materials and Methods: In this cross sectional study, in 110 women, candidates of assisted reproduction the follicular fluid oxytocin was measured. All recruits were selected randomly from Alzahra hospital infertility center of Tabriz university of medical sciences and in all of them HCG was used for induction of ovulation.

Results: The average age of Women was 28.28 years. 84.5 percent of their infertility was a primary type. The most common causes of infertility were male factors followed by anovulation for each women averagely 13.47 oocyte were obtained and average of follicular fluid oxytocin was 230.7 mIu/ml 19.1% of women became pregnant.

Conclusion: Follicular oxytocin amount was different in various phases of follicle development and there wasn't relation between follicular oxytocin and chance of pregnancy outcome.

Key words: *Assisted Reproductive Techniques, Follicular Fluid Oxytocin, Clinical Outcome.*

P-40

Epigenetic pattern of HOXA10 gene in human endometrium during menstrual cycle

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Introduction: Epigenetic pattern of *HOXA10*, as a key gene responsible for uterine organogenesis, functional endometrial differentiation and endometrial receptivity, have not been fully characterized. The aim of this study is to investigate the epigenetic regulation of *HOXA10* promoter and its correlation with mRNA expression of

this gene in endometrial tissue, during menstrual cycle.

Materials and Methods: Endometrial tissues were collected from 18 healthy fertile women undergoing laparoscopy for tubal ligation surgery. Ethical approval and informed patient consent was gained for the use of tissue samples. Quantitative expression analysis was performed by real-time PCR technique and epigenetic analysis was performed by Chromatin Immunoprecipitation (ChIP), using anti- H3K9ac, MeCP2, H3K9Me2, H3K27Me3, H3K4Me3 antibodies.

Results: Our results showed a correlation between *HOXA10* mRNA expression and epigenetic marks of its promoter, during menstrual cycle. In the way that, H3K9ac and H3K4Me3, known to be associated with gene activation, were significantly higher during secretory phase of menstrual cycle in comparison to proliferative phase. In contrast, H3K9Me2, H3K27Me3 and MeCP2 marks, known to be associated with gene repression, were significantly higher during proliferative phase in comparison to secretory phase of menstrual cycle.

Conclusion: This study provides support for a possible role of histone codes and epigenetic marks, in regulation of mRNA expression of *HOXA10* during menstrual cycle. Our findings indicate that *HOXA10* can be noted as a candidate gene which its aberrant expression and histone modification may contribute to the etiology of infertility and other gynecological disorders.

Key words: *HOXA10 gene, Menstrual cycle, Epigenetic.*

P-41

The vascular endothelial growth factor VEGF+405 G/G genotype may influence embryo implantation in assisted reproductive techniques

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Introduction: Repeated implantation failure (RIF) is the main problem after using assisted reproductive techniques (ART). The main causes of RIF as a multifactorial problem include decrease in endometrial receptivity, defects of embryo or combinational. Successful embryo implantation depends on trophoblast proliferation, migration and invasion to the endometrium, all associated with vascular endothelial growth factor (VEGF) as the major protein in stimulating of angiogenesis. This study aimed to determine the association betweenVEGF+405G/C polymorphism and RIF in infertile women.

Materials and Methods: The patients group included 74 women with >3 RIF and the control group consisted of 149 healthy fertile women. Genotypes and allele frequencies of VEGF+405G/C polymorphism were determined by PCR-RFLP method and verified by Sanger sequencing.

Results: The frequencies of GG, GC and CC genotypes in patients group were 31.1%, 48.6% and 20.3%, respectively while those frequencies in controls were 2.0%, 47.0% and 51.0% respectively. The frequency of GG genotype was significantly higher in patients than controls ($p<0.001$). CC genotype frequency was higher in controls than patients ($p<0.001$). The frequency of GC genotype did not show any difference between groups. C as the wild allele was more frequent in controls while frequency of G as the mutant allele was higher in patients ($p<0.001$).

Conclusion: The VEGF+405 G/G genotype may influence embryo implantation and lead to RIF in ART candidates. Since this is the second report on association of this polymorphism with RIF, further studies in different ethnic populations require for determining this association.

Key words: *Recurrent Implantation Failure, Vascular Endothelial Growth Factor, Angiogenesis.*

P-42

Relationship between sperm parameters and DNA fragmentation using Halosperm kit

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Introduction: Sperm DNA integrity is the most important part for transferring the genetic information. Sperm DNA fragmentation is considered as male infertility and its assessment completed conventional semen analysis and it's emphasized to evaluate it in fertility clinics. In this study, we investigated the relationship between sperm parameters) motility, morphology, concentration) and DNA fragmentation level of sperm (DFLs)

Materials and Methods: 89 infertile men were assessed by conventional analysis of sperm and DFLs determination by Halosperm which is sperm chromatin dispersion test (SCD), this assessment was done in two groups of patients, low DNA fragmentation group (LFG ≤30%) and high DNA fragmentation group (HFG >30%).

Results: Sperm parameters (concentration, motility and morphology) in HFG was significantly lower than LF group ($p<0.001$, $p<0.001$, and $p<0.01$, respectively) after preparation. Logistic regression model showed morphology and motility variables were the predictors of DFLs, and cut off points of them were 5% and 50%.

Conclusion: Our results show a negative relationship between DFLs and sperm parameters after preparation. Also, according to DF>30% in percentage of men with normal semen parameters the high importance of assessment DF test in clinics in order to determine sperm DNA problems and discovering sperm abnormality in the patients is sensed.

Key words: *Spermatozoa, Infertility, DNA Fragmentation.*

P-43
Studying the place of Iran in the world for medical tourism in infertility fields

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Introduction: As mentioned medical tourism is growing in the world (especially in Asia), patients travel from developed countries to developing countries for treatment with medical tourism. For comparing the country and the region, the h-index is a way to evaluate the productively of the science and scholar. In this research, our goal is to compare the ranking of different regions in the field of embryology, fertilization embryonic development and infertility treatment and then to evaluate Iran's h-index in comparison with other countries.
Materials and Methods: We have studied Latin America, Pacific Region, Middle East, Asiatic Region, Western Europe, Eastern Europe, Northern America, Northern Africa, Central Africa, and Southern Africa as our key target regions in the time frame of 1996-2012. The data of the documents, citable documents, self-citations, citations per document and H-index of these given regions and countries were obtained automatically and from the SCImago Journal and Country Rank website.
Results: As our study shows, Northern America has the highest h-index in the world. The leading countries, in that period, are United Kingdom, United States, Japan, Czech Republic, Argentina, Israel and Australia with the highest h-index. Also Iran is ranked fourth in the Middle East and twelfth in Asia.
Conclusion: Iran's treatment costs, private hospitals, ranking, reproductive technology, culture, legal and ethics of infertility treatment are reasons that will important it as a medical center. Since the Iranian medical equipment and potential for medical tourism make it unique in the regions to become a center of infertility treatment in the regions.
Key words: *Medical tourism, H-index, Infertility treatment.*

P-44
The effect of *SHBG* gene polymorphism and idiopathic male infertility

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Introduction: Infertility is defined as a lack of conception in a couple that has been having unprotected intercourse, one to three times per week, for one year. Male infertility may result from a variety of causes. The list of known causes of male infertility is long and varied, but can be divided into 4 major categories: 1) hypothalamic-pituitary disorders (1-2%) 2) primary gonadal disorders (30-40%), 3) disorders of sperm transport (10-20%); and 4) idiopathic (40-50%).Male factor infertility 35%. Genetics contributes to infertility by influencing a variety of physiological processes including hormonal homeostasis, spermatogenesis, and sperm quality. Therefore, an understanding of the genetic basis of reproductive failure is essential to appropriately manage an infertile couple. The sex hormone- binding globulin (SHBG) gene, located on chromosome 17, has also been studied for a possible role in spermatogenesis. The gene is involved in both delivering sex hormones to target tissues and controlling the concentration of androgens in the testis. Androgens play important roles in sexual differentiation and the process of spermatogenesis. We aimed to study the association between SHBG gene polymorphism and idiopathic male infertility in a northern Iran.
Materials and Methods: Genotyping of polymorphisms we performed by allele specific polymerase change reaction (AS-PCR) techniques (rs1799941).
Results: We found no significant association between SHBG gene polymorphism and idiopathic male infertility in population (p=0.1).
Conclusion: So this study is necessary investigated in a greater population.
Key words: *SHBG, Gene polymorphism, Idiopathic male infertility.*

P-45
Evidence for dynamic role of NFY in cellular processes related to endometriosis

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Introduction: Nuclear factor-Y (NFY) is the major CCAAT-binding transcription factor that has a crucial function in transcriptional regulation of cell cycle genes. This hetrotrimeric protein has three different subunits including NFY-A, B and C, which are all necessary for binding to DNA with the high specificity and affinity. Due to the high cell proliferation in endometrium during menstrual cycle and aberrant endometrial changes during endometriosis, it seems that this transcription factor may be involved in occurrence characteristics of endometriosis.
Materials and Methods: The aim of this study was to compare expression profile of NFY coding gene by real-time PCR. For this respect, 26 laparoscopically confirmed endometriosis patients, parallel with 18

control samples were collected from healthy fertile women, between 20-45 years old, undergoing tubal ligation surgery. Ethical approval and informed patient consent was gained for the use of tissue samples.
Results: Our results revealed that the mRNA level of all subunits of NFY showed significant higher expression in ectopic samples during secretory and proliferative phase, compare to control group. Also, in eutopic samples, the expression level of these genes, except for NFY-B in secretory phase and NFY-C in proliferative phase, were higher than the control group.
Conclusion: These results suggest the dynamic role of NFY in endometriosis, maybe through induction of proliferation of endometrial cells, especially in occurrence of ectopic endometriosis.
Key words: *Nuclear factor-Y, Endometriosis, Menstrual cycle.*

P-46
A Comparison of the effects of transdermal estradiol and estradiol valerate on endometrial receptivity in frozen-thawed embryo transfer cycles: A randomized clinical trial

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Introduction: Implantation and pregnancy are related to the interfaces between embryo maturity and endometrial receptivity. The aim of this study was to determine the optimal endometrial preparation protocol by comparing the clinical outcome of two methods of endometrial preparation in FET cycles, that is, oral estradiol and 17ß-estradiol transdermal patch.
Materials and Methods: Of 188 women candidates for FET, 90 patients were enrolled in our study. In the study group (n=45), 17-B estradiol transdermal patches 100 µg were applied from the second day of the cycle and continued every other day. Then each patch was removed after four days .In the control group (n=45), oral estradiol valerate 6 mg started as the same time above and continued daily.
Results: There was a significant difference in estradiol level on the day of progesterone administration and the day of embryo transfer between the two groups (p=0.001 in both), but no significant difference was observed between them in biochemical and clinical pregnancy rates (32.6 % vs.33.3%, p=1, 30.2%vs. 33.3%, p=0.81 respectively). The implantation rate tended to be higher in the study group, but it did not achieve a statistical significance (20.45% vs. 11.7% respectively p>0.05).
Conclusion: In spite of there being no significant differences in implantation, biochemical and clinical pregnancy rates between the two groups, due to the reduced costs, drug dose, and emotional stress as well as the simplicity of the protocol for patient, we can use estradiol transdermal patches instead of oral estradiol in FET cycles.
Key words: *Frozen-thawed embryo transfer, Transdermal estradiol patchs, Endometrial preparation, Pregnancy rate.*

P-47
Evaluation effect of intrauterine human chorionic gonadotropin injection before embryo transfer in implantation and pregnancy rate in infertile patients and comparison with conventional embryo transfer in IVF/ ICSI/ ET cycles: A randomized clinical trial

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Introduction: Implantation is one of the key stages for the success of assisted reproductive techniques (ART). The complex process of Implantation is regulated by various factors which one the most important is human chorionic gonadotropin (HCG). This prospective, randomized clinical study aimed to investigate the effect of intrauterine human chorionic gonadotropin injection before embryo transfer (ET) on pregnancy outcome in infertile couples.
Materials and Methods: Of 317 patient's candidates for IVF/ ICSI, we evaluated 159 patients undergoing Invitro Fertilization /Intracytoplasmic Sperm Injection (IVF/ICSI) with antagonist protocol. Patients divided into three groups by a computer-based program. In cases, case group I (n=53) received 500 IU of HCG and case group II, (n=53) received 1000 IU of HCG intrauterine injection before ET, and control group undergoing ET without a preceding intrauterine injection of HCG.
Results: There was no significant difference between case group I, II and control group .The implantation rate was 18.86%, 13.52% and 14.37%, chemical pregnancy rate was 34%, 32.15% and 35.3%, and the clinical pregnancy rate was 32.1%, 32.1% and 31.4%, respectively in the case group I, II and control group.
Conclusion: Intrauterine injection of HCG before embryo transfer (ET) does not improved the pregnancy outcomes in IVF/ICSI /ET cycles.
Key words: *Intrauterine HCG injection, IVF/ICSI, Embryo transfer, Pregnancy outcome.*

P-48
Fertility outcome after treatment of unruptured ectopic pregnancy with two different methotrexate protocols

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Introduction: The purpose of this study was to compare the success rates of 70 patients from the same database, each with an ectopic pregnancy (EP) that was treated with either the single- or multi-dose methotrexate (MTX) protocols for enraptured EPs**.**

Materials and Methods: This study was a blinded, randomized clinical trial. Treatment protocols were either single- (50 mg/m (2)) dose MTX or multi-dose (1 mg/kg MTX + 0.1 mg/kg folinic acid). There were 35 cases in each group. The outcome was measured by adverse events, resolution of pregnancy without surgical treatment, success rate of MTX treatment, and fertility outcome in each group.

Results: With the single-dose protocol, response to treatment was considered successful in 29 (82.9%) patients; in the multi-dose protocol 31 (88.6%) responded to treatment. The difference between success rates in the groups was not statistically significant (p=0.587). In the single dose group, 2 (5.7%) patients and in the multi-dose group, 6 (17.2%) patients had complications (p=0.28). Of the 14 patients in the single-dose group, clinical pregnancy occurred in 9 (75%) whereas clinical pregnancy occurred in 3 (25%) patients from the multi-dose group. Infertility was seen in 4 (33.3%) patients in the single-dose group and in 8 (66.7%) in the multi-dose group.

Conclusion: We believe that the single-dose MTX protocol could be as successful as multi-dose MTX for the treatment of EP. It is effective, cost-effective, and associated with better fertility outcomes than the multi-dose MTX protocol.

Key words: *Ectopic Pregnancy, Methotrexate, Pregnancy Outcome.*

P-49

A comparative study of luteal estradiol pre-treatment in GnRH antagonist protocols and in micro dose flare protocols for poor-responding patients

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Introduction: In spite of significant advances in assisted reproductive techniques (ART), the management of poor-responding patients is still intricate. Endogenous FSH in the previous luteal phase may selectively stimulate larger follicles and consequently lead to a size inconsistency in the developing follicles. This size inconsistency may cause fewer follicles to be responsive to gonadotropin stimulation .This study aims to verify if luteal estradiol pretreatment improves IVF/ICSI outcomes in a GnRH antagonist protocol as compared with a micro dose GnRH agonist protocol in poor-responding patients.

Materials and Methods: A total of 116 IVF/ICSI cycles were included in this prospective randomized single blind clinical trial. The selected women were randomly assigned to receive an estradiol pre-treatment in a GnRH antagonist protocol (daily oral Estradiol Valerate 4 mg preceding the IVF cycle from the 21st day until the first day of the next cycle) or in oral contraceptive pill micro dose GnRH agonist protocol.

Results: The patients in the luteal estradiol protocol required more days of stimulation (10.9±1.6 vs. 10.2±1.8) and a greater gonadotropin requirement (3247.8±634.6 vs. 2994.8±611 IU), yet similar numbers of oocytes were retrieved and fertilized. There was no significant difference between the two groups in terms of the implantation rates (9.8% vs. 7.9%) and the clinical pregnancy rates per transfer (16.3% vs. 15.6%).

Conclusion: This study demonstrates that the use of estradiol during a preceding luteal phase in a GnRH antagonist protocol can provide similar IVF outcomes when compared to a micro dose GnRH agonist protocol.

Key words: *Poor responders, IVF outcome, Luteal phase, Estradiol, Micro dose protocol.*

P-50

Effect of progesterone supplementation on natural frozen–thawed embryo transfer cycles. A randomized controlled trial

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Introduction: The transfer of cryopreserved embryos can be timed with ovulation in a natural cycle or after artificially preparing the endometrium with exogenous hormones. Progesterone is essential for the secretory transformation of the endometrium that permits implantation as well as for the maintenance of early pregnancy. The purpose of this study is to assess the effect of luteal phase supplementation on pregnancy rates in natural frozen-thawed cycles.

Materials and Methods: The study was designed as a prospective randomized clinical trial of 102 women undergoing an embryo transfer in a natural cycle. The women in the interventional group (n=51) received intramuscular progesterone 50 mg twice a day starting from 36 hours after the hCG administration. The control group (n=51) did not receive any progesterone support.

Results: There were no significant differences of demographic characteristics between the groups and no statistically significant differences were observed between study and control groups in clinical pregnancy rate (33.3% vs. 27.5%, p=0.66). There were no differences in implantation rate or spontaneous abortion rate either.

Conclusion: In conclusion, our results suggest that a luteal phase support does not affect clinical pregnancy rates in natural frozen–thawed embryo transfer cycles.
Key words: *Progesterone, Pregnancy rate, Frozen embryo transfer, Natural cycle.*

P-51
C- Reactive protein (CRP) levels of serum and peritoneal fluid in women with endometriosis

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Introduction: Endometriosis is defined as the existence of endometrial-like tissue outside the uterus. Diagnosis of endometriosis is a challenging theme, and in spite the broad search for innovative laboratory tests and advances in imaging technologies, there are still no easy, non invasive diagnostic tests available. Due to inflammatory process of endometriosis, still CRP level may be target of initial screening. The aim of this study was to investigate CRP levels as a marker of inflammatory process in serum and peritoneal fluid of patients with endometriosis.
Materials and Methods: In a case control study 179 women endometriosis (n=90), and without endometriosis (n=89), evaluated. The venous blood samples were obtained from all patients before laprascopy, and the peritoneal fluid samples were collected from pelvis before any manipulation. Unpaired T test was applied to compare the parameters between two groups.
Results: It was found that there is no significant difference between the CRP serum level in women with endometriosis and infertile women without endometriosis. There was significant difference in peritoneal level of CRP between case and control groups.
Conclusion: The findings suggested, measurement of this marker cannot be used to diagnose endometriosis. It is further recommended that a combination of different markers might be helpful in this regard, and other studies can investigate to find such useful markers.
Key words: *Endometriosis, Inflammation, C-reactive protein, Serum, Peritoneal fluid.*

P-52
The effect of madder root (Rubia) on sperm parameters in adult male rats

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Introduction: The main parts of madder used for mentioned goals are roots and rhizomes, which contain Alizarin, rubestric acid and pourpourines. The red color of madder is due to the Alizarin component. This study investigates Madder root on Sperm parameters in adult male rats.
Materials and Methods: In this trial, 33 adult male rats were randomized into three groups. The experimental groups received Rubia orally for 60 days in two different sublethal doses; 100 mg/kg as high dose and 50 mg/kg as low dose, whereas the control group received distilled water.
Results: In this trial, the male rats treated with Madder root showed that cauda epididymal sperm count decreased. This suggests that spermatogenesis was reduced, probably due to the reduction in testosterone concentration. In addition, they had less motile sperm. The decrease in sperm motility can be caused by a decrease in ATPase activity, which might be linked to defects in the ultrastructure of sperm.
Conclusion: In the present study, the fertilizing ability of the treated male rats reduced significantly by the administration of *Rubia*, the fertility rate was 100% for the control group, which was reduced to 66.6% and 55.5% in the low and high dose-receiving groups, respectively.
Key words: *Rubia, Sperm, Rat, Male.*

P-53
The effects of Aloe Vera on testicular histology in rat

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Introduction: The pharmacological actions of *Aloe Vera*, as studied in vitro, include anti- inflammatory and anti-arthritic activities, as well as anti-bacterial and hypoglycemic effects. This study investigates of *Aloe Vera* gel on Testicular Histology in male rats.
Materials and Methods*:* In this trial, 33 adult male rats were randomized into three groups. The experimental groups received *Aloe Vera* orally for 60 days in two different sublethal doses; 150 mg/kg as high dose and 75 mg/kg as low dose, whereas the control group received distilled water.
Results: The right testis of all male rats was cut into small pieces and fixed in Bouin's fixative. Then the tissues were washed in 70% alcohol saturated with lithium carbonate. The samples were dehydrated, cleared and paraffin embedded. Serial transverse sections of 6m were cut, mounted on clean slides, hydrated and then stained with hematoxylin. Testicular sections of the treated and control rats were compared to investigate the spermatogenesis process. In addition, the

diameters of 15 seminiferous tubules per rat were measured.
Conclusion: Based on the findings of the present study, it can be concluded that *Aloe Vera* acts as an anti-fertility agent.
Key words: *Aloe Vera, Testicular, Rat.*

P-54
The effect of Madder root (Rubia) on testosterone in adult male rats

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Introduction: Madder is a foregoes plant from Rubiaceae family that historically originated from Ghafghaz and Near East. This plant was traditionally cultivated in the central and western regions of Iran. This study investigates the validity and/or invalidity of Madder root on enhancing the reproductive activity in male rats.
Materials and Methods: In this trial, 33 adult male rats were randomized into three groups. The experimental groups received Rubia orally for 60 days in two different sublethal doses; 100 mg/kg as high dose and 50 mg/kg as low dose, whereas the control group received distilled water.
Results: Significant decline in serum testosterone level was observed in both of the treated groups when compared with the control group. The respective levels in the low and high dose-receiving groups was 1.55±0.52 ng/ml and 1.26±0.34 ng/ml, respectively as compared to 4.23±1.03 ng/ml in the control group ($p<0.001$).
Conclusion: Based on the findings of the present study, it can be concluded that Rubia acts as an anti-fertility agent.
Keywords: *Rubia, Testosterone, Rat, Male.*

P-55
Complication of IVF: A case report

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In vitro fertilization (IVF) refers to a procedure designed to overcome infertility and produce a pregnancy as a direct result of the intervention. Complications are usually due to hormonal stimulation and egg retrieval but mortality and morbidity rates directly related IVF are low. We describe a late manifestation of ovarian abscess after oocyte retrieval for IVF.
Key words: *In Vitro Fertilization, Complication.*

P-56
The prevalence of polycystic ovary syndrome in Iranian women based on different diagnostic criteria

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Introduction: This study aimed to determine the prevalence of polycystic ovary syndrome (PCOS) in Iranian women based on different diagnostic criteria.
Materials and Methods: This cross-sectional study was conducted in 2009 in Isfahan, Iran among females referred to the mandatory pre-marriage screening clinic. Menstrual irregularity was assessed as the presence of chronic amenorrhea or a menstrual cycle length of less than 21 days or more than 35 days, or more than four days of variation between cycles. Clinical hyperandrogenism was assessed as the self-reported degree of hirsutism using the modified Ferriman Gallwey (mF-G) scoring method based on a chart displaying degree of hair growth in nine regions. Those participants who reported menstrual irregularity and/or who had an mF-G score of ≥ 8 were invited for a clinical examination. Those who did not have these criteria were not further evaluated and were deemed not to have PCOS. Participants with abnormal findings underwent blood test and abdominal sonography of their ovaries. In those with hirsutism, serum was obtained on the 22nd-24th day of the cycle for the measurement of progesterone; free testosterone was measured in those with menstrual irregularity.
Results: The estimated prevalence of PCOS was 7% based on the NIH criteria, 15.2% under the Rotterdam criteria, and 7.92% according to the AES criteria.
Conclusion: The Rotterdam prevalence estimates were double those obtained with the NIH criteria. This study can be used for international comparisons because it was conducted on a representative sample of females using different criteria for the definition of PCOS.
Key words: *Polycystic ovary, Menstrual dysfunction, Prevalence.*

P-57
Assessment of the developmental competence in vitrified- warmed ovine oocytes in different developmental stages

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Introduction: Cryopreservation of oocytes, which is an interesting procedure to conserve female gametes, is an

essential part of reproductive biotechnology. The objective of the present study was to examine the effects of oocyte developmental stage on subsequent development of vitrified-warmed ovine immature (GV) and matured (MII) ooctes.

Materials and Methods: The oocytes from follicles of ovine, 2-6 mm in diameter, were collected in a pre-incubated (38.6°C, 5% CO_2, 100% humidity) HEPES-modified TCM 199 medium. Good quality oocytes were either vitrified in GV stage or after IVM as MII. The basic vitrification solutions were HEPES-buffered TCM-199 with FCS. The selected oocytes were placed in equilibration solution of 7.5% EG + 7.5% DMSO for 5 min, then transferred into vitrification solution containing 15% EG, 15% DMSO, and 0.5M sucrose for 30 sec. The oocytes were then loaded onto the tip of modified straw and plunged into liquid nitrogen. Following warming in solution containing 0.5 M sucrose, the survival of oocyte, fertilization potential, and subsequent embryo development were examined.

Results: The survival rate was not different between treatment groups (GV, MII) as such more than 66% of the oocytes could tolerate the vitrification procedures. However, vitrified MII oocytes resulted in a higher cleavage rate than GV oocytes (53±0.04% and 37±0.03%, respectively; $p<0.05$).

Conclusion: Developmental ability of ovine oocytes after vitrification was affected by oocyte maturity stage. More studies are needed in order to increase the ovine oocytes developmental competence after vitrification.

Key words: *Vitrification, Developmental stage, Ovine oocyte, Ethylene glycol, DMSO.*

P-58

The effects of vitrification on nuclear status of ovine oocytes

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Introduction: The microtubules and chromatin of oocytes are vulnerable to cryoprotectants and thermal change during cryopreservation. The objective of the present study was to investigate the effects of vitrification on nuclear status of ovine oocytes in GV and MII developmental stages.

Materials and Methods: The oocytes from follicles of ovine, 2-6 mm in diameter, were collected in a pre-incubated (38.6°C, 5% CO_2, 100% humidity) HEPES-modified TCM 199 medium. Good quality oocytes were either vitrified in GV or after IVM as MII stage. The basic vitrification solution was HEPES-buffered TCM-199 with FCS. The selected oocytes were placed in equilibration solution of 7.5% EG + 7.5% DMSO for 5 min, then transferred into vitrification solution containing 15% EG, 15% DMSO, and 0.5M sucrose for 30 sec. The oocytes were then loaded onto the tip of modified straw and plunged into liquid nitrogen. Following warming in solution containing 0.5 M sucrose, vitrified GV and MII oocyte were cultured in IVM medium for 24h and 2h, respectively. Then, they were denuded, and stained with Hoechst. They were then evaluated for the chromatin status under a fluorescence microscope.

Results: The rate of MII oocyte with normal nuclear status in vitrified-warmed GV and MII oocyte were no statistically significant (43% and 41%, respectively; $p<0.05$) but the rate of MII oocyte with abnormal nuclear status in vitrified-warmed MII oocytes (55%) was significantly ($p<0.05$) higher than those of vitrified-warmed GV oocytes (41%).

Conclusion: The chromatin of MII oocytes was more sensitive to vitrification than those of GV oocytes.

Key words: *Vitrification, Nuclear status, Ovine oocyte.*

P-59

A randomized controlled trial of heparin therapy for women with in vitro fertilization implantation failure

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Introduction: To investigate whether pre and post embryo transfer heparin therapy compare to post embryo transfer heparin therapy increase the pregnancy rate in women with IVF implantation failure.

Materials and Methods: A randomized controlled trial, transfer of cryopreserved embryos, among women with IVF implantation failure history. Pre and post embryo transfer heparin therapy was study group (n=45) and post embryo transfer heparin therapy was control group (n=43).

Results: There was no significant difference in pregnancy rates between two groups; for example, Beta HCG positive rate were 42% (18.43) and 40% (18.45), in control group and study group, respectively, and the generalized estimating equation covariate adjusted relative Beta HCG positive rate was 0.93 (95% confidence interval, 0.44-2.17).

Conclusion: Heparin treatment during pre and post embryo transfer did not improve pregnancy rates in women with IVF implantation failure history.

Key words: *Heparin therapy, IVF, Implantation failure.*

P-60
Crown-rump length discordance in twins in the first trimester and its correlation with perinatal complications

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Introduction: A difference more than 15-40% in birth weight of twins can predict perinatal complications. As significant difference in twin's growth has a very important effect on pregnancy and perinatal complications, this study aimed to evaluate crown-rump length discordance (ΔCRL) in the first trimester of pregnancy and its correlation with perinatal complications.
Materials and Methods: A total number of 118 women in the first trimester of twin pregnancy underwent ultrasound examination to measure ΔCRL. Then, at the time of delivery, perinatal complications in twins were recorded and the correlation between ΔCRL and perinatal complications were evaluated.
Results: Among 118 studied mothers with twin pregnancy, ΔCRL was normal (<11%) in 96 cases (81.4%) and high (≥11%) in 22 cases (18.6%). Birth weight discordance was normal (<20%) in 103 cases (87.3%) and above normal (≥20%) in 15 cases (12.7%). The results revealed a significant correlation between higher frequency of small for gestational age (SGA) and high ΔCRL (more than 11%) (p=0.01).
Conclusion: Our study concluded that SGA has a significant relationship with high ΔCRL (>11%).
Key words: *Crown-Rump length, Discordance, Ultrasound examination, Twins, Perinatal complications.*

P-61
Effect of maternal age on pregnancy outcome

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Introduction: Teenage pregnancy is known as a high risk pregnancy. However, some study show that good prenatal care can decrease the rate of complications. This study was done to evaluate the frequency of preterm labor, still birth, premature rupture of membranes, cesarean section, eclampsia, low birth weight and interest of mother's about the type of delivery.
Materials and Methods: This study was conducted from October 2009 to November 2010 in Isfahan University of Medical Sciences, Isfahan, Iran. Five hundred mothers were followed during their pregnancy and were divided into two groups, under 20 years (teenagers) and-over 20 years. The complications and outcome of pregnancy were evaluated and the collected data was analyzed by SPSS16.
Results: Five hundred pregnant women were evaluated during their pregnancy. The mean age of teenage women was 18.12±1.11 years and the mean age of over 20-years mothers was 26.53±3.08 years. 15 (6%) teenage women have experienced eclampsia, while only 4(1.6%) women over 20 years old had eclampsia (p=0.01).
Conclusion: This study showed that teenage pregnancy has more complications than older age; and more education is needed to reduce this type of pregnancy.
Key words: *Teenage pregnancy, Preterm labor, Low birth weight, Premature rupture of membranes, Eclampsia, Still Birth, Body mass index.*

P-62
Maternal and fetal outcomes of preterm premature rupture of membrane

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Introduction: Preterm premature rupture of membrane (PPROM) is the rupture of the membrane before labor and prior to the 37th week. PPROM is a common complication of pregnancy with numerous adverse effects on both the mother and the infant. Identifying the risk factors for PPROM and methods for its early diagnosis and treatment will dramatically decrease the side effects. This study aimed at evaluating the outcome of pregnancies complicated by PPROM.
Materials and Methods: This descriptive, analytic, cross-sectional study lasted for six months. It included 57patients who were admitted to Shahid Beheshti Hospital (Isfahan, Iran) due to rupture of membrane in28th-34th weeks of pregnancy. Patients were physically examined and asked for their history and symptoms. The collected data was analyzed with chi-square tests.
Results: The prevalence of PPROM, cesarean section, tachycardia, fever, and more than 15000/ml leukocytosis was 2.3, 52.7, 74.0, 95.0, and 66.0%, respectively. Distress, sepsis, and death were observed in 21.0, 3.0, and 1.7% of the neonates, respectively. No

cases of pneumonia or hyaline membrane disease were detected. There was not a significant relationship between sex and PPROM.

Conclusion: Our findings were similar to those of previous research. However, considering the importance of PPROM, larger studies in different areas are required for diagnosis and treatment of PROM to prevent preterm birth.

Ke ywords: *Preterm premature rupture of membrane, maternal outcomes, fetal outcomes.*

P-63

The diagnostic value of combined test for trilogy 21 and 18 screening in over 35 years old pregnant women in the gestational age of 9-14 weeks

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Introduction: Early diagnosis of congenital anomalies can prevent the birth of these children. The Step-wise sequential test has the most sensitivity in this regard; but because of the religious and legal rules in our country (the abortion must be done before 17 weeks of gestation or 19 weeks of LMP), it is better to use a test that is performed in first trimester and has high sensitivity rate. We aimed to estimate the diagnosis value of combined test (free beta-hCG, nuchal translucency, and pregnancy-associated protein A) for trisomy 21 and 18.

Materials and Methods: In this cross sectional study, 380 pregnant women who were more than 35y, referred to Beheshti and Alzahra clinics at 9-14 weeks of gestation were enrolled. Combines test analysis was done with Alpha software, cases was divided to high and low-risk portions for trisomy 21 and 18. The high risks went on amniocentesis and the other group followed after birth for detecting if there were any signs of syndromes manifestation.

Results: For trisomy 21, the sensitivity of combined test was 100%, and the specificity was 96.4%. For trisomy 18, it was 75% for the sensitivity and 100% for the specificity, with a false positive rate of 0%.

Conclusion: Regarding to high sensitivity and specificity of the combined test in our population compared to other societies, we can use this test with more confidence. So, diagnosing the maternal anomalies in early first trimester could be done and we could terminate pregnancies with proven trisomy 21 and 18 legally.

Key words: *Free beta-hCG, Nuchal translucency, Pregnancy-associated protein A, Trisomy 21, Down's syndrome, Trisomy 18.*

P-64

Evaluation of antimullerian hormone levels before and after laparoscopic management of endometriosis

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Introduction: Serum antimullerian hormone (AMH) proposed to be a reliable marker of ovarian reserve; the aim of this study was to evaluate the influence and value of laparoscopic management in endometriosis as measured by serum AMH levels.

Materials and Methods: In this cross-sectional study, 33 infertile patients who referred to fertility- Infertility Center of Isfahan- with different stages of endometriosis managed by diagnostic operative laparoscopy and serum AMH levels were measured pre and one month postoperative laparoscopy. Main outcome measures were serum AMH levels in correlation with the type of infertility, stage of endometriosis, and type of surgery in infertile patients.

Results: 33 infertile patients enrolled in the study with mean age 28.9±5 years, and thus did not show a significant difference. Mean serum AMH levels was 4.23±3.75 ng/ml and 2.2±2.47 ng/ml, respectively, in primary and secondary infertility groups before and one month after laparoscopy, which shows a significant difference ($p<0.001$). Median AMH level changes in Cauterization (0.67±0.76ng/ml), endometrioma excision 2±0.6 ng/ml, and both 2.18±0.81ng/ml and shows no significant differences. Mean serum AMH levels were definitely decreased in minimal/mild and severe stage endometriosis before and 1 month after laparoscopy, (1.84±2.06 ng/ml and 2.18±3.45 ng/ml), respectively. Also serum AMH according to ovarian appearance and evolvement showed no significant differences after laparoscopy: (5.5±1.4 ng/ml and 2.76±0.96 ng/ml) and (3.37±2.2 ng/ml and 1.84±1.5 ng/ml).

Conclusion: Serum AMH levels clearly decreased 1 month after operative laparoscopy.

Key words: *Antimullerian hormone, Endometriosis, Laparoscopy, Ovarian reserve.*

P-65

Fertility preserving surgery and epithelial ovarian cancer-a case report

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Introduction: We want to report a nuligravid woman with epithelial ovarian cancer who underwent fertility preserving surgery.
Materials and Methods: She referred us in July 2013 with 32years old age and 15years infertility .Her complaints were abdominal pain and distension as well as weight loss. In her evaluation CA-125 was 256 and other tumor markers were normal. Massive ascitis and bilateral7-8cm sized ovarian masses with lobulated contour were seen in imaging.
Results: At time of laparatomy, for her bilateral ovarian tumors and ascitis, right salpigoophorectomy and left ovarian cystecomy with omentectomy and peritoneal sampling was done. In frozen section borderline serous tumor and in final pathology serous papillary borderline tumor for both ovaries with microinvasion in left side was reported. Peritoneal cytology was positive for serous ovarian neoplasm origin, whereas omentum had non-invasive implants. One month later she planned for pregnancy by induction of ovulatio with HMG (human menopausal gonadotropin) and HCG (human chorionic gonadotropin) and then an IVF (in-vitro fertilization) for embryo-transfer in future. She has been under close observation by cyclic examination, transvaginal ultrasound and CA-125 and had not any episode of recurrence after surgery. Now, three months after IVF, She has a freezed -embryo to do an embryo-transfer for about 3month ago.
Conclusion: This is one of cases who are alternatively offered to do abdominal hysterectomy and bilateral salpingoophorectomy and/or chemotherapy, but we preserved her fertility at surgery and as soon as possible proceeded to save her ovarian reservoir by freezed-embryo.
Key words: *Ovarian cancer, Fertility preserving.*

P-66
A comparative Study of relationship between micronutrients and gestational diabetes

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Introduction: Gestational diabetes mellitus (GDM) is a metabolic disorder in pregnancy that is characterized by increased insulin resistance and/or decreased insulin secretion. Although the etiology of GDM is not completely understood, it is thought that GDM may be due to a non-immune dysfunction of pancreatic β cells. In this paper, we studied the relation between the micronutrient and gestational diabetes.
Materials and Methods: Therefore, we measured micronutrient concentration including Ni, Al, Cr, Mg, Fe, Zn, Cu, and Se in serum of women with gestational diabetes between 24 and 28 weeks of gestational age (study group) who had inclusion criteria and comparison with micronutrient levels in normal pregnant women with same gestational age (control group).
Results: Our results showed that there was no significant difference between the serum micronutrient level (Ni, Al, Cr, Mg, Zn, Cu, Se) in study and control groups except serum level of iron which in serum of gestational diabetic women was lower than normal pregnant women and difference was significant.
Conclusion: Advanced age, high BMI and waist, and familial history of diabetes had significant differences between study and control groups. Relation between micronutrients including Ni, Al, Cr, Mg, Zn, Cu, Se, and gestational diabetes had not significant differences in two groups, except iron level which in serum of gestational diabetic group was lower than normal group and difference was significant.
Key words: *Micronutrient, Gestational diabetes mellitus, BMI.*

P-67
The relationship between personality characteristics and following infertility treatment processes in infertile women in Isfahan

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Introduction: Infertility affects men and women of reproductive age and puts them at the risk of emotional and psychological problems. The aim of this study was to compare the profile of personality factors in the group who followed and those who did not follow fertility treatment in Isfahan.
Materials and Methods: The research method was descriptive and causal comparative type. In order to conduct the research, 38 infertile individuals including 19 people who followed infertility treatment and 19 people who did not follow the treatment were randomly selected. For statistical operations, SPSS15 software was used. Minnesota Multiphasic Personality Inventory (MMPI-2) also was used as the study's tool. Self-assessment questionnaire is the most objective personality assessment tool that is used in this study.
Results: Using multivariate analysis of variance, the results showed that there was no significant difference,

in terms of personality dimensions, between those who followed and those who did not follow infertility treatment ($p<0.05$). However, t-test results showed that the group that followed infertility treatment, experience a higher level of paranoia and nervous or mental fatigue ($p<0.05$). No significant difference was observed in other dimensions.

Conclusion: Since infertility and its treatment is an issue affected by many factors such as family circumstances, financial resources, culture, etc, thus, it seems natural that certain personality types or characteristics have not been correlated with following or non-following treatment.

Key words: *Personality, Infertility, Following infertility treatment.*

P-68
Postpartum ICH

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A G1D1 27 year's old patient that had normal delivery 2 days ago refer to our hospital. The patient had GCS: 3.15 related to ICH grade 4. She was intubated and 4 days after the reception the patient expired due to massive ICH. The patient after the diagnose of IUFD with gestational age of 27 week had a NVD and the day after that release from hospital with normal lab data and vital signs but after one day she had a refractory headache and nausea and vomiting and gradually decreased GCS, after the CT-scan has been done the diagnosis was ICH. MRI/MRV and CT scan had been done for her and after R/O all the diagnosis of ICH like that aneurysm, drugs, angiopathy, and coagulopathy, the diagnose that set for her was reversible cerebral constriction syndrome (RCVS). This disease response to high dose of corticosteroides and has been known since 5 years ago.

Key words: *ICH, Postpartum, Vasoconstriction*

P-69
Phytoestrogens and their beneficial role in women's health

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Introduction: Phytoestrogens are a group of biologically active plant substances with nonsteroidal structure but similar to that of estradiol, an endogenous estrogen. This structural similarity accounts for the ability of these compounds to bind to estrogen receptors in various cells and exert estrogenic or antiestrogenic effects. Phytoestrogens are found in many plant sources such as walnuts, soybeans, cereals (oats, barley, wheat, and rice), legumes (beans, lentils), berries, apples, carrots, ginseng, fennel, anise and flaxseed. This paper reviews the role of phytoestrogens in women's health.

Materials and Methods: Online scientific sources were used to adjust this paper. These resources include Google Scholar, Advanced Search of Google, ScienceDirect, Scopus and en.bookfi.org.

Results: Phytoestrogens are thought to act as both agonists and antagonists. The controlled clinical trials offer phytoestrogens as an alternative to conventional hormone replacement therapy (HRT) especially in postmenopausal women. The most important gynecologic effect of these agents is the treatment and control of the symptoms of menopause. The other beneficial effects of these compounds include prevention and treatment of osteoporosis and reduction of coronary heart diseases and cancers (such as breast, uterus and thyroid). Also evidence is emerging that phytoestrogens play a beneficial role in treatment of obesity and diabetes.

Conclusion: Since long-term HRT can no longer be justified for disease prevention, women need alternative options to improve their quality of life and reduce their risk of heart disease, osteoporosis and breast cancer. Epidemiological and experimental evidence supports the importance of phytoestrogens in maintaining health and preventing disease in women.

Key words: *Phytoestrogens, Women, Disease, Health.*

P-70
Beta-thalassemia major and the role of oxidative stress on female fertility and infertility

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Introduction: In beta-thalassemia major (BTM), iron overload is the joint outcome of multiple blood transfusions and an inappropriately increased iron absorption associated with ineffective erythropoiesis. The outpouring of catabolic iron that exceeds the iron-carrying capacity of transferrin results in the emergence of nontransferrin-bound iron (NTBI)and its redox active form, labile plasma iron (LPI), which catalyzes the formation of free radicals, resulting in oxidative stress (OS) and damage to mitochondria, lysosomes, membranes, proteins and DNA. Recent advancesin the management of BTM have significantly improved life expectancy and quality of life of BTM patients, with a consequent increase in their reproductive potential and desire to have children. However, endocrine complications due to haemosiderosis are still present in a significant number of patients worldwide usually cause hypogonadotropic hypogonadism (HH) and declining synthesis of LH and FSH.

Materials and Methods: In this review we studied published papers on BTM and female fertility and also the role of OS in pathogenesis of infertility.
Results: The levels of NTBI, LPI were increased antimullerian hormone (AMH), was mostly normal. The levels of FRAP were low and levels of AOPP and MDA were high in the nonchelated patients compared with the chelated patients.
Conclusion: Infertility in women with BTM is assumed to be mainly caused by the direct or indirect effect of iron. The direct effect of iron is probably related to its direct deposition on the hypothalamic-pituitary axis and the female reproductive system and its indirect effect is mostly attributed to the iron-induced OS. Treatment with combination of antioxidants and iron chelators could neutralize the deleterious effects of OS, reverse endocrine complications and improve reproductive ability and fertility potential.
Key words: *Beta-thalassemia Major, Oxidative stress, Fertility, Infertility.*

P-71
Risk classification for drug use during pregnancy

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Introduction: In many countries, risk classification systems have been set up to summarize the sparse data of drug safety during pregnancy. But, these have resulted in ambiguous statements that are often difficult to compare, interpret and use with accuracy when counseling patients on drug use in pregnancy. The objective of this study was to compare and analyses the correlation and consistency between and the criteria for risk classification for medications used during pregnancy.
Materials and Methods: Risk classification systems from the US Food and Drug Administration (FDA), the Australian Drug Evaluation Committee (ADEC) and the Swedish Catalogue of Approved Drugs (FASS), were evaluated, reviewed and compared on basis of the risk factor typology to which they had been assigned. Also, evidence on teratogenicity and adverse effects during pregnancy was retrieved using Medline.
Results: Risk factor category allocation for 645 drugs classified by the FDA, 446 classified by ADEC and 527 classified by FASS was compared. Only 61 (26%) of the 236 drugs common to all 3 systems were placed in the same risk factor category. Analysis of studies on the safety of common drugs during pregnancy of drugs classified as X by the FDA showed that the variability in category allocation was not only attributable to the different definitions for the categories.
Conclusion: Differences in category allocation for the same drug can be a source of great confusion among users of the classification systems as well as for those who require information regarding risk for drug use during pregnancy.
Key words: *Risk classification systems, Pregnancy.*

P-72
Compare methods of diagnosing genital tuberculosis in infertile women

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Introduction*:* Genital tuberculosis is an important under-diagnosed factor of infertility. Iran is a developing country with 21 in 100000 incidences of pulmonary tuberculosis and 28% extra-pulmonary dieses were reported. The aim of study is compare different methods: histopathological examination (HPE), AFB smear and polymerase chain reaction deoxyribonucleic acid (PCR-DNA) and culture for diagnosing endometrial tuberculosis in infertile women.
Materials and Method*:* We used Scopus, Embase, PubMed, World Health Organization (WHO) and scientific Iranian journals from 2000-2014.
Results*:* Routine laboratory values are of little value in the diagnosis. An absolute diagnosis cannot be made from characteristic features in hysterosalpingogram (HSG) or laparoscopy. On evaluating against the diagnostic criteria, the sensitivity of PCR is more than HPE while HPE is further than culture. We compare results between the clinical criteria and specific diagnostic tests by Kappa measure of agreement. The culture and HPE showed mild agreement with the clinical criteria, whereas PCR showed a moderate agreement. The PCR results were negative in some cases. PCR using TRC_4 primers had a higher sensitivity than IS 6110 primers in detecting clinically suspected GTB. Due to the paucibacillary nature of GTB, diagnosis by mycobacterial culture and histopathological examination (HPE) have limitations and low detection rate.
Conclusion*:* Our results showed that conventional methods of diagnosis namely, HPE, AFB smear and culture have low sensitivity. PCR was found to be useful in diagnosing early disease as well as confirming diagnosis in clinically suspected cases. False negative PCR was an important limitation in this study.
Key words: *Tuberculosis, Infertility, Diagnosis methods, Iran.*

P-73
An investigation on the consequences of and approaches to the change of life style relating the rate of women s fertility and quality of life

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Life style is considered as the set if behaviours, model and patterns of people's lives. Since the individual's have different moral features and characters, accordingly they have different lifestyle. Undoubtedly change in Iranian life style which is different from previous religious and traditional life style. One of the consequences of these changes is the decrease in women s inclination to pregnancy, because they consider it as opposing to their well- fair and life quality that results in a crisis called family or maternal crisis. Of course, the researchers have shown that most dimensions of pregnant women s life quality decrease comparing to other women and also increase if age and the number of pregnancies as well as low income and education are directly related with pregnant women s life style. Based on the definition of world health organization (WHO), the health and quality of life cover comprehensive physical, mental and social well-fair. By the help of rules and regulations, the trend of population decrease which happening near futures cannot be controlled. But it needs some strategies including:

-compiling the pattern of life style and propagating it into women s all activities in appropriation with Islamic criteria.

-increasing women s life style with respect to their role and status in the society and providing mental and occupational security.

-preventing from the increase of the rate of divorce (because the children of divorce will not be interested in breeding any child in the future.

Key words: *Life style, Fertility, The quality of life.*

P-74
Effect of training on fertility in men

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Introduction: Aim of this study was to compare the effects of endurance and resistance training on parameters related to sexual function in untraining men including levels of testosterone, estradiol, SHBG. Recent researches confirm that exercise improves blood flow due to increased metabolic activity and changes in the secretion of certain hormones. Of course, depend on the type and intensity of training, changed in hormone levels may vary. Alteration in the levels of this important hormones, play important role in sperm production and fertility in men.

Materials and Methods: Statistic population consisted of students of Islamic Azad University of Neka city. Volunteers were organized and randomly divided into endurance, resistance and control groups of eight individuals. Selected variables were measured before and after four weeks of exercise. Measurement of parameters was done by ELISA method. The t-test and one-way analysis of variance were used. To determine within and between groups different, Tukey test was used to show the significant changes in each variables.

Results: The results showed that the levels of testosterone and estradiol, in endurance and resistance groups Sequence have a significant ($p<0.05$) increase and decrease respectively. SHBG levels were significantly increased only in the endurance group ($p<0.05$). But LH levels were significantly increased only in the resistance group ($p<0.05$).

Conclusion: The endurance and resistance training can increase the release of nitric oxide and cGMP that may leads to vasodilate testis artery and increased production of testosterone. Increased testosterone and decrease estradiol in men cause sperm production and improve fertility.

Key words: *Resistance training, Endurance training, Testosterone, Estradiol, Fertility.*

P-75
Role of determination of hyperglycosylated HCG in prenatal diagnosis of Down syndrome

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Introduction: Down syndrome is a genetic condition that occurs in approximately one in 691 live births. It is considered the most common chromosomal syndrome; therefore, prenatal diagnosis of this anomaly is important. Down syndrome screening is most often performed using the triple test: α-fetoprotein (AFP), 4 unconjugated estriol (uE3), and human chorionic gonadotropin (HCG). Moving screening into the first trimester has the advantage of earlier diagnosis. Hyperglycosylated human chorionic gonadotropin (HhCG) is a glycoprotein hormone secreted during embryonic implantation and trophoblast invasion of the uterine wall. Because the cytotrophoblasts are primitive and invasive in nature, HhCG is also called invasive trophoblast antigen (ITA). Invasive trophoblast antigen is a promising marker that can be measured in urine or serum.

Materials and Methods: For study of relationship between ITA and Down syndrome we searched in PubMed, Sciencedirect, and Google scholar with key word for ITA, HhCG, and Down syndrome

Results: Using IRMAs and ELISAs, investigators showed that A)HhCG rapidly increases in early pregnancy, attaining substantially higher concentrations and decreasing earlier than hCG; B) HhCG is increased in Down syndrome- affected pregnancies in both the

first and second trimesters; and C) the HhCG:hCG ratio appears to be higher in those with invasive- noninvasive trophoblastic disease.
Conclusion: Data indicate preliminary confirmation of the potential usefulness of urinary ITA measurements in detecting Down syndrome in a setting that simulates routine usage Serum ITA appears to be a useful first trimester Down syndrome marker that could replace of other markers mentioned.
Key words: *Invasive trophoblast antigen, Hyperglycosylated human chorionic gonadotropin, Down syndrome.*

P-76
Air pollution effects on pregnant women and newborns' health

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Pregnant women are one of the susceptible groups for hypertensive disorders, since changes in pregnancy lead to increased stress on the cardiovascular system and finally result in pregnancy-induced hypertension and preeclampsia. Several studies on pregnant women have shown higher risks of pregnancy-induced hypertension and preeclampsia following exposure to air pollution. So that pregnant women exposed to particulate matter (PM_{10}) and nitrogen dioxide (NO_2) levels during pregnancy, experience significant higher systolic blood pressure throughout pregnancy. On the other hand, pre-natal and post-natal studies conducted in infants of population-based cohort study implicate the adverse effect of air pollution on normal function of respiratory system, lung volume, and inflammation of respiratory pathways and sleep quality of 5-week-old infants.
Key words: *Air pollution, Pregnancy, Hypertension, Preeclampsia, Lung function.*

2- Embryology, Genetics, Stem Cell

P-77
Evaluation of in vitro effect of crab shell extract on nitric oxide production by prostate cancer cell line

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Introduction: Nitric oxide (NO) is a free radical and antioxidants which plays a pivotal role in many physiological and pathological processes such as angiogenesis, tumor cell growth and invasion. Antioxidants affect NO secretion by cells. Crab shell has various antioxidants. The aim of this study was to investigate nitric oxide levels of prostate cancer cells media treated with extracts of crab shell.
Materials and Methods: Prostate cancer cell line (LNcap) was used in this study Crab shell was prepared and powdered, and then the hydroalcoholic extract was prepared. Five extracts concentrations (100, 200, 400, 800 and 1000 µg /ml) in 24, 48 and 72 hours were affected on the cells. NO levels were evaluated by Griess methods. Data were analyzed by one way ANOVA and $P<0.05$ was considered significant.
Results: the effect of different concentrations of crab shell extract on LNcap cell line in 24, 48, and 72-hour periods indicated decreasing NO secretion in dose and time dependant manner. The 1000µg/ml dose has significant difference compared to control group ($p\leq0.05$).
Conclusion: Hydroalcoholic extract of Crab shell reduced nitric oxide secretion by prostate cancer cells (LNcap) in dose and time-dependent manner.
Key words: *LNcap cell line, Griess method, NO*

P-78
Protective effect of green tea extract on sperm parameters and FSH and LH levels in mice treated with anti-cancer drug paclitaxel

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Introduction: The aim of this study was to investigate the protective effect of green tea extracts on the sperm parameters and FSH, LH levels in mice treated with anti-cancer drug Paclitaxel
Materials and Methods: 35 male NMRI mice were divided into 7 groups: Control received Saline as Solvent. Exprimental 1 was intraperitoneally injected 0.2 mg/kg of Paclitaxel for 3 consecutive days. Exprimental 2, 3 treated with 200 mg/kg, 300 mg/kg of GTE respercively daily for 4 weeks. (i.p. injection) . Exprimental 4, 5 treated with 200 mg/kg, 300 mg/kg of GTE respercively daily for 4 weeks. (i.p. injection).starting at the second week 0.2 mg/kg of Paclitaxel for 3 consecutive days were intraperitoneally admnistered. One week after the last injection Blood samples for determination of FSH, LH levels were collected. Testicular and Body weight and sperm parameters were evaluated. Results were analysed by ANOVA test. $p<0.05$ was considered as significant.
Results: The results showed that the green tea extract significantly elevated the parameters of sperm, count, motility and viability ($p<0.05$). There was a significant decrease in FSH,LH levels in Exprimental 1 (0.2 mg/kg of Paclitaxel for 3 days) as compared to Control group ($p>0.05$). There was a significant increase in LH, FSH levels in Experimenal 5 as compared to Experimenal 1 after treatment with green tea extract. While the

increase observed in Experimental 4 was not significant ($p>0.05$).

Conclusion: GTE has some protective effects on sperm parameters and FSH, LH levels in mice treated with anti-cancer paclitaxel that is probably associated with its anti-oxidant components such as Catechin.

Key words: *Green tea, Paclitaxel, FSH, LH, Testis.*

P-79

Protective effect of green tea ovary function and LH and FSH level in mice treated with anti cancer drug Paclitaxel

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Introduction: Paclitaxel is an anticancer drug commonly used to treat ovarian cancer. Its destructive effects on ovary have been proved by several researches. The anticancer, antioxidant and chemoprotective effects of green tea may protect ovary from destructive effects of Paclitaxel.

Materials and Methods: In this study effects of 2 doses (200, 300 mg/kg/bw) of green tea extract on the levels of LH and FSH hormones in Paclitaxel treated mice were investigated. 35 NMRI adult female mice (8weeks) were divided into 7 groups as follows: Group1: control; Group 2: saline (sham); Group 3: case 1 (IP injection of 0.2 mg/kg paclitaxel for 3 days); Group 4, 5: case 2, 3 (IP injection of 200, 300mg/kg/bw green tea extract respectively); Group 6, 7: experimental 1, 2 (IP injections of paclitaxel+green tea extract). Blood serums of different group were collected one week after the last injection. Data were analyzed buy ANOVA and $p<0.05$ was considered as significant.

Results: Results showed that LH hormone in the group sham 1 decreased in comparison with group control, and groups sham 2, 3 were significantly increased compared to group sham 1, and the second experimental group was significantly higher than the group sham 1. Hormones FSH in the group sham 1. Significantly increased compared to control, and only group sham3 was significantly reduced compared to group sham1. FSH in experimental group 1, 2 were significantly lower than in group sham1.

Conclusion: Results show that high doses of green tea extract can hormone level LH, FSH closer control group.

Key words: *Paclitaxel, Ovary, Green tea, LH, FSH.*

P-80

Mitochondria common deletion in cumulus cells in vitro fertilization-embryo transfer cycle

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Introduction: The aim of this study was to investigate mitochondria DNA 4977bp deletion, known as mtDNA common deletion, in cumulus cells (CCs) and its probable relationship with patient's characteristics and in vitro fertilization outcomes.

Material and Methods: A total 14 women undergoing IVF/ICSI were included the study.The CCs were collected during oocyte retrievals and harvested for DNA extraction. Human mtDNA common deletion was detected by multiplex PCRand gel electrophoresis.The relationship between mtDNA common deletion and etiology of infertility, patient'sage, embryoquality and pregnancy rates were analyzed accordingly. Embryo morphology was evaluated on day two based on Hill criteria.

Results: The most cause of infertility was Male and tubal factors. The mean age of the patients was 30± 8. All of the embryos were fallen into A and B grades.No common deletion was detectedin the samples. Thisinvestigation is an ongoing study and our sample size would be 36 cases.The final results, which include probable relationship between common deletion and the aforementioned variables, will be presented at the congress.

Conclusion: The result of this investigation may highlight the role of cumulus cells in oocyte evaluation and embryo selection in in vitro fertilization/embryo transfer cycles.

Key words: *Cumulus, mtDNA deletion, Embryo quality, Mitochondria.*

P-81

A newborn with ambiguous genitalia and a complex X; Y rearrangement

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Introduction: In most mammals, sex is determined at the beginning of gestation by the constitution of the sex chromosomes, XY in males and XX in females.

Case: Here we report an interesting case characterized by ambiguous genitalia and ovotestis in a newborn carrying an apparently female karyotype (46 XX). Array

CGH-analysis revealed an unbalanced rearrangement resulting in the deletion of the distal Xp and the duplication of the proximal Xp contiguous region with presence of the Y chromosome from Ypter to Yq11. Fluorescent in situ hybridization (FISH) showed that this portion of the Y was translocated to the tip of the abnormal X and that the duplicated portion of chromosome X was inverted. Altogether, the abnormal chromosome was a dicentric one with the centromere of the Y chromosome apparently inactivated.

Conclusion: The presence within the translocated Y chromosome of the SRY gene explains the development of testes although it is not clear the reason for the genitalia ambiguity.

Key words: *Ambiguous genitalia, Unbalanced rearrangement, Array-CGH, FISH.*

P-82
PGD and the effect of sperm selecting methods in ICSI

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Introduction: One of the factors that increase the fertilization rate, embryo quality and also fertilization percentage is using a right method for selecting sperm which can be done with optical instrument such as IMSI or the process might be chemical like gradient solutions. PGD (Preimplantation Genetic Diagnosis) is developed as a diagnostic procedure to determine fetal genetic diseases and sex determination.

Materials and Methods: In our study we examined the gender of microinjection method fertilized embryos by fluorescent situ hybrizidation.

Results: This study showed that sperm selecting methods can effect on the results of micro injected embryos gender as it was compared to the results of other studies in the field of fetal sex from microinjection. There was a significant increase in fetus male gender.

Conclusion: We suggest that Chemical methods can be used in couples with female reproductive problems for sex selective Results and its selectivity are by the motility of the sperm and this study requires more investigations.

Key words: *PGD, Sex determination, Gradient method.*

P-83
Effect of in vitro fertilization on expression of apoptotic specific gene in mouse embryos at blastocysts stage

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Introduction: *In vitro* fertilization (IVF) is one of the assisted reproductive technologies used to help infertility treatment. *In vitro* culture of preimplantation embryos is associated with changes in gene expression. Exposure of preimplantation embryos to a variety of cellular stresses like culture media can induce apoptosis. It is however, not known if the method of fertilization affects the pattern of gene expression. We compared gene expression of IVF-derived mouse blastocysts versus *in vivo* produced blastocysts. The purpose of this study was to investigate the effect of *in vitro* fertilization on the expression of *P53* gene which is involved in apoptosis process.

Material and Methods: IVF-derived blastocysts were considered as group 1 and *in vivo* blastocysts as group 2. Expression of *P53* gene in IVF and *in vivo* embryos were assessed with real-time PCR.

Results: Our results showed no significant changes in the expression of *P53* gene between two groups.

Conclusion: *In vitro* fertilization can be used as an efficient and feasible method for infertility treatment.

Key words: *IVF, Mouse, Blastocysts, Apoptotic specific gene.*

P-84
Oocyte cryopreservation, advantages and disadvantages

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Oocyte cryopreservation has practical and ethical advantages compared with embryo storage. It allows oocytes to be quarantined before donation, simplifies the management of a donation programme, and ensures the most efficient distribution of the few donated oocytes available. Women at risk of early ovarian failure can store oocytes so that they can retain the possibility of bearing their own genetic children. Oocyte cryopreservation is vital for women without a partner and eliminates the problems associated with withdrawal of consent when embryos are stored. More contentiously, women could store oocytes to delay childbearing without there being a medical indication. During routine assisted conception cycles, oocytes can be cryopreserved as an emergency procedure or to avoid producing supernumerary embryos. In human, vitrification is a promising approach to oocyte storage which can conserve oocyte competence Viable pregnancies have been conceived from the embryos derived from vitrified oocytes, but to date there have been too few live births to allow a realistic assessment of the efficiency of oocyte vitrification. A number of

outstanding issues regarding methodology, dramatic difference (s) in its physio-structural properties, safety of storage and the long-term health of the children born via this approach as notable topics will be resolved only as oocyte vitrification becomes more widespread designed to provide the evidence base required in modern assisted conception. It is vital that procedures do not become 'set in stone' before they are fully optimised and that protocols and outcomes, especially live births, are fully documented and published.

Key words: *Oocyte, Cryopreservation, Advantage, Disadvantage.*

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Ascorbic acid improves ejaculated human semen parameters after mobile phone exposure in vitro

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Introduction: Cell phones have become an essential part of daily life but, the health risks related with their usage are often overlooked. However, possible consequences of the cellular phone usage on human sperm parameters have not been investigated adequately. This study was performed to evaluate the possible protective effect of ascorbic acid, against sperms exposed to the cell phone radiation

Materials and Methods: Semen samples were obtained from 18 fertile males. Following liquefaction, each sample was divided equally into 4 parts: One aliquot fresh semen as control, second aliquot was exposed to cellular phone radiation for 10 minutes continuously, and third aliquot exposed to cellular phone radiation for 10 minutes treated with ascorbic acid (10 µg/ml). In all groups, sperm analysis was performed for their viability, morphology and motility, evaluation of sperm movement were performed using four criteria: A) rapid progressive, B) slow progressive, C) none progressive, D) no motility. Data were analyzed by one-way ANOVA using SPSS version 16 software.

Results: In comparison with the fresh and exposed groups, there was a significant decrease in the rapid progressive, slow progressive and viability, and increased the number of sperm with none progressive and abnormal morphology. Ascorbic acid induced significant increases the percent of rapid progressive, slow progressive and viability and decreased abnormal sperm in mobile phone exposed group

Conclusion: That mobile phone exposure lead to behavioral and structural changes of human sperm, and ascorbic acid improved sperm motility, viability and morphology against toxicity of mobile phone exposure.

Key words: *Cell phones, Exposure ascorbic acid, Sperm motility, Morphology, Viability.*

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Evaluation of MMP-2 gene expression in mice pre-antral follicles derived from vitrified and fresh ovarian tissue

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Introduction: Cryopreservation is a useful method for preservation of ovarian tissue of patients who are candidate for chemo and radiotherapy. It has been postulated that MMP-2 participates in the process of remodeling of ovarian extracellular matrix such as the follicle growth and ovulation. The aim of this study was to compare the expression of MMP-2 gene of preantral follicles derived from vitrified ovaries with those derived from fresh ovaries.

Materials and Methods: Ovaries of 14 to 16-days-old NMRI mice were randomly choose and evaluation of MMP-2 gene expression of preantral follicles isolated from vitrified ovarian tissue compared with fresh preantral follicles using Real time PCR. Preantral follicles with 140-160 µm in diameter were isolated from fresh and vitrified ovaries. Then, for evaluation of MMP-2 gene expression Real time PCR was used.

Results: Expression of MMP-2 gene of preantral follicles isolated room vitrified ovaries was significantly higher than fresh preantral follicles.

Conclusion: Vitrification of ovarian tissue causes increased expression of MMP-2 of preantral follicles.

Key words: *Vitrification, MMP-2, Ovary, Preantral follicle, Real time PCR.*

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Effect of vitrification on expression of apoptotic specific genes, Bax and Bcl2 in IVF-derived versus in vivo embryos

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Introduction: For embryo preservation in the long-term, cryopreservation is one of the undeniable technologies in assisted reproductive technologies. Exposure to a variety of cellular stressors, like culture media and high concentrations of cryoprotectants, can induce changes in gene expression and apoptosis

pattern. This study compared vitrified-warmed *in vivo* and *in vitro* embryos in terms of viability and expression of *Bax* and *Bcl2* genes which are involved in apoptosis.

Materials and Methods: In experiment 1, about 300 *in vivo* blastocysts divided into 3 groups. Group A, vitrified/warmed blastocysts, group B, blastocysts just exposed to vitrification/warming solutions as toxicity test and finally group C, non-treated blastocysts as control. In experiment 2, same number of IVF-derived blastocysts divided into the same categories. Survival and hatching rates of blastocysts in all groups were assessed. Expression of Bax and Bcl2 was evaluated by Real Time PCR technique.

Results: The proportion of hatching and hatched blastocysts in *in-vivo* blastocyst was notably higher than those observed in IVF-derived counterpart. No significant difference was observed in expression of *Bax* and *Bcl2* genes between treated groups.

Conclusion: These data suggest that vitrification of IVF-derived blastocysts can be used as an efficient method for blastocysts preservation.

Key words: *Vitrification, IVF, Apoptosis specific genes, Mouse, Blastocysts.*

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Effect of in vitro fertilization on pluripotency of mouse inner cell mass using gene expression of Sox_2

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Introduction: It is generally accepted that the quality of *in vitro* fertilization (IVF)-derived embryos are lower than those derived from *in vivo*. Conditions of embryo culture period play an important role in future growth and developmental potential of blastocyst in terms of cryotolerancy, gene expression pattern and pregnancy outcome. This study was performed to assess the quality of *in vitro* produced mouse blastocysts in case of expression level of *Sox2* as a pluripotency specific gene.

Materials and Methods: In this experiment two groups of blastocysts were used. Blastocysts derived from *in vitro* fertilization (*in vitro* group) and superovulated mouse (*in vivo* group). Hatching rate was determined on the fourth day of culture. Gene expression was studied by Real-time PCR technique.

Results: Our results indicated that hatching rate significantly decreased in IVF-derived blastocysts. Furthermore, Sox_2 gene expression level did not significantly change in the IVF group compared with the control group ($p \geq 0.05$).

Conclusion: This study revealed that IVF can be considered as an optimal technique for infertility treatment.

Key words: *In vitro fertilization, Pluripotency, Mouse blastocysts, Expression gene,* Sox_2.

P-89

Effect of in vitro fertilization on primitive endoderm specific genes expression in mouse blastocysts

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Introduction: It is generally accepted that mammalian preimplantation embryos are sensitive to their surrounding environment and culture conditions in case of *in vitro* studies. Culture conditions can affect gene expressions which are associated with embryo quality. Therefore, we compared the expression of primitive endoderm layer markers (*Gata6*, *Grb2*) and development of mouse blastocysts produced by *in vitro* fertilization (IVF) versus *in vivo* produced blastocysts.

Materials and Methods: For IVF group, oocytes were isolated from the superovulated females and fertilized *in vitro* by capacitated sperm obtained from the cauda epididymis of male. The presumptive zygotes were cultured to the blastocyst stage. For control group, blastocysts were flushed out of the uterus on post mating day 3.5. Finally expression levels of *Gata6* and *Grb2* genes in both groups of blastocysts were analyzed by Real-time PCR.

Results: *In vitro* blastocysts have a reduction in hatching rate compared with blastocysts generated *in vivo* (70.22% vs. 87.80%). Furthermore blastocysts produced by IVF had an increase in the expression levels of *Gata6* and *Grb2* when compared with the *in vivo* control embryos ($p>0.05$).

Conclusion: Assisted hatching for in *vitro* produced embryos would be a useful approach to improve pregnancy outcome.

Key words: *IVF, Blastocyst, Mouse, Gene expression, Gata6, Grb2.*

P-90

Association of *ß-defensin 126* gene alteration with ICSI and IVF outcome in unexplained infertile men

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Introduction: Despite improved methods for evaluation sperm quality, infertility remains unexplained in about 20% of affected couples. During sperm maturation, a Cysteine-rich secretory glycoprotein *β-defensin126* secreted by the epididymal epithelium adsorbed to the entire sperm surface. It remains on the sperm until sperm become capacitated in the female reproductive tract. Its removal from over the head of sperm is required for sperm zona recognition. A cytosine dinucleotide deletion in the open reading frame of second exon of *DEFB126* gene generates an abnormal mRNA. Men homozygous for this mutation have reduced chance of successful fertilization.
Materials and Methods: Genomic DNA from the peripheral blood of 80 male partners of unexplained couples who underwent ICSI (first group) and IVF (second group), were extracted. PCR was performed and molecular genotyping for the *DEFB126* variant was done by SSCP (single strand conformational polymorphism), tetra PCR and DNA sequencing. ELISA performed for the assessment of this protein expression on sperm cells.
Results: Statistical analysis shows, no significant differences were found between homozygote mutation and wild type carriers in fertilization rates, implantation rates and clinical pregnancy of IVF and ICSI. The protein expression was less in men with del/del genotype, compare to other genotypes ($p<0.005$).
Conclusion: Although previous studies were found *DEFB126* variation would affect sperm function and male fertility rate, in present study, no significant differences were found between homozygote mutation and wild type carriers in fertilization rates, implantation rates and clinical pregnancy of IVF and ICSI. Further confirmation in a larger scale study is needed.
Key words: *Unexplained infertility, Deletion, DEFB126, ART.*

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Quantitative expression of P53 on in vitro produced mouse blastocysts

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Introduction: Nowadays, *in vitro* fertilization (IVF) is a routine and widely accepted treatment for infertility. IVF-derived embryos are exposed to many cellular stresses like changes in pH and temperature during the culture period. Cellular stresses are associated with changes in gene expression and thus activation of the apoptotic process. The aim of the present study was to compare the expression level of apoptotic specific gene, *P53* in IVF-derived embryos with *in vivo* embryo counterpart.
Materials and Methods: In this experiment, 420 IVF-derived blastocysts (treated group) and *in vivo* produced blastocysts (control group) were used. The survival and hatching rates of blastocysts were evaluated in these groups. Expression of *p53* gene in both IVF and *in vivo* embryos were evaluated using Real-time PCR.
Results: A decrease was observed in survival rate in treated group than control group (97.14 vs. 92.89). Also the hatching rate of blastocysts decreased significantly compared with control group (50% vs. 60.10%). *P53* expression was increased in treated group in comparison with control group, but this increase was not statistically significant ($p>0.05$).
Conclusion: The findings of this study indicate that *in vitro* fertilization as a successful approach for infertility treatment. Although the hatching and survival rates of IVF-derived blastocysts were decreased, our results revealed that *in vitro* fertilization do not make undesired effects on *P53* gene expression.
Key words: *Mouse blastocyst, P53 Gene expression.*

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Effect of artificial collapse of blastocoelic cavity on viability of mouse blastocyst through Cdx2 gene expression

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Introduction: Based on previous studies, manual puncture of trophectoderm (TE) of mouse blastocyst using a microneedle prior to vitrification increases survival rate. But this might be invasive and induce TE cell damage. Therefore, we examined the effect of artificial collapse (AC) of blastocoele on viability and quality of embryos through expression of *Cdx2* as a TE specific marker.
Materials and methods: 3.5 to 4.5 days old embryos were obtained from superovulated female mice and divided randomly in AC-treated and non-treated groups. In first group blastocysts were mechanically punctured with a microneedle. Survival capacities of collapsed blastocysts were assessed on the basis of their ability to re-expansion and leave the zona pellucida (hatching) 3 and 12 hours after AC. In addition, quantitative expression of *Cdx2* was performed in both groups by Real-time PCR technique.
Results: The re-expansion and hatching rate of collapsed blastocysts were significantly improved. In

the first group, expression of *cdx2* gene increased in compare with second group.
Conclusion: Our results reveal that using AC of blastocoele cavity would be a useful approach to improve pregnancy outcome.
Key words: *Trophectoderm, Vitrification, Artificial Collapse, Blastocyst, Blastocoele, Cdx2.*

P-93
Effect of the MDR1 gene C1236T polymorphism in male infertility in Guilan

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Introduction: Infertility is a common problem affecting one in six couples. P-glycoprotein (P-gp), a product of the MDR1 (ABCB1) gene, may be a link between genetic and environmental factors contributing to the development of male infertility because pesticides (P-gp substrates) are well established factors of male infertility. MDR1 (ABCB1) is member of the family of ATP binding cassette (ABC) transporter. It is plasma membrane transporter that is expressed in various organs. In the present study are examined the possible association of C1236T: rs1128503 functional ABCB1 polymorphism with response to male infertility.
Materials and Methods: In total, 35 male patients undergoing semen analysis due to initial infertility workup were included in the study. The control group consisted of 65 healthy males with proven fertility. *MDR1* 3435C>T genotyping was performed by the polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) method.
Results: The significant association between MDR1 gene polymorphism and male infertility was not observed (p=0.06).
Conclusion: Infertility can occur due to idiopathic factors. Studies show that polymorphisms in several genes implicated in male infertility. Concludes that polymorphism 1236C>T MDR1 gene may be one factor contributing to male infertility. Research on the effect of these genes is still being investigated.
Key words: *Male infertility, MDR1, P-gp, C1236T polymorphism, PCR-RFLP.*

P-94
Quality assessment of blastocysts artificially collapsed by microneedle

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Introduction: Embryo cryopreservation is possible in all stages of pre-implantation, but according to some studies, the survival rate of cryopreserved blastocyst is lower than the other stages. This problem could be due to the fluid-filled cavity of blastocyst that provides a good ground for ice crystals formation and cell structure damages. Artificial collapse of blastocyst cavity is one of the assisted reproductive technologies that can diminish this problem by reducing the volume of blastocoelic fluid. But the risk of mechanical damages to blastomers is possible during this technique. The purpose of this study was to investigate the effect of artificial collapse of blastocyst on embryo quality through evaluation of *Nanog* gene expression that is effective in the pluripotency of inner cell mass.
Materials and Methods: 3.5-4.5 days old *In vivo* mouse embryos were divided in treated and control groups randomly. Blastocysts were collapsed by using a microneedle in treated group. The *Nanog* gene expression assessed in treated group and fresh blastocysts as control group by Real-time PCR technique.
Results: *Nanog* gene expression was increased in treated group in comparison with control group, but this increase was not statistically significant.
Conclusion: Our results revealed that artificial collapse of blastocyst do not make undesired effects on *Nanog* gene expression.
Key words: *Blastocysts, Artificial collapse, Nanog gene expression.*

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Expression of Oct4 Gene in IVF-derived mouse blastocyst

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Introduction: Since the birth of the first baby using *in vitro* fertilization (IVF) in 1978, enormous changes in the field of reproductive biology and infertility treatment have been established. Although IVF is considered as a safe technique but studies have shown that during IVF, some stresses induced by osmosis, oxygen, temperature and pH changes in ectopic conditions can cause morphological, genetic and epigenetic changes in embryos derived from IVF compared to *in vivo*. The purpose of this study was to assess the effect of IVF on embryo quality regarding the expression level of *Oct4* gene. This gene is effective in the pluripotency of blastocyst inner cell mass.
Materials and Methods: In this experiment 3.5 to 4.5 days old mouse embryos were used in both treated and control groups. Expression level of *Oct4* gene was

evaluated using Real-time PCR technique in IVF derived blastocyst (treated group) and *In vivo* blastocyst (control group).
Results: *Oct4* gene expression levels increased in the treated group compared to the control group, but this increase was not significant (p>0.05).
Conclusion: According to the results, *in vitro* fertilization does not have undesired effects on *Oct4* gene expression in mouse blastocyst.
Key words: *IVF, Blastocyst, Oct4, Real-time PCR.*

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Expression of trophectoderm specific gene, Fgf4 in artificially collapsed mouse blastocysts

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Introduction: In recent years, puncture of trophectoderm of expanded blastocyst before vitrification introduced a simple and effective technique to assist successful cryopreservation of expanded blastocyst by vitrification. Puncture of trophectoderm of expanded blastocyst prior to vitrification would allow more rapid re-expansion and enhance hatching rate. However, there is no guarantee on their normal development. Thus, we examined the effect of forced blastocoel collapse on viability and quality of embryos through expression of *Fgf4* as a trophectoderm specific marker.
Materials and Methods: In this experiment day 4 and day 5 mouse embryos were collected from synchronized mice and randomly divided into two groups. Expanded blastocysts in group 1 were artificially collapsed using ICSI pipette. Survival and hatching rate of collapsed blastocysts were assessed. Quantitative expression of *Fgf4* was performed in these groups by Real-time PCR technique.
Results: There was no degeneration of collapsed blastocysts. The proportion of blastocysts showing fast development tended to be higher when the blastocysts underwent AC. There was no clear correlation between morphology of AC embryos and control group and expression of *Fgf4* significantly improved.
Conclusion: Our results revealed that artificial collapse of blastocoele cavity can improve the survival and hatching rate of blastocysts before embryo transfer.
Key words: *Artificial collapse, Vitrification, Trophectoderm, Blastocoel, Blastocyst, Fgf4.*

P-97
Ovarian tissue and follicle culture

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Introduction: Currently, the culture of cryopreserved ovarian cortical tissue that contains large number of primordial follicles is a promising fertility preservation approach in young cancer patients. This option allows immediate initiation of cancer treatment and is the only suitable choice for pre-pubertal girls. To restore fertility using ovarian cortical strips, there are several choices depend on age and type of cancer.
Materials and Methods: One of the several proposed approaches for fertility preservation in female cancer patients is ovarian tissue cryopreservation followed by transplantation, or ovarian tissue and follicles culture. Ovarian tissue can be transplanted when there is no risk of introducing malignant cells to the patient otherwise latter method should be considered. Therefore, to achieve complete development, multi-step culture system is more advocated.
Results: For instance, the first few days ovarian tissue culture followed by culture of isolated follicles as 3-dimentional systems in the form of simple follicular culture or artificial ovary along with considering all required growth factors is received much attention. Due to complexity of factors and processes involved in follicular development and lack of enough knowledge about folliculogenesis at molecular and cellular levels, live birth has not been achieved, except in mouse, via follicular culture in mammals.
Conclusion: Despite achieved progresses in assisted reproductive technologies, no reliable method for female fertility preservation using follicular culture is considered. Apart from 3-dimentional culture system, application of bioreactor besides all obtained progresses in the field of ovarian physiology and cryopreservation will be promising to this end.
Key words: *Fertility preservation, Ovarian tissue culture, Follicle culture.*

P-98
In vitro Effect of crab shell hydroalcoholic extract on apoptosis in breast cancer cells line

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Introduction: Breast cancer is now the most common cancer in women worldwide. According to toxic side effects and drug resistance to chemotherapy, the use of natural compounds with for development of anticancer drugs, has been considered. The aim of the present study was to investigate the in vitro effect of crab shell extract on induction of apoptosis in breast cancer cell line (MCF7).
Materials and Methods: Breast cancer cell line (MCF7) was used in this study. Crab shell was prepared and was powdered. Then the hydroalcoholic extracted was prepared and 6 concentrations (0, 100, 200, 400, 800 and 1000 µg /ml) and were affected on the cells within 72 hours. TUNEL method and fluorescent

microscope were used to evaluate apoptosis of the cells. Data were analyzed by one way ANOVA and $p<0.05$ was considered significant.
Results: Apoptosis Index of control, 100, 200, 400, 800 and 1000 µg/ml extracts were 1.85%, 3.55%, 4.91%, 10.62%, 17.55% and 21.48% respectively. 400, 800 and 1000 µg /ml concentration of extract had significant in comparison with control group ($p<0.05$).
Conclusion: Crab shell extract induced apoptosis in breast cancer cells MCF7 dose-dependently.
Key words: *MCF7 cell line, Apoptosis, TUNEL staining.*

P-99
Analysis of TEX14 expression in testis tissues of non-obstructive azoospermic men referred to Royan institute

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Introduction: Testis-expressed 14 (TEX14) is a novel protein that localizes to germ cell intercellular bridges. During spermatogenesis, proposed roles for the intercellular bridge include germ cell communication, synchronization, and chromosome dosage compensation in haploid cells. In the absence of TEX14, intercellular bridges are not observed by using electron microscopy and other markers. TEX14 is required for intercellular bridges in vertebrate germ cells, and recent studies provide evidence that the intercellular bridge is essential for sermatogenesis and fertility.
Materials and Methods: Testis tissue samples were obtained from 10 patients with severe oligozoospermia and 20 patients with non-obstructive azoospermia (10 with SCOS syndrome and 10 with maturation arrest) who were referred to the Royan institute. Total RNA was extracted with Trizol and cDNA was synthesized. Quantitative real-time RT–PCR was performed using Power SYBR Green kit.
Results: Normalizing the relative amount of TEX14 transcript by the amount of GAPDH transcript in the same sample, indicated that expression of TEX14 in the testis samples of patients with SCOS syndrome ($p=0.004$) and patients with maturation arrest ($p=0.038$) is significantly reduced as compared with oligozoospermic patients.
Conclusion: The same expression pattern of *TEX14* among mouse and human indicated that *TEX14* is a highly conserved gene that might has an important role in mammalian testis functions like spermatogenesis. According to the results, we can conclude that *TEX14* expression levels are essential for normal spermatogenesis and deficiency in this gene can cause spermatogenic failure and infertility in men.
Key words: *Male infertility, Non-obstructive Azoospermia, TEX14.*

P-100
Investigation of KDR gene polymorphisms (-604, 1719 and 1192) in women with unexplained recurrent pregnancy loss in comparison with normal women

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Introduction: Recurrent pregnancy loss is the most important fertility problem which affects about 1-5% of pregnant women. One of the possible genetic causes of unknown recurrent pregnancy loss is impairment in angiogenesis system and one of the most important genes is Kinas insert-Domain-Receptor (KDR). It is found on vasculogenic and angiogenic precursor cells in human placenta. Determining the association between single nucleotide polymorphisms (SNPS) (-604, 1719 and 1192) of KDR gene in women with unexplained Recurrent pregnancy loss in comparison with healthy women .
Materials and Methods: In this study 110 women with history of recurrent pregnancy loss in the reproductive age as case and 120 healthy women with no history of abortion and at least one healthy child are chosen as control group. Genotyping of these polymorphisms were analyzed using the Amplification Refractory Mutation System-Polymerase Chain Reaction (ARMS-PCR) technique.
Results: Genotype frequencies of SNP -604 in women with unexplained recurrent pregnancy loss were as follows TT (26.4%) TC (45.5%) and CC (28.2%) while in normal group genotypes were 30%, 43.4% and 26.7%respectively. Genotypes AA, AT and TT of SNP(1719) presented frequencies of 30%, 2.8%and 67.3% respectively in case group and 3.4%, 32.5% and 64.2% in controls. Distribution of Genotypes in SNP 1192 was 79.1%, 19% and 1.8% for GG, AG and AA in case and 80%, 20% and 0% in the same order in controls .
Conclusion: Results of this study demonstrated no association between recurrent pregnancy loss and -604, 1719 and 1192 SNPS of KDR genes**.**
Key words: *Recurrent pregnancy loss, Single nucleotide polymorphisms, KDR gene.*

P-101
Study of the protection of Alpha- tocopherol on human sperm parameters, with mobile phone radiation treated in vitro

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Introduction: There has been developing public concern on the effects of electromagnetic radiation (EMR) emitted by cellular phones on human health. Evidence from several studies supports a growing claim that cell phone usage may have a detrimental effect on sperm parameters. In this study we examined the relationship of cell phone radiation and the effect of alpha tocopherol on ejaculated semen.
Materials and Methods: Semen samples were collected from 18 patients presenting to the infertility clinic. Each sample was divided in two aliquots: control group (sample not exposed) and exposure group (sample exposed to cell phone). Exposure group was divided in two parts, the first was exposed to the cell phone radiation directly, and the second group was mixed with 5 mM alpha tocopherol and emitted to cell phone radiation. Evaluation of semen parameters including viability, morphology and motility were performed using four criteria: A) rapid progressive, B) slow progressive, C) none progressive, D) no motility.
Results: Our result indicated that exposure group showed a significant decrease in the rapid progressive, slow progressive sperm movement and viability. It also increases the no-motility category of sperm movement and abnormal sperm significantly. Also alpha-tocopherol (5mM) increases rapid progressive, slow progressive and viability of sperm and decreased abnormal sperm in mobile phone exposed group significantly.
Conclusion: The addition of alpha- tocopherol in the semen could be useful to prevent human semen parameters after mobile phone radiation
Key words: *Cell phones, Alpha tocopherol, Viability, Morphology, Radiation, Motility.*

P-102
Effect of prenatal methamphetamine administration during gestational days in mice

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Introduction: Recently, administration of methamphetamine (MA) has been increased in pregnant women. MA crosses through the placenta and effect on fetal. In the present study, the effect of prenatal exposure of 10 mg/kg/day of MA was evaluated in pregnant mice on Crown-rump length, placenta circumference, body and placenta weight gain of fetus and histological changes evaluated in fetus in each group and then compared to others.
Materials and Methods: Twenty-four NMRI pregnant mice were divided into four groups. First, second and third groups were injected intraperitoneally 10 mg/kg/1day MA from gestational day (GD)1 to GD7, GD7 to GD14 and GD1 to GD14, respectively. Forth group, as control group, was injected saline from GD1 to GD14. On GD14, the pregnant females were killed and fetuses and placenta were weighted and then crown-rump length of fetus was measured with caliper. For Histological evaluation fetuses stained with hematoxyline-eosin and TUNEL assay was applied to assess cell apoptosis.
Results: Fetus body weight showed significantly decreased in third group compared to first and second groups, and lower crown-rump length in Fetuses observed between third group and others ($p \leq 0.001$). Fetus in MA treated showed lower placenta circumference compared to control. Histological changes such as Exencephaly, cleft palate, hemorrhage and immature fetus found in second and third groups. Apoptotic cells were observed in second and third groups but there were no significant increased compared to others.
Conclusion: In utero administration of MA can cause morphological and histological changes in mice fetus but the exact mechanism remains unclear.
Key words: *Pregnant mice, Methamphetamine, Apoptosis.*

P-103
Comparison of two different mouse embryonic stem cell culture systems in generating chimeric embryos by blastocyst microinjection method

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Introduction: The generation of chimeric embryos is an important step in knockout mouse production. As known the source of donor mouse embryonic stem cells (ESCs) is effective on production of chimeric mouse embryos and germline transmission. The present study was aimed to investigate the efficiency of two different mouse ESCs in generating chimeric embryos.
Materials and Methods: The embryos were collected from the oviducts of 0.5-dpc C57BL/6 mice and after 3 days culture, at blastocyst stage, randomly divided into 3 groups. I) the blastocysts were microinjected by mouse ESCs co-cultured on mitomycinated MEF; II) the blastocysts were microinjected by mouse feeder free ESCs; III) the non-injected blastocysts were considered as a control. Approximately, 10-15 GFP positive ESCs

were microinjected into blastocele cavity of groups I and II. The hatching rate and the presence of GFP positive cells in inner cell mass (ICM) were evaluated at Day 5 of culturing.
Results: The results showed that the hatching rate was significantly higher in group 1 than control group (96.3±3.7 vs. 58.6±11.3) though, the presence of GFP positive ESCs was lower in group 1 than group 2 (57.2±9.2 vs. 86.3±5.9).
Conclusion: The increased hatching rate in group 1 compared to control is probably due to zona pellucida drilling by laser. The presence of greater numbers of GFP positive ESCs in group II might be related to the higher purity and homogeneity of cultured ESCs in feeder free culture system compared to the co-cultured group.
Key words: *Embryonic stem cell, Blastocyst, Chimeric, Mouse, Microinjection.*

P-104
IVF outcome after using anti freeze protein in semen freezing of three Iranian ovine breeds

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Introduction: Despite the effects of antifreeze proteins (AFPs) on freezing point and their potential interaction with membranes, there are controversial reports on their effects on fertility in different species. In this study the effects of extender supplementation with AFP during semen freezing on embryo development were studied in three Iranian sheep breeds.
Materials and Methods: The collected semens from Shal, Afshari, and Moghani ram breeds, before freezing, were diluted in extender supplemented with (Shal-AFP, Afsh-AFP and Mogh-AFP, respectively) or without (Shal-Cnt, Afsh-Cnt and Mogh-Cnt groups, respectively)10µg/ml AFP III. The abattoir-derived COCs were separately fertilized with above frozen semen and the cleavage, blastocyst, and hatching rates were recorded.
Results: The highest and lowest blastocyst rates, on day 8, were recorded in shal-Cnt and Afsh-Cnt groups, respectively (26.61±8.58 and 16.61±4.94, respectively; $p \geq 0.05$). The highest and lowest hatching rates were observed in Afsh-Cnt and Mogh- Cnt groups, respectively (55.15±12.06 and 24.61±14.87, respectively; $p \geq 0.05$).
Conclusion: Neither the presence or absence of AFP III nor the breeds of rams had effect on the blastocyst formation and hatching rates in in vitro drived embryos.
Key words: *AFP, Frozen, Semen, Breeds, Blastocyst, Hatching.*

P-105
Effect of α-tocopherol supplementation during ram semen cryopreservation on subsequent embryo development

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Introduction: This study was conducted to evaluate the effect of α-tocopherol (Toc) supplementation to semen extender during sperm freezing on developmental competence of derived embryos.
Materials and Methods: The pooled semen samples collected from three rams of Shal breed were diluted in extender with different concentrations (5 mM and 10 mM; Toc-5 and Toc-10 groups, respectively) or without Toc (control groups) before freezing. The abattoir-derived COCs were fertilized with above frozen semen (treatment and control group). The parameters of embryo development such as cleavage, blastocyst, and hatching rates were subsequently recorded. The data were analyzed using ANOVA test.
Results: The blastocyst rate on day 8 in Toc-5 group was greater than Toc-10 and control groups (48.2±11.1 vs. 36.4±7.8 and 39.3±8, respectively). However, the hatching in Toc-10 group was greater than Toc-5 and control groups (52.6±4 vs. 55.9±15.4 and 43.8±8.3, respectively).
Conclusion: The presence of different concentrations of α-tocopherol in semen extender may exert different effects on embryo developmental parameters using frozen-thawed semen.
Key words: *Embryo, α-tocopherol, Sperm cryopreservation.*

P-106
In vitro proliferation and colonization of mouse spermatogonial stem cell using low intensity ultrasound

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Introduction: Spermatogonial stem cells (SSCs) are the foundation of spermatogenesis. Sound wave especially low intensity ultrasound (LIUS) can be effective on increasing the number of cells.
Materials and Methods: Isolated SSCs from neonate mice cultured in DMEM culture medium with 10% Fetal Bovine Serum. In the first phase, temperature controlled and in the second phase, SSCs stimulated by LIUS with 3 different Intensity dose (100, 200 and 300

mW/cm^2) for 5 day and SSCs proliferation and colonization assessed at 7th day.
Results: The LIUS treatment of mouse SSCs increased the proliferation rate and colonization of SSCs in experimental groups compared to the control group. Average of proliferation rate in 100, 200, 300 mW/cm^2 and control group were 1.96±0.03, 2.26±0.03, 1.73±0.03 and 1.66±0.03, respectively. Average number of colonies in 100, 200, 300 mW/cm^2 and control group were 45±1.2, 53±2.4, 28±1.2 and 20±0.8, respectively. Average diameters of colonies in 100, 200, 300 mW/cm^2 and control group were 235.3±6.8 µm, 204.6±12.3 µm, 203.6±5.6 and 214.3±9.1 µm, respectively. Our results showed that there was significant increase in proliferation rate and number of colonies in experimental groups compared to control group ($p<0.05$), whereas there were not significant differences between groups regarding to diameter of colonies.
Conclusion: These results suggested that LIUS treatment can be an efficient and cost-effective method to improve proliferation and colonization of SSCs during in vitro culture.
Key words: *Colonization, Proliferation, Mouse, Stem Cell, Ultrasound,*

P-107
The protective effect of silymarin on viability, motility and mitochondrial membrane potential of ram sperm treated with sodium arsenite

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Introduction: Sodium arsenite, as an environmental pollutant, which accumulates in reproductive organs can exert oxidative stress on spermatogenesis and sperm morphology. Due to the antioxidant role of silymarin (an effective extracted from the seeds of Silybum marianum or milk thistle), this study was performed to investigate if silymarin can prevent the adverse effect of sodium arsenite on viability; motility and mitochondrial membrane potential of ram sperm.
Materials and Methods: Epidydimal sperm obtained from Farahani´s ram (Ovis Aries) was swim up and divided into three groups: 1.control 2.spermatoza treated with sodium arsenite 10 micromolars 3.spermatoza treated with silymarin 20 micromolar + sodium arsenite 10 micromolar and incubated at 37 °C for three hours. MTT assay and Rhodamine 123 were respectively used to assess sperm viability and mitochondrial membrane potential. Sperm motility was done according to World Health Organization (WHO) guidelines. Data were analyzed with one way ANOVA and $p<0.05$ was considered significant.
Results: Viability, motility and intact mitochondrial membrane potential of the spermatozoa were significantly decreased compared to the control group. In silymarin+ sodium arsenite group, silymarin could significantly compensate sperm viability, motility and intact mitochondrial membrane potential decreases compared to sodium arsenite group.
Conclusion: Sodium arsenite decreases ram sperm viability, motility and intact mitochondrial membrane potential and silymarin is able to compensate the adverse effect of sodium arsenite on these sperm parameters.
Key words: *Motility, Viability, Mitochondrial membrane potential.*

P-108
Effect of embryonic fibroblast cells conditioned medium on in vitro maturation of immature mouse oocytes

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Introduction: The purpose of this study was to evaluate the effect of mouse embryonic fibroblast cells conditioned medium on resumption of meiosis, in vitro maturation of immature mouse oocytes, fertilization and derived embryos development.
Materials and Methods: Immature oocytes denuded at the geminal vesicle (GV) stage were obtained from female NMRI mice 46-48 hrs after injection of 7/5 IU PMSG. To repartee mouse embryonic fibroblast cells (MEFs), the fetuses were collected from the female mice at day 13 and cultured in DMEM. After the preparation of a monolayer, conditioned medium were collected and used for culture. Immature oocytes were randomly cultured in culture medium of MEM-a supplemented with different concentrations (0, 10, 30, 50 and 100%) of mouse embryonic fibroblast conditioned medium. After 14-16 hrs the matured oocytes were fertilized with spermatozoa in T6 medium and their development was assessed until blastocyst stage.
Results: There was no significant differences ($p<0.05$) in maturation rate between control and conditioned medium groups. But there were significant differences ($p<0.05$) in the percentage of fertilization and cleavage in conditioned medium with 30%-50% concentrations as compared to the control group ($p<0.05$)
Conclusion: The conditioned medium of fibroblast cells increase in vitro fertilization (IVF) and embryonic development. But there was no effect on the maturation of immature oocytes.
Key words: *In vitro maturation, Mouse oocyte, Embryonic fibroblast cell, Conditioned medium.*

P-109
Effect of Nitroglycerin treatment on the number of pups in female rats

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Introduction: High levels of reactive oxygen species (ROS) and reactive nitrogen species (RNS) in the uterus lead to oxidative stress which can decrease expression of adhesion molecules and may cause impaired blastocyst implantation. Nitroglycerin (NTG), source of ROS and RNS, is a nitrate drug, effective in lowering blood pressure and chest pain in patients with angina pectoris and congestive heart failure. In this study we aimed to investigate the long and short term effects of nitroglycerin treatment on the pups number.
Materials and Methods: The rats (150-200g) in long-term test group were administered with NTG (15mg/kg) and normal saline (1ml/kg) in controls for 4 weeks. Afterwards, they mated and their treatment continued until the end of pregnancy and finally their pups were counted. In short-term groups, treatments of the rats were started after mating similar to what have been done for the long term treatment groups.
Results: In long-term NTG treated group the pups number decreased compared to the controls ($p<0.05$). In short-term NTG treated group the number of pups had no difference with control group.
Conclusion: Our investigations indicated that the long-term NTG treatment may down regulate adhesion molecules which have important role in the implantation and this may lead to decrease in the pups number. But the short-term NTG treatment may not have adverse effects on the adhesion molecules expression, implantation and the number of pups.
Key words: *Nitroglycerin, Pups, Female rats.*

P-110
The efficacy of adding dexamethazone to clomiphene citrate in the treatment of polycystic ovary syndrome and infertility

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Introduction: The aim of this work was to evaluate the efficacy of adding Dexamethazone (DEX)) to Clomiphene citrate (CC) in polycystic ovary syndrome (PCOS) with normal dehydroepiandrosterone sulphate (DHEAS) in induction of ovulation.
Materials and Methods: 120 infertile women with PCOS were randomly assigned into two groups. Group I: Clomiphene citrate 100 mg/day was given from day 3 to day 7 of the cycle and DEX 1 mg/day from day 3 to day 12 of the cycle. Group II: Same protocol of CC combined with placebo (Folic acid tablets) was given from day 3 to day 12 of the cycle. The main outcome was ovulation. Secondary measures included number of follicles >18 mm, pregnancy rate and ovarian follicular response were monitored by ultrasound.
Results: There were no statistically significant differences between groups as regards age, duration of infertility, BMI, menstrual pattern, serum DHEAS. The mean number of follicles >18 mm were significantly higher in the DEX group than in the placebo group ($p=0.059$). Similarly, there were significantly higher rates of ovulation and pregnancy in the DEX group. Dexamethazone was very well tolerated as no patients complained of any side effect.
Conclusion: Induction of ovulation by adding DEX to CC in PCOS with normal DHEAS is associated with higher ovulation and pregnancy rates and seems to be an effective, cheap and simple method.
Key words: *Clomiphene citrate, Dexamethazone, Infertility, Polycystic ovary syndrome.*

P-111
In vitro maturation of human oocytes using supernatants of mesenchymal stem cells and embryo formation by use of ICSI

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Introduction: In vitro maturation of oocytes can reduce costs and avoid side effects gonadotropin stimulation produced in ivf cycle. Unfortunately synthetic maturation mediums are not efficient. The aim of this study was to find an approach to increase fertility. Molecules secreted by mesenchymal stem cells into the culture medium can resume meiotic division. In this study it was demonstrated that the supernatants of mesenchymal stem cells could provide a suitable environment for maturation of oocytes whereas matured oocytes are able to reach blastocyst stage.
Materials and Methods: Oocytes in germinal vesicle stage were placed into commercial medium and supernatant of mesenchymal stem cells that consist of DMEM 10% (supplemented with FBS). After 48 hours, oocytes were observed using an invert microscope to detect the release of polar body as a sign of oocyte maturation.

Results: According to obtained data and by use of chi square test about maturating GV oocytes the difference between these two used medium was not significant but about embryo formation, they differed significantly ($p<0.05$).
Conclusion: The obtained results showed that supernatant of mesenchymal stem cells in comparison with commercial medium was more efficient and effective, and didn't disurb subsequent embryonic development of matured oocytes.
Key words: *In vitro maturation, Mesenchymal stem cells, Cell cultures, Human oocyte, Embryo formation.*

P-112
Effect of oxidative stress on testis histopathology in mature male mouse

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Introduction: Approximately 10-15 percent of couples are infertile. Oxidative stress and Reactive oxygen species (ROS) is one of the main reasons of male infertility. In this study, the effect of oxidative stress induced by tertiary-butyl hydroperoxide (TBHP) was investigated on testis histopathology in mouse.
Materials and Methods: TBHP was intraperitoneally (ip) injected at the dilution of 1:10 median lethal dose (LD_{50}) into the adult male mice strain Balb/c for two weeks. In continuous, the mice were sacrificed and testis tissues were removed in order to assay the ROS level and Histological analysis.
Results: The flow cytometry analysis showed a significant increase in ROS level in testis. Testis histopathology following TBHP treatment revealed a significant decrease in Leydig and germ cells, seminiferous tubule diameter, germ layer thickness, but interstitial connective tissue thickness showed an increase. In addition, germ cells disorganization and progressive degeneration were detected.
Conclusion: In conclusion, oxidative stress induced by TBHP could lead to the various morphological changes in seminiferous tubules and also play a potential role in the pathogenesis and protective mechanisms of testis.
Key words: *Male infertility, Oxidative stress, Reactive oxygen species, Tertiary-butyl hydroperoxide (TBHP).*

P-113
Bmp4 exposure increases expression of meiotic markers during differentiation of germ cells from mouse embryonic stem cells

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Introduction: Adding bone morphogenetic protein 4 (BMP4) to the culture media of embryonic stem (ES) cells has been proposed to induce germ cell differentiation. Obviously, first step in gamete production depends on the induction of the meiosis.In the current study, we investigated the induction of germ cell meiosis by BMP4 exposure.
Materials and Methods: Embryonic stem cells were propagated on a feeder layer of mouse embryonic fibroblastsin ES cell medium supplemented with LIF. Then, the ES cells were detached from feeder and differentiated through embryoid body(EB) and monolayer culture system in LIF-free ES cell media in presence or absence of BMP4 for 5 days.Using quantitative real-time RT-PCR, a subset of meiotic markers, Stra8, SCP1, SCP3, and REC8, were assessed following treatment the cells with (+BMP4) or without BMP4 (-BMP4).
Results: Expression of the meiotic markers significantly increased after treatment with BMP4 in EB differentiation protocol. In monolayer culture system, a significant reduction in mRNA levels of SCP1, SCP1, and REC8 was observed in +BMP4 cultures after 5 days compared with the cells cultured in -BMP4 condition . In contrast, the presence of BMP4 in the culture media of monolayer culture condition did not impact on the Stra8 gene expression level.
Conclusion: Expression of meiotic genes following treatment with BMP4 enhanced in EB formation protocol; however, it was not affected in monolayer culture system. Overexpression of meiotic markers that has been shown in this study, could suggest promoting ES cell differentiation to post-migratory germ cells.
Key words: *Germ cells, Embryonic stem cells, Bone morphogenetic protein 4, Embryoid body.*

P-114
The study of levofloxacin effects on ovary tissue and follicle count in rat

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Introduction: Today one of the societies difficulties is ovary tissue damage and thereinafter infertility symptom. Levofloxacin is one of the antibiotics whit usages of the wide therapeutic that often use for genitourinary and lower respiratory systems infections. Target of this study is determination of Histopathology and Cytotoxic of Levofloxacin effects on ovary tissue of rat.
Materials and Methods: In this study we used, female Wistar rats weighting 250±20 g and 8 weeks old that

grouped in 4 groups. Along the study the control group was without treatment and the other groups fed with levofloxacin in 200, 500 and 750 ml doses daily. After 22 days, rats became unconscious with ether and the logged ovary`s tissues was referred to pathology laboratory for take slides and histopathology study.
Results: The result showed that Levofloxacin cause increase primordial follicles, decrease primary follicles, decrease secondary follicles and oocytes destructions. With increasing dose of this drug, observed more destructive effects in ovary tissue.
Conclusion: According to changes which made in this study, it is possible to the cytotoxic effects of levofloxacin in ovary tissue. We do attention to this drug effects which decrease the follicles and decrease the amount of fertility in humans.
Key words: *Ovary, Levofloxacin, Rat.*

P-115
Effects of retinoic acid and ovarian somatic cell co-culturing on oocyte differentiation from oocyte-like cells

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Introduction: Retinoic acid not only induces meiotic entry in germ cells but also can stimulate proliferation and prevent apoptosis of migratory and postmigratory germ cells. Moreover, growth and development of primary oocytes is dependent on cellular interactions with ovarian somatic cells and production of factors along with changes in oocyte gene expression. This study was designed to determine whether ovarian somatic cell co-culturing and RA can affect differentiation of embryonic stem (ES) cells to oocyte.
Materials and Methods: Male mouse ES cells were cultured asembryoid body (EB) for 5 days. Then, each group was co-cultured with ovarian somatic cells in presence or absence of retinoic acid (+RA or -RA) for additional 14 days and cells were assessed for expression of Stra8, SCP3 and Oct4 by quantitative real-time RT-PCR and confirmed for expression of Oct4 by immunocytochemistry.
Results: Round cells, ~15-25 µm, appeard after 3 days of culture on ovarian somatic cells which some of them reached up to 80 µm in size gradually. The gene expression levels of Stra8, SCP3 significantly elevated in the EBs and monolayer in +RA condition compared to -RA condition, in contrast to Oct4 that significantly decreased.
Conclusion: This study showed that addition of +RA beside to ovarian somatic cells improved the rate of in vitro differentiation, therefore our approach provides a new strategy for the establishment of oocyte from ES cells.
Key words: *Embryonic stem cells, Retinoic acid, Ovarian somatic cell, Oocyte.*

P-116
The role of Selenium in optimizing different parameters of human sperm after cryopservation process

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Introduction: Semen cryopreservation is an important procedure which is used frequently before assisted reproductive techniques (ART). Sperm cryopreservation and thawing is associated with increased ROS production and decreased antioxidant level. In this research we evaluated the effects of the Selenium, as an antioxidant, on some human sperm parameters after cryopreservation process.
Materials and Methods: Sperm samples were obtained from 43 men referring to the Fertility and Infertility Center of Shariati Hospital (Tehran, Iran). After the sperm parameters were determined according to World Health Organization (WHO) guidelines, samples were divided into two parts: one without Se, as control and the other one with 5ug/ml Se. Control and treated specimens were then cryopreserved by the liquid nitrogen vapor method. After two weeks interval, the samples were thawed at room temperature, and then sperms concentration, motility, viability, morphology and DNA damage were evaluated by different methods.
Results: Our results showedthatSe significantly increased sperms concentration, motility, viability and decreased the rate of sperms DNA damage in treated samples, compared to control ones ($p<0.05$).
Conclusion: This study suggests that adding Se to sperm sample as an antioxidant, before cryopreservation, protects sperms from mortal effect of freezing procedures, therefore Se can be used in infertility clinics.
Key words: *Sperm, Cryopreservation, Selenium.*

P-117
Effect of *Urtica dioica* extract on stereological structure of ductus epididymis in streptozotocin induced diabetic rats

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Introduction: Diabetes mellitus is a common metabolic disorder that can be associated with many complications in epididymis. Epididymis plays an essential role in the motility acquisition and fertilizing capacity of spermatozoa and its significant impairment can be a

factor in male infertility. This study was carried out to investigate the effects of ethanolic extract of *U. dioica* on structure of epididymis in diabetic rats by stereological techniques.
Materials and Methods: Fifteen adult male wistar rats were divided into control, diabetic and treatment groups. Hyperglycemia was induced by 50 mg/kg Streptozotocin (STZ). One week after STZ injection, treatment group received 30 mg/kg/day *U. dioica* extract by oral gavage for 30 consecutive days. Finally animals were euthanized and whole of right epididymis was removed, weighted and fixed in 10% neutral buffered formalin. Using isotropic uniform random samples and standard tissue processing, the height and volume of epithelium, lumen diameter and tunica muscularis thickness were estimated by unbiased stereological techniques in different region of epididymis.
Results: This study showed that diabetes could lead to structural changes in all regions of epididymis. Stereological results indicated that height and volume of epithelium and tunica muscularis thickness were significantly reduced in diabetic rats and *U. dioica* could inhibit these changes strongly especially in caudal regions ($p<0.01$). It was also revealed that lumen diameter was significantly increased in diabetic rats but there is no significant differences between treated and control group.
Conclusion: Administration of ethanolic extract of *U. dioica* can prevent diabetic undesirable side effects on epididymis.
Key words: *Stereology, Epididymis, Diabetes, Urtica dioica.*

P-118
The effect of *Vitex agnus* castus on structure and volume of corpus luteum in mice

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Introduction: *Vitex agnus-castus L.* (VAC) is a phytosterogen and has been used traditionally in the treatment of menstrual disorders, premenstrual syndrome and corpus luteum insufficiency but there is no scientific evidence about its effect on corpus luteum. So, this study was aimed to evaluate the effects of VAC essential oil on structure and volume of corpus luteum in mice by unbiased stereological technique.
Materials and Methods: In this study 20 young adult female BALB/c mice were randomly divided into four groups: group 1 as control group and group 2, 3 and 4 which received 75, 150 and 300 mg/kg VAC essential oil via gastric gavage for seven consecutive days, respectively. At the eighth day, animals were euthanized and the ovaries were quickly removed, weighted and fixed in 10% buffered formalin. The samples were processed by routine and standard paraffin embedding and using the isotropic uniform random samples were sectioned. Eight to twelve sections from each ovary were sampled through systematic random sampling and were stained by H&E. The volume and volume density of corpus luteum were estimated by Cavalieri's method.
Results: The results showed that volume and volume density of corpus luteum were increased in all treated animals compared to control group. This dose-dependent increasing was not significant in group 2 but there is a significant differences between group 3 and 4 compared to control ($p<0.05$).
Conclusion: Our findings indicated that VAC essential oil as a phytosterogen can affect structure and size of corpus luteum in a dose dependent manner.
Key words: *Ovary, Stereology, Vitex agnus, Corpus luteum, Phytosterogen.*

P-119
Unbiased stereological estimation of number and volume of atretic follicles in low dose of *Vitex agnus* castus treated mice

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Introduction: *Vitex agnus castus* (VAC) is a phytostrogen and has wide biological activities. It is commonly used in the treatment of menstrual disorders, premenstrual symptoms and spasmodic dysmenorrheal. The aim of this study was to investigate the effects of low dose of VAC essential oil on number and volume of atretic follicles in mice by unbiased stereological technique.
Materials and Methods: In this study 10 young adult female BALB/c mice were randomly divided into two groups: group 1 as control group and group 2 which received 75 mg/kg VAC essential oil via gastric gavage for seven consecutive days. At the eighth day, animals were euthanized and the ovaries were quickly removed, weighted and fixed in 10% buffered formalin. The samples were processed by routine and standard paraffin embedding and using the isotropic uniform random samples were sectioned. Eight to twelve sections from each ovary were sampled through systematic random sampling and were stained by H&E. The volume of atretic follicles was estimated by Cavalieri's method and its numbers were estimated using a physical disector.
Results: The results showed that VAC essential oil could affect structure of ovary and number of follicles. Stereological results revealed that volume and total number of atretic follicles were significantly increased in ovary of treated mice compared to control ($p<0.05$).
Conclusion: Based our results, it can be concluded that administration of VAC essential oil can affected structure and maturation of ovarian follicles even in low dose. Therefore, it should be used with caution in traditional medicine.
Key words: *Ovary, Stereology, Vitex agnus, Atretic follicles.*

P-120

The decreased level of antioxidant and increased oxidative stress in Iranian women with polycystic ovary syndrome (PCOS)

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Introduction: Polycystic ovary syndrome (PCOS) is a common disorder of infertility which affects more than 100 million women. It is characterized by chronic anovulation, hyperandrogenism and obesity. PCOS is also associated with oxidative stress changes. Here, we aimed to investigate the level of antioxidants and oxidative stress in Iranian women with PCOS for the first time.
Materials and Methods: In this study 30 women with PCOS and 30 healthy women were included. C-reactive protein (CRP), insulin, AOPP and level of total antioxidants status (TAOS) were measured from blood samples.
Results: The levels of insulin, CRP, AOPP and protein carbonyl were significantly increased in women with PCOS compared with healthy women but there was a decrease in level of TAOS in PCOS women.
Conclusion: These changes show that oxidative stress contributes to PCOS and the decrease of antioxidants leads to increase of oxidation products contributing to PCOS.
Key words: *Polycystic, Ovary, Antioxidant, Oxidative stress*

P-121

Evaluation of the protective effect of Nigella sativa oil on testis tissue after treatment with Bisphenol A

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Introduction: Bisphenol A (BPA) is used as a monomer in polycarbonate plastics and is toxic on male reproductive system. The aim of this study was to investigate the protective effect of *Nigella sativa* oil (NSO) on testicular tissue against toxicity induced with Bisphenol A.
Materialsand Methods: Adult male NMRI mice with mean body weight 32±3 g were randomly divided into 4 groups (n=6): Control, BPA (200 mg/kg/day), NSO (5 ml/kg/day) and BPA+NSO. Oral treatment was performed till 34 days. At the end of treatments, body and left testis weight were recorded and used for histopathological and morphometric studies. Lipid peroxidation index, malondialdehyde (MDA) was measured by spectrophotometric method. Data were analyzed with One Way ANOVA and $p<0.05$ was considered significant.
Results: In mice treated with BPA significantly decreased seminiferous tubules diameters ($p<0.01$), germinal epithelium thickness ($p<0.001$) and increased the diameter of seminiferous tubules lumen ($p<0.05$) compared to the control group. It also made a significant increase in MDA levels ($p<0.001$). Similarly, histological results revealed degeneration of germinal epithelium and atrophy of seminiferous tubules in BPA group. This destructive changes was noticeably compensated in BPA+ NSO group ($p<0.05$). Bisphenol A had no effect on the body and testis weight and diameter of spermatogonial nucleus.
Conclusion: The results indicated that *Nigella sativa* oil could be partially ameliorated Bisphenol A-induced toxicity.
Key words: *Bisphenol A, Testis, Nigella sativa oil, Mice.*

P-122

Histopathological study of the effect of green tea extract on testicular damage induced by sodium arsenite in NMRI mice

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Introduction: Sodium arsenite is an environmental pollutant with ability to generate free radicals and tissue damage. The aim of this study was to investigate the effect of green tea extract (GTE), as an antioxidant, on structure and tissue of testis in mice treated with sodium arsenite.
Materialsand Methods: Adult male NMRI mice with mean body weight 30±5g were randomly divided into 4 groups (n=6): control, sodium arsenite (5mg/kg/day), GTE (100mg/kg/day) and sodium arsenite+GTE. Oral treatments were performed till 34 days. After the treatment, the left testis was removed, weighed and was used for histopathological observation. The serum malondialdehyde (MDA) levels were used as an indirect index of lipid peroxidation and were determined by spectrophotometric method. Data were analyzed with One Way ANOVA and means difference was considered significant at ($p<0.05$).
Results: Testes of sodium arsenite-treated mice showed vacuolation and atrophy of seminiferous tubules. Inthis group, a significant decrease in mean diameter of seminiferous tubules, germinal epithelium thickness ($p<0.001$) and a significant increase inthe mean diameter of seminiferous tubules lumen and MDA levels ($p<0.001$) were found compared to the control group. In Sodium arsenite+ GTE group, GTE could significantly compensate the harmful effects of Sodium arsenite on the above parameters compared to the sodium arsenite group ($p<0.001$). Sodium arsenite had no effect on the body and testis weight and diameter of spermatogonial nucleus ($p>0.05$).

Conclusion: The result indicates that green tea extract may be useful in reducing the toxic effects induced by sodium arsenite in mice testis.
Key words: *Sodium arsenite, Testis, Green tea, Mice*

P-123
Induction of apoptosis by synergistic inhibition of noscapine and taxol on PC-3 human prostate cancer cell line

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Introduction: Prostate cancer is a leading cause of cancer related death in most developed countries. Combination treatment with multiple therapeutic agents has been used to enhance the efficacy of treatment in controlling cancer cells. In the present study, the apoptotic effects of taxol (chemotherapy agent) and noscapine opium antitussive) on human prostate cancer cell line (PC-3) has been investigated.
Materials and Methods: PC-3 cells were treated with taxol (50 nM), noscopine (50 µM) and their combination for 48 hours. Untreated cells were used as control. Treatments-induced apoptosis was assessed by AO/EB (acridine orange/ ethidium bromide) double staining assay. The mRNA expression of pro-apototic *Bax* and anti-apoptotic *Bcl-2* was determined by RelativeRT-PCR (reverse transcription polymerase chain reaction). Data was analyzed by one way ANOVA.
Results: PC-3 cells undergoing apoptosis following treatment with taxol (50 nM), noscapine (50 µM) and their combination compared to untreated cells after 48 hours. The combination group induced highest increase in cell apoptotic. Noscapine or taxol and their combination treatments decreased mRNA expression of anti-apoptotic molecule *Bcl-2* and increased mRNA expression of pro-apoptotic molecule *Bax* and *Bax to Bcl-2* ratio.
Conclusion: The present in vitro study indicates that noscapine and taxol combination treatment is effective against PC-3 cells by induction of apoptosis. Therefore, it may provide a novel therapeutic strategy to improve the treatment efficiency of prostate cancer therapy.
Key words: *Prostate cancer, Noscapine, Taxol, Cell line.*

P-124
Anti-tumor effect of Thymoquinone combined with Tamoxifen on human breast cancer MCF-7 cells

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Introduction: This study was aimed to evaluate the effect of combining Tamoxifen with Thymoquinone (The main active component of black seeds) on MCF-7 (noninvasive human breast cancer cell line, estrogen receptor positive).
Materials and Methods: The human breast cancer MCF-7 cellswere treated separately with Tamoxifen (2µM) in combination with different doses of Thymoquinone (50, 75, 100, 150 µM). After 48h treatment, Cell viability were investigated by MTT assay and trypan blue staining.The Data were analyzed by one way analysis of the variance (ANOVA) and $p<0.05$ was considered significant.
Results: In 48h treatment, the data of MTT assay and trypan blue staining were showed that Tamoxifen and Thymoquinone alone or in combination significantly reduced cell viability of MCF-7 in comparison with control ($p<0.05$).
Conclusion: The combination effect of Thymoquinone and Tamoxifen on human breast cancer MCF-7 cells was more effective in cell viability reduction than single drug exposure.
Key words: *Apoptosis, Breast cancer, Tamoxifen, Thymoquinone.*

P-125
Ameliorative effects of Curcumin on the spermatogenic cell populations in mice following exposure to sodium arsenite: A stereological study

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Introduction: Sodium arsenite is a well know toxicant which suppresses spermatogenesis. The aim was to investigate the effect of curcumin, as a powerful antioxidant, on the spermatogenic cell populations in mice exposed to sodium arsenite.
Materials and Methods: Adult male NMRI mice were divided into 4 groups (n=6): control, curcumin (15 mg/kg/day), sodium arsenite (5 mg/kg/day), sodium arsenite + curcumin. After oral treatment for 34 days, the right testis was removed, fixed, sectioned and stained using heiden hain azan method. The testis volume and weight, number of spermatogonia, spermatocytes, and spermatid and sertoli cells were stereologically estimated. Data were analyzed using one-way ANOVA and Tuckey's test, the means difference was considered significant at $p<0.05$.
Results: The number of spermatocytes and spermatids significantly reduced in mice treated with sodium arsenite compared to the control ($p<0.001$). The mentioned parameters increased significantly in the sodium arsenite+curcumin group to the control level. The testis weight and volume, the total number of spermatogonia and sertoli cells did not show any

significant difference in the sodium arsenite group in comparison to the control ones ($p>0.05$).
Conclusion: Our data indicates that curcumin may ameliorate the adverse effects of sodium arsenite on the spermatogenic cell population, therefore addition of curcumin to the daily diet of workers of industrial environments, who are exposed to arsenic, could prevent its adverse effects. Further studies are still required to confirm the above.
***Key words**: Sodium arsenite, Curcumin, Spermatogenic Cell Populations, Mice.*

P-126
Myco-estrogen zearalenone reduced testicular endocrine activity and enhanced germinal cells apoptosis in rats

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Introduction: Zearalenone (ZEA) is known as a nonsteroidal oestrogenic mycotoxin produced by different species of *Fusarium* fungi that grow on cereals. ZEA exerts its detrimental impact partly via inducing conformational alterations in physiologic interactions of estrogen receptors. Therefore, present study was designed in order to evaluate the effect of different doses of ZEA on testicular endocrine status as well as spermatogenesis.
Materials and Methods: Thirty mature male rats were divided into four groups including; control-sham (2mL, normal slain, ip), low dose ZEA-treated (1mg/kg, ip), medium dose ZEA-treated (2mg/kg, ip), high dose ZEA-treated (4mg/kg, ip). All animals received chemicals for 21 continuous days. The serum levels of testosterone, inhibin-B as well as Leydig cells intracytoplasmic steroid foci were analyzed by using radioimmunoassay and epifluorescent microscopy, respectively. The TUNEL staining was used in order to evaluate the germinal cells apoptosis.
Results: ZEA-received animals exhibited significant ($p<0.05$) decrease in serum levels of testosterone and inhibin-B in a dose dependent manner. Chronic administration of ZEA remarkably ($p<0.05$) reduced Leydig cells steroidogenic content, which was more pronounced in high dose ZEA-treated group. ZEA resulted in severe germinal cells apoptosis, dose dependently. No histopathological and biochemical alterations were revealed in control-sham group.
Conclusion: Our data suggest that ZEA exerts its pathological impact by reducing the testicular endocrine status both at Leydig and Sertoli cells level, which in turn results in sever apoptosis in germinal cells.
***Key words:** Zearalenone, Testosterone, inhibin-B, Apoptosis, Steroidogenesis.*

P-127
The protective role of Nigella Sativa oil on mice testicular tissue and spermatogenic cell populations following exposure to para-nonylphenol: A stereological analysis

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Introduction: Nonylphenol as an environmental contaminant has adverse effects on male reproductive system. The aim was investigate the possible protective effect of *Nigella sativa* oil (NSO) on mice testicular tissue damage fallowing exposure to para-Nonylphenol (p-NP).
Materials and Methods: Adult male NMRI mice (30±5 g) were divided into 4 groups (n=6), control, NSO (5mg/kg/day), p-NP (250mg/kg/day) and p-NP + NSO, and treated orally for 34 days. Finally, mice were sacrificed, their right testis were taken out, fixed, sectioned, processed and stained using heiden hain' azan method. Total volume of testis and the total number of spermatogonia, spermatocyte, long and round spermatid and Sertoli cells were estimated stereologically. Lipid peroxidation index, malondialdehyde (MDA) level, was also measured.Data were statistically analyzed using one way ANOVA and means difference was considered significant at $p<0.05$.
Results: There was a significant decrease intotal number of long and round spermatids, spermatocytes, spermatogonia and sertoli cells as well as a significant increase in MDA level in p-NP group when compared to control ones ($p<0.001$). The mentioned parameters were normalized to the control level in p-NP + NSO group. A significant decrease of MDA level was also found in NSO group in comparing with control group ($p<0.001$).
Conclusion: Our results rewealed that NSO could reduce the oxidative stress toxicity induced by Para-Nonylphenol in the testicular tissue and spermatogenic cells, suggesting that consumption of NSO, as an antioxidant, can prevent the side effects of p-NP exposure in industrial cities.
***Key words:** Para-nonylphenol, Nigella sativa oil, Testis, Stereology.*

P-128
Evaluation of the protective effect of Nigella sativa oil on testicular tissue in mice following exposure to para-nonylphenol

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Introduction: Para-nonylphenol (p-NP) as an environmental pollutant exerts it´s effects through endocrine disruption and inducing of oxidative stress in the male reproductive system. The aim was to investigate the protective effect of Nigella sativa oil (NSO) on testicular tissue in mice exposed to p-NP.
Materials and Methods: Adult male NMRI mice with mean body weight 32±3g were divided into 4groups (n=6): control, NSO (5ml/kg/day), p-NP (250mg/kg/day) and p-NP+NSO. After oral treatment for 34 days, body and left testis weight were recorded and testis used for histopathological observations. The serum malondialdehyde (MDA) levels as a marker of lipid peroxidation was measured by spectrophotometry. Data were analyzed with One Way ANOVA and $p<0.05$ was considered significant.
Results: In the testes of mice treated with p-NP, germinal epithelium was vacuolated and atrophy of the seminiferous tubules was observed. On this group a significant decrease in diameter of seminiferous tubules and germinal epithelium thickness and significant increase in the diameter of the seminiferous tubules lumen and MDA levels ($p<0.001$) was found compared to the other groups. Above parameters was significantly compensated in p-NP+NSO group. Body and testis weight and diameter of the nucleus of spermatogonia showed no significant change between groups ($p>0.05$).
Conclusion: Our data indicates thatNSO as an antioxidant could compensate the pathological changes induced by p-NP on testicular tissuein adult mice. Therefore, addition of NSO to the daily diet can be a good strategy to reduce free radicals and improve the reproductive system of men that exposed to environmental pollutants.
Key words: *Para-nonylphenol, Testis, Nigella sativa oil, Mice.*

P-129
Daidzein and Trifoliumpratense hydroalcoholic extract negatively affected the testis structure and functions

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Introduction: Red clover (*Trifoliumpratense*) belongs to the plant family Leguminosae, which its estrogenic effects long before have been reported. Besides its beneficial effects, there are increasing evidence indicating phytoestrogens related detrimental effects in female reproductive system including breeding problems of sheep grazing on red clover pastures and fertility failure in cattle fed with red clover silage. During the last decade, exclusive debates and controversial studies were conducted to show the potential detrimental effects of phytoestrogens on male reproductive system. We in the present study aimed to show any potential effects of daidzein as a known phytoestrogen and hydroalcoholic extract of red clover flowers on the testis structure and the serum level of testosterone in adult male rats.
Materials and Methods: The animals in five groups were exposed against saline (control group), daidzein (10 mg/kg, orally) and/or various dose levels of red clover extract (20, 40 and 80 mg/kg, b.w. orally) for 28 days.
Results: Our results showed that 28 days exposure to 10 mg standard daidzein and/or high dose of red clover flowers extract resulted in 6- and 5-fold increase of germinal epithelium dissociation, respectively, when compared to the control group. At the same time germinal epithelium height and seminpherouse tubules diameter were reduced in test groups significantly ($p<0.05$) in a dose-dependent fashion. Determination of serum level of testosterone confirmed the fact that the lower leydig cells number, the lower testosterone concentration.
Conclusion: Our data suggest that phytoestrogens and red clover extract with known phytoestrogens do have negative effects on male reproductive system including structural and functional disorders.
Key words: *Daidzein, Phytoestrogen, Reproductive system, Testis, Mice.*

P-130
Pulegone-induced damages in mice ovarian tissue correlates with CYP19 gene expression

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Introduction: Pulegone is a naturally occurring organic compound in variety of plants that is widely used for flavoring foods, drinks, and dental products. However, there are several reports indicating its cytotoxic effect on various cell types. The CYP19 is an enzyme catalysing the conversion of androgens into oestrogens. Therefore, present study was conducted in order to uncover the effect of ±pulegune on CYP19 mRNA expression and its impact on follicular growth in mice model.
Materials and Methods: Twenty four mature female mice were divided into control-sham (received 0.5 mL normal saline, orally) and test groups including; 25mg/kg, 50mg/kg and 100mg/kg pulegone-treated groups. The mRNA level of CYP19 was assessed by semiquantitative-PCR. Total follicle and atretic follicles distribution per ovary and serum level of estradiol were evaluated.
Results: Pulegone reduced CYP19 expression in a dose dependent manner. Pulegone-received animals exhibited significantly ($p<0.05$) lower follicle distribution and remarkably ($p<0.05$) higher number of atretic follicles versus control-sham groups. Depending on dose, the serum level of estradiol decreased in pulegone-treated animals.

Conclusion: In conclusion, our data showed that pulegone exerts its pathological impact by decreasing oestrogen synthesis via down-regulating CYP19 expression. Ultimately, pathologically altered oestrogen synthesis provokes follicular atresia.
Key words: *Pulegone, Follicular Atresia, CYP19, Estradiol.*

P-131
Effects of doxorubicin on reproductive system in animal model

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Introduction: Doxorubicin is a chemotherapeutic agent that used for the treatment some leukemias and Hodgkin's lymphoma, bladder, stomach, lung, and others. The aim of this study was to investigate the effect of cytotoxic events in the reproductive system caused by a single dose of doxorubicin.
Materials and Methods: In this experimental study 30 male wistar rats were selected and randomly divided into two groups. Experiment groups were received 2.5 mg/kg and control groups just received normal saline for 60 days.
Results: Results showed that doxorubicine had destructive effects on testis tissue and spermatogenesis in test group compared to control group within 60 days after administration, significant decrease in the weight of reproductive organs as compared to control animals. The sperm motility and count in cauda epidydimides, testicular ducts were significantly decreased. Spermatogenesis was decrease at primary and secondary spermatocyte stages and then diameter of seminiferous tubules, thickness of interstitial tissue, and thickness of testicular capsule, were studied. Diameter of seminiferous tubules and thickness of epithelium of seminiferous tubules significantly decreased, but thickness of interstitial tissue and thickness of testicular significant increased compared to controls ($p<0.05$).
Conclusion: Generally doxorubicine administration causes decline in spermatogenesis and significant changes in diameter of seminiferous tubules, thickness of interstitial tissue, and thickness of testicular capsule in rat testis tissue. These changes may via the reducing of cell divide and toxic effects of doxorubicine
Key words: *Chemotherapeutic agent, Doxorubicin, Reproductive system, Animal model.*

P-132
The effects of 70% ethanolic extract of celery (Apium graveolens) on serum testosterone and gonadotropin levels in male rats

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Introduction: The importance of fertility and procreation as a factor for survival of the human race is not hidden from anyone**.** Celery has a plenty of nutritional and pharmaceutical applications**.** The presence of phytoestrogenic compounds has been reported in this plant. These compounds may affect the pituitary-gonad axis. The aim of the present study was to evaluate the effect of ethanolic extract of celery on serum testosterone and gonadotropin levels in male rats.
Materials and Methods: In this experimental study, 32 male Wistar rats were divided into four groups of eight rats. The control group didn't receive any treatment. The placebo group received normal saline and the case groups received 200 and 300mg/kg/B.W of ethanolic extract of celery for 20consecutive days by oral administration. One day after the last gavage, animals anaesthetized and blood sampling from their heart was carried out. Then serum levels of testosterone, LH and FSH were measured by using ELISA method.
Results: The level of LH in the case group receiving 200mg/kg of celery extract showed a significant decrease compared with the control and placebo groups ($p<0.05$). The level of FSH and testosterone in case groups didn't show any significant difference in comparison with the control group ($p>0.05$).
Conclusion: The results indicated that administration 200 mg/kg doses of celery extract causes a significant reduction in serum LH Concentration, but it has no effect on ganadotropin and testosterone hormone in highest dose used in this study that was probably due to presence of flavonoid and antioxidant proporties of celery
Key words: *Celery extract, Testosterone, Gonadotropin, Male rat.*

P-133
Characterization of mesenchymal stem cells from human umbilical cord Wharton's jelly: potential differentiation of germ-like cells in vitro

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Introduction: For humans, cytotoxic drug therapy to eradicate cancer cells can damage spermatogenesis and lead to infertility. Theoretically, isolation and differentiation of MSC to germ-like cells could provide

a source of endogenous germ cells for possible transplantation for patients undergoing chemotherapy in future.

Materials and Methods: Pluripotent mesenchymal stem cell (MSC) lines were established from umbilical cord Wharton's jelly. The cells present the high expansion potential of MSC, a typical fibroblast-like morphology and proliferate up to 15 passages without displaying clear changes in morphology. PCR analysis was performed on MSCs at passages 2-5 to further characterize this cell population. The results showed that these cells strongly expressed markers for mesenchymal progenitors such as CD 105 and CD44 and were negative for cell surface markers associated with hematopoietic cells, CD34. MSC formed tadpole-like germ cells after induction with different dosages of retinoic acid and conditioned medium.

Results: The present study showed that, mesenchymasl stem cells are fully functional after proliferation and culturing process do not damages the surface properties of these cells. The ability to isolate and culture of MSCs *in vitro* and to apply transplantation technique may facilitate development of therapeutic strategies for the treatment of infertility in patients who may suffer destruction of germ cells as a result of irradiation or chemotherapy for cancer.

Conclusion: Our results may provide a new route for reproductive therapy and a novel in vitro model to investigate the molecular mechanisms that regulate the development of the mammalian germ lineage.

Key words: *Mesenchymal stem cells, Germ cells.*

P-134

Hawthorn berries ethanolic extract lowered polycystic ovarian syndrome-elevated testosterone level and improved the altered ovaries structure

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Introduction: Polycystic ovarian syndrome (PCOS) is the most common endocrinopathy seen in women. Hawthorn extract is traditionally used for treating cardiovascular diseases and plasma cholesterol lowering. Various constituents including flavonoids with biological activities including free radical scavenging, anti-lipoperoxidation and anti-inflammatory have been isolated from hawthorn. Due to crucial role of inflammation and high cholesterol in the etiology of PCOS, we aimed to study the hawthorn's berries hydroalcoholic extract potential effects on estradiol valerate-induced PCOS in rats.

Materials and Methods: PCOS was induced in 3 groups of rats (n=6) by intramuscular injection of estradiol valerate (EV, 4 mg/rat in 0.2 ml sesame oil). The control group only received the vehicle (0.2 ml sesame oil). A 60-day interval was chosen to let the cysts become established. Following the interval time, effects of hawthorn berries extract (HBE, 100 mg/kg, orally) and oral contraceptive pills (OCP, containing 60 mg/kg estradiol, orally) on serum level of testosterone and the architecture of ovary via histological examinations were studied for 4 weeks.

Results: Hormonal assay showed that EV injection resulted in 4 fold increase in serum level of testosterone, which both HBE and OCP significantly ($p<0.05$) lowered the PCOS-increased level of testosterone. 28 days HBE and OCP administration remarkably lowered the PCOS-induced cystic and atrectic follicles and increased the normal and functional follicles.

Conclusion: Our data suggest that HBE could be a good candidate for further studies about its pure therapeutic agent (s), which might alone or in combination with other remedies be used to prevent or treat the PCOS.

Key words: *Hawthorn, Polycystic ovary, Testosterone, Histological examinations.*

P-135

Poly cystic ovarian syndrome induces ovarian oxidative stress

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Introduction: Polycystic ovarian syndrome as a prevalent disease in women should be considered. This disease is due to an increase in the number of cysts in the ovaries and balance of oxidant and antioxidant can be affected by that. Therefore, this study is an attempt to investigate oxidative stress level in cystic ovarian tissue of mouse model.

Methods and Methods: In this study, 10 NMRI female mice were divided into 2 groups: control and experimental (PCOS that was induced using single injection of estradiol valerate; 40 mg/kg). During 8 weeks after PCOS induction, body weight was measured weekly. Mice in each group were scarified and their ovarian tissue was collected. To confirm the model, histopathological study was down. Oxidative stress was measured in ovarian tissue by using DCFH-DA and flowcytometric assay. Data was analyzed by T-test.

Results: The results showed that there is a significant increasing level ($p\leq0.05$) of gaining weight in experimental group compared to control group. Ovarian tissue histopathological study was demonstrated PCO model after passing two months of induction. Flowcytometric data reveled that oxidative stress increased in ovarian tissue of PCO group.

Conclusion: The results of this study express that PCO can lead to increase oxidative stress in ovarian tissue. This increase can lead to a feedback and make more cysts in ovarian tissue of patient.

Key words: *Polycystic ovarian syndrome, Oxidative stress, Estradiol valerate, ROS, Cyst.*

P-136
The effect of Glutathione on the stereological parameters of hypothalamus in Cyclophosphamide- treated mice

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Introduction: New anti-cancer drugs have increased survival and fertility in young patients. One of the most important side effects of these drugs (such as cyclophosphamide) is on gonadal system and hypothalamus. These changes will cause premature menopause and infertility. Cyclophosphamide therapy for autoimmune diseases and cancers causes an unacceptably high incidence of negative changes in hypothalamus. One of possible chemical for reducing these side effects is thiol (such as glutathione). This study was performed to evaluate the capability of glutathione for reducing the cyclosphosphamide effects on the hypothalamus using stereological methods.
Materials and Methods: Sixty female mice were randomly assigned into five groups: All groups including control group had free access to water and food. The sham and gluthathion (Glu) groups received normal saline and gluthathione (10mmol/day), respectively daily by gavage for 16 days while cyclophosphamide group (Cyc) received only cyclophosphamide (50mg/kg;i.p) as a single dose and fifth (Cyc+Glu) group received both gluthathione and cyclophosphamide. The number of neuron and the volume of hypothalamus were evealuated using stereological methods.
Results: The number of neuron and the volume of hypothalamus significantly decreased in cyclophosphamide group in comparison with control, gluthathione and Cyc+Glu groups ($p<0.05$).
Conclusion: The present study showed that Thiol improved structural changes of hypothalamic caused by cyclophosphamide in mice, suggesting that using Thiol accompanying chemotherapy drugs may have protection effects on fertility.
Key words: *Gluthathion, Cyclophosphamide, Hypothalamus, Fertility.*

P-137
Effects of supraphysiological dose of Nandrolone Decanoate on the testis and testosterone concentration in mature and immature male rats: A time course study

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Introduction: Few data are available on immature users because most studies on anabolic-androgenic steroids (AAS) abuse have been done in adults. The long-term effects of AAS abuse on the immature are even more uncommon. Accordingly, this study was conducted the effect of ND on the testis and testosterone concentration in male rats.
Materials and Methods: Mature and immature rats were divided into 8 groups. GroupA: control group. Group B: vehicle group received DMSO solution for 35 and 70 days. Group C: short-term mature received 10 mg/kg/day (ND) for 35 days. GroupD: long-term mature received 10 mg/kg/day (ND) for 70days. Immature rats were divided into 4 groups the same as mature rats groups. 48 hours after the last injection, rats were sacrificed and body weight, testis and accessory sex organs morphometery were assessed.
Results: There was an increase in the body weight only in first days. Ratio length to width or size of testis was decreased in long-term immature rats. Diameter of Seminiferous tubules changed in Long- term immature among other rats. Level of testosterone was reduced in all rats exception short-term mature rats .Spermatogonia type A, B, primary spermatocytes and spermatids were decreased in long-term mature and in short-term and long-term immature rats.Moreover, sperm was decreased in all rats, and cellular disorders were observed, as well. The number of leydig and sertoli cells was reduced in long-term immature rats.
Conclusion: This study showed that suprophysiological dose of ND affects spermatogenesis, testis structure, testosterone and spermatogenic cells were decreased. Leydig and Sertoli cells were reduced.
Key words: *Nandrolone Decanoate, Testosterone, Testis, Rat.*

P-138
Selection of the best sperm processing method in leukocytospermia

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Introduction: Leukocytospermia was seen in 10% of infertile men. Sperm DNA fragmentation has been proposed as a cause of male infertility. The processing of leukocytospermic semen leads to increase sperm DNA fragmentation and decrease of sperm quality and its fertilizing ability in infertile men. The aim of this study was the selection of the best sperm processing method for leukocytospermic semen to decrease DNA fragmentation.
Materials and Methods: Semen samples with leukocytospermia were collected from 50 infertile men who referred to the Avicenna Infertility Center affiliated

to Avicenna Research Institute. The samples have divided into 5 fractions for processing through the following methods; simple washing, Density gradient centrifugation (DGC), Glass wool, Swim up and neat semen. Sperm DNA fragmentation of prepared sperm was evaluated through SCD method by SDFA kit. Semen analysis was carried out according to WHO criteria. The results were evaluated by performing statistical analysis with statistical package of SPSS v21.
Results: The results were showed that percentage of sperm with DNA fragmentation selected by Glass wool procedure (10.81±1.21) were significantly ($p \leq 0.05$) lower than other methods in leukocytospermia samples in comparison with control group (23.98±1.54).
Conclusion: According to this study the most appropriate method for separating the best sperm from leukocytospermic samples with minimum Sperm DNA fragmentation is Glass wool procedure.
Key words: *Leukocytospermia, Sperm, DNA fragmentation, SCD test.*

P-139
Effect of vitamin E with or without folic acid on oxidative stress in uterus of induced diabetic rats with streptozotocine

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Introduction: Studies show that infertility is on the rise and some diseases such as diabetes mellitus play a key role in this. Chronic hyperglycemia and metabolic disorders caused by diabetes mellitus increases the production of free radicals in the body and will ultimately lead to oxidative stress in tissues. The amount of tissue oxidative damage in diabetic patients has a direct effect on fertility trends.This study is designed to investigate the antioxidant effect on oxidative stress rate in uterus of diabetic rat.
Materials and Methods: Diabetic female rats with streptozotocin were divided into control, diabetic groups & diabetic Treated groups. Treated groups received folic acid and vitamin E Via gavage for 4 weeks. Antioxidant markers: Level of enzyme activities GR, GPX and CAT and Protein levels of MDA, GSH were measured in uterine tissue**.**
Results: The results of this study showed that the activity of enzyme GPX, at the diabetic groups were decreased compared with control group and its activity at treated groups was increased compared with diabetic groups.In addition, levels of MDA protein at the diabetic group had increased than controls group, whereas its level in the diabetic group was reduced compared to treated groups. The results were analyzed statistically and the difference between them was significant.
Conclusion: Vitamin E by restoring the activity of antioxidant markers is responsible an important protective role against oxidative damage caused by diabetes. In this way, the use of antioxidants can have a positive effect on diabetes-related infertility.
Key words: *Infertility, Diabetes, Oxidative stress, Antioxidant.*

P-140
Comparison the effect of Levonorgestrel IUD (Mirena) with oral medroxyprogesterone acetate and Letrozole on abnormal uterine bleeding with simple endometrial hyperplasia

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Introduction: The aim of this study was to compare the effect of levonorgestrel IUD with oral medroxy progesterone acetate and Letrozole on abnormal uterine bleeding with simple endometrial hyperplasia.
Materials and Methods: Forty five patients referred to Shahid Sadoughi gynecology clinics from 2009 until 2011 who suffered fromabnormal vaginal bleeding or endometrial thickness were enrolled. The patients were divided into3 groupsrandomly.First group (n=20) received 2.5 mg Letrozol daily for 3 months, the second group (n=42) received 10 mg MPA for 10 days a month for 3 months and the third groupincluding 20 patients with IUD levonorgestrel (Mirena) which releases 20 mcg levonorgestrel per day. At end of 3rd month, the endometrium thickness was measured by sonography was measured and the pathology of endometrial sampling were compared.
Results: Age range of patients was between 22-47 years. The endometrial thicknesses decreased in allthree groups. The mean endometrial thicknesses after teartment in MPA, Letrozole and Mirena groups were (16.09±7.37), (9.97±4.03) and (7.4±2.41) retrospectively. Pathology results in all three groups showed no significant differences (p=0.06).
Conclusion: Levonorgestrel IUD (Mirena) in comparison with Medroxyprogesterone and Letrozole is more effective in treatment of AUB and simple endometrial hyperplasia. It also had significantly less completions for patients. Although response to treatment. Although response to treatment was shown in all these three methods.
Key words: *Endometrial hyperplasia, Letrozol, Medroxy-progestrone, Levonorgestrel IUD (Mirena).*

P-141
Effect of Ferula assa-foetida oleo gum resin on spermatic parameters and testicular histopathology in male Wistar rats

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Introduction: Asafoetida has been used asaphrodisiac agent in different countries. The present study was aimed to evaluate the effectiveness of asafoetida on spermatic and testicular parameters in treatment rats.
Materials and Methods: 30 male Wistar rats received 25, 50,100 and 200 mg/kg asafoetida respectively. After six weeks, a small part of the cauda epididymis of each rat was dissected and the spermatic parameters were evaluated for at least 200 spermatozoa of each animal. Testes of all rats were harvested for pathologic examination. The testosterone concentration of serum was also determined.
Results: This study indicated that asafoetida significantly increased the number and viability of sperms ($p<0.05$). Histological study showed that spermatogenesis process and number of Leydig cells was increased with increasing the dose, but the Leydig cells become vacuolated. Johnsen score in experimental groups was increased compare to control although this difference was not significant ($p>0.05$).
Conclusion: In conclusion, asafoetida showed a positive effect on spermatic parameters although the histopathological effects on the testes were observed, particularly at high doses.
Key words: *Asafoetida, Spermatic parameters, Testicular Histopathology, Hematology.*

P-142
Comparison of pregnancy rate per embryo transfer cycles when transferred frozen embryo was done on days 17, 18 or 19

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Introduction: During the menstrual cycle the endometrium undergoes cyclic changes in preparation for implantation. In the follicular phase, the growing follicles produce increasing amounts of estradiol that will induce proliferative endometrial changes. Following ovulation, the corpus luteum produces progesterone that will initiate secretory changes. If implantation does not occur during the window of implantation, the endometrium will shed once the corpus luteum regresses.With certain endometrial abnormalities (e.g. Asherman's syndrome) that prevent normal endometrial changes from occurring, implantation rates are low and abortion rates are high (Schenker and Margalioth, 1982).
Materials and Methods: This study was performed between 2012 and 2013 in Novin Infertility Treatment Center (Mashhad, Iran). We examined ICSI cycles of 1250 patients. All patients have embryo transfer in the same situation but in three different days.
Results: Clinical and ongoing pregnancy rate (PR) andabortion rate were measured. Fertilization and implantation were similar between the groups. No difference was found regarding the number of transferred embryos (on day 2 or 3) and cryopreserved embryos, multiple pregnancies, abortion rates, transfer's drug protocol, transfer's Catheter or endometria's thickness between the groups. Pregnancy rate in group 2 that have embryo transfer on 18^{th} day was more than 19^{th} , and in 19^{th} is more than 17^{th} day ($p=0.04$).
Conclusion: Our results suggest increased endometrial thickness was associated with improved treatment outcome and significantly increased the chances of achieving a subsequent clinical and ongoing pregnancy. Women with transfer on 18^{th} day have more chance than the other groups.
Key words: *Embryo transfer, Implantation rate, IVF, Pregnancy, Transfer cath.*

P-143
Association assessment of ESRα gene polymorphism (rs9340799) with endometriosis risk in Iranian's women population

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Endometriosis is a gynecoligical disorder that defined by the presence of endometrial tissue outside the uterus. Clinical manifestations range dysmenorreal chronic pelvc pain, dyspareunia, dysphasia and infertility to ompletely asymptomatic disease. Epidemiology studies reveal thet endometriosis affects more than 10% of reproductive age women and possibly causes infertility. Endometriosis is a multiactorial disease and interplay between environmental factors and genetic variations. Estrogen receptor alpha (ESR-α) is a nuclear receptor protein encoded by the gene ESR-α which is significantly associated with endometriosis. We aimed to evaluate 100 women affected with endometriosis for ESR-α selected SNP including rs9340799 by ARMs-PCR.As a result we confirmed thet there is no a significant association between rs9340799 and endometriosis.
Key words: *Endometriosis, a-estrogen receptor, ESRa, polymorphism, ARMs-PCR.*

P-144
Infertility in couple and celecoxib usage (an experimental design)

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Introduction: Researches showed that infertility effect may be seen in some patients that used celecoxib for a long time. Celecoxib is a form of non-steroidal anti-inflammatory drug (NSAID) that directly targets COX-2, an enzyme responsible for inflammation and pain. The goal of this survey is assess the effect of celecoxib on reproductive system functions.
Materials and Methods: In This experimental survey we study on the effect of celecoxib on rat reproductive system, on spermatogenesis and the level of blood testosterone hormone.Histological studies and measuring of weight (testis, prostate, seminal vesicle and epidydimis) and the level of blood testestron are done. 50 rats with 200-230 gr. weight selected and compared in 5 groups. Control group (no drug given), case group (solvent drug: Di- methyl sulfoxide), 3 cases group (orally celecoxib 10, 20 and 40mg/kg given daily) for 15 days. In the end of 15 days heart blood sampling for measuring serum testosterone level accomplished after that reproductive systems separated and prepared for histological study.
Results: Result showed sertoli cells in control and case groups are differences. So that in case group (40mg/kg) number of sertoli cells decreased due to decrease testestron level. This can cause production of abnormal sperms. Significant differences are seen in the mean weight of prostate per body weight in case group (40 mg/kg) in compared with control group.
Conclusion: High doses of celecoxib can produce infertility.
Key words: *Celecoxib, Mail, Infertility, Testosterone hormone.*

P-145
Tamoxifen in Combination Tranilast Affects Transforming Growth Factor-β Ligands and Its Receptors in MCF-7 Cells

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Introduction: The transforming growth factor-β (TGF-β) signaling network plays a complex role in breast cancer. Tamoxifen is an anti-estrogen used for treatment of breast cancer. Researches show that combination of tamoxifen with other substance that helps to overcome on resistance to tamoxifen. Tranilast an anti-allergic compound that antagonizes the effects of TGF-β has been reported to reduce the metastasis of some cancers applied. Since tranilast functions through TGF-β pathway, it seems also tamoxifen affects this signaling pathway, we hypothesize that combination of these drugs may a suitable option for breast cancer treatment.
Materialsand Methods: MCF-7 human breast cancer cell line were treated with different doses of tamoxifen and tranilast in combination or alone: (TAM: 1, 2, 5, 10 and 20 µM; tranilast: 10, 20, 50, 100 and 200 µM) as a single treatment and the combined treatments used were: 2 µM of tamoxifen with 5 different dose of tranilast for 48h. Proliferation inhibition was assessed by MTT assay and the effects of tranilast and/or tamoxifen on TGF-β1-3 also three surface receptors TGF-βRI-III mRNA expression using real-time RT-PCR. Inhibitory effect of these drugs on invasion and metastasis were tested by matrigel assay.
Results: Tranilast and/or tamoxifen can regulate TGF-β isoforms and receptors gene expression from these cells also tranilast and/or tamoxifen inhibit migration and invasion of MCF-7 cells.
Conclusion: The inhibiting expression of TGF-β contributes to the loss ability of the breast tumor cells to invade and tranilast could be a candidate drug for treatment of breast cancer patients.
Key words: *Breast cancer, Tamoxifen, Tranilast, Transforming growth factor-beta.*

P-146
Evaluation of gene expression in Adipose-Derived Mesenchymal Stem Cells using real time PCR method

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Introduction: Mesenchymal stem cells (MSCs) are non-specialized cells that are found in many adult and embryonic tissues. These cells have the huge self renewal potential and ability to differentiate into many kinds of cell lineages in vitro. Adipose tissue is as one of the important tissues used to obtain these cells. Mesenchymal stem cells derived from adipose tissue have the pluripotent characteristics, reproducibility and plasticity. They also have high repair potential as a promising approach for the treatment of diseases in tissue engineering and regenerative medicine.
Materials and Methods: In this study, mesenchymal stem cells were isolated from human subcutaneous adipose tissue and these cells can be expanded in vitro and reach to desired number. The expression of collagen I, collagen II, aggrecan, and sox9 in these cells were analyzed by Real time PCR method.
Results: Based on the results of this study, collagen I & II expression aggrecan and sox9 were very low in MSCs.
Conclusion: Theses results indicated that mesenchymal stem cells have an undifferentiated state.
Key words: *Mesenchymal Stem Cells (MSCs), gene expression, Real time PCR.*

P-147

The effect of hydro-alcoholic extract of Apium Graveolens in female rats on fertility, the weight and sex ratio of rat offspring

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Introduction: Infertility is one of the most common problems that observed in approximately 15% of couples. *Apium Gravelens* (celery) is a medicinal plant with antioxidant properties and rich of flavonoid. This study was conducted to evaluate the effect of hydro-alcoholic extract of celery in female rats on fertility, weight and sex ratio of rat offspring.

Materials and Methods: In this experimental study,30 female rats were divided randomly into 3 groups. The control group received 1ml of distilled water, and experimental groups received respectively doses of 100 and 200 mg/kg/BW celery extract for five weeks by gavage. During the fifth week, two female rats from each group was mated with one healthy male rat. After a week, every female rat was kept in the separate cages. Females received celery extract during pregnancy and until childbirth. Finally, the number of the delivery females, number, weight and sex ratio of offspring were recorded. The data were analyzed using SPSS15 software and ANOVA test.

Results: There was no significant difference in delivery rate and newborns sex ratio between the experimental and control groups ($p>0.05$). The number of newborns was significantly increased in each experimental group compared to the control group ($p\leq0.05$). Also a significance decrease was observed in the weight of offspring in each experimental group compared to the control group ($p\leq0.05$).

Conclusion: Celery due to antioxidant property improves the fertility and increase the number of offspring but decrease weight of offspring. Thus use of medicinal plants in the diet should be more considered.

Key words: *Celery, Fertility, Sex ratio, Offspring, Female rat.*

P-148

Antifertility effect of hydro-alcoholic extract of Fennel (Foeniculum vulgare Mill) seed in male rats

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Introduction: Skyrocketing population is one of the main problems in modern communities. Today, study of anti-fertility effects of herbs has been considered because of the side effects of chemical medicines.This study is aimed to investigate the antifertility effect of chronically administered of foeniculim vulgare mill seed extract in male rats.

Materials and Methods: In this experimental study, 40 Wistar rats divided into five groups of eight rats each. The control group received distilled water and the experimental groups were orally administrated 1ml fennel extract in four doses of 25, 70, 140, and 280 mg/kg/B.W daily for sixty days. After the last gavage, rat'sanesthetized; caudal parts of the right epididymis were used for sperm counting. After fixation of testis, tissue sections were prepared and studied microscopically for the evaluation of morphometric and histological changes. The data were analyzed by one-way ANOVA test using SPSS15 software.

Results: The number of spermatogonia and sertoli cells decreased significantly in doses of 140 and 280 mg/kg compared with the control group ($P<0.05$). The number of primary spermatocyte and sperm count decreased significantly in the experimental groups when compared to control group ($P<0.05$). Furthermore Thickening of the basement membrane, cell apoptosis and irregular arrangement of germinal epithelium were observed in the experimental groups compared to the control group.

Conclusion: Hydro-alcoholic extract of fennel seed in used doses could reduce reproductive activity in male rats and has anti fertility activity.

Key words: *Foeniculum Vulgare Mill, Antifertility, Rat.*

P-149

αvβ3 integrin express on mid-luteal human endometrium: An immunogold and immunofluorescent staining study

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Introduction: The implantation is a complex procedure that involves many molecules. One of these molecules

is integrin specially αvβ3 which serves as receptor for components of extra cellular matrix to act as bridging molecules between the blastocyst and the endometrial surface during the implantation process.

Materials and Methods: The endometrial biopsies obtained from the anterior wall of the uterine cavity of 12 women. Each biopsy divided into three pieces: 1- Fixed in 10% neutrally buffered formaldehyde for light microscopy and immunofluorescent study. 2- Fixed in 4% paraformaldehyde in 0.1 M phosphate buffer (pH 7.4) for immunogold electron microscopy and 3- Fixed in 2.5% glutaraldehyde in 0.1 M phosphate buffer (pH 7.4) for scanning electron microscopy. Afterwards, the biopsies evaluated by Immunofluorescent, Immunogold and scanning electron microscopy techniques.

Results: Immunofluorescent staining demonstrated that αvβ3 integrin express only on luminal surface epithelium and glandular epithelium of mid-luteal phase. Immunogold staining images in mid-luteal phase samples showed that αvβ3 integrin express on ciliated, non- ciliated (pinopdes) cells and junctional complexes. While, no reactivity observed on the endometrial surface, using the negative control antibody or in specimens incubated without primary antibody in any of the specimens.

Conclusion: The results showed that αvβ3 integrin express only on luminal surface epithelium and glandular epithelium in the mid-luteal phase of human endometrium. Targeting integrins may provide a new avenue for the development of contraceptive technologies and the loss of this integrin in certain infertility states may signify the presence of implantation defects that reduce cycle fecundity in women.

Key words: *αvβ3 Integrin, Mid-luteal Phase, Endometrium, Immunogold, Immunofluorescent Staining.*

P-150
Effect of sesame-supplemented diet on testis histology of adult rat

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Introduction: Studies show that some antioxidants are effective in improving male infertility.

Materials and Methods: This experimental study was carried out on 30 adults Wistar rat 200 gram that obtained from laboratory animal center at Kashan University of Medical Sciences. Rats were divided into experimental and control groups randomly. The control group received standard diet and experimental group received diet containing 70% standard diet and 30% sesame seed after weaning for 12 weeks. At the end of the study, testis weight and volume were measured and seminiferous tubules, lumen epithelium diameter, LH, FSH and testosterone concentrations were evaluated. Data was analyzed by SPSS software and t-test. $P< 0.05$ was considered to significant level.

Results: Body weight rats, weight and volume testis and percentage volume seminiferous tubules vessels in two groups were not significant. The mean cells number and motility of sperm in left epididymis, number of cells epithelium and percentage volume of epithelial, lumen and interstitial of this tubules were extremely significant ($p<0.0001$) in the experimental group compared to control. LH concentration increased significantly in the experimental group compared to control ($p<0.03$).

Conclusion: Sesame seed intake improved testicular parameters, fertility and sperm production in males.

Key words: *Sesame seed, Testis, Rat, Sex hormones.*

P-151
Mesenchymal stem cells from rat bone marrow and adipose tissue similary to expressed neurotrophic factors in vitro

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Introduction: MSCs have been attracted great attention because of their neuroprotective effects both in vitro and in vivo by secreting various factors. Although bone marrow is the most common MSC source, cells with similar characteristics have been shown to be present in several other adult tissues. Adipose tissue, large quantities of which can be easily obtained, represents an attractive alternative to bone marrow in isolating adipose tissue-derived MSC (ADSC). Our purpose was to comparatively examine under appropriate in vitro conditions, expression of some neurotrophic factors such as brain-derived neurotrophic factor (BDNF), ciliary neurotrophic factor (CNTF), glial cell-derived neurotrophic factor (GDNF), neurotrophin-3 (NT-3), neurotrophin-4 (NT-4), nerve growth factor (NGF) and the expression of nestin.

Materials and Methods: Isolated ADSCs and BMSCs from the subcutaneous adipose tissue and bone marrow from adult rat subjects, respectively. ADSCs and BMSCs were cultured in α-MEM supplemented with 10% FBS. Reverse transcription-polymerase chain reaction (RT-PCR) was carried out to evaluate the expression of the above-mentioned neurotrophic factors in both cells were in-vitro.

Results: The morphological, immunophenotypical and expression of above neurotrophic factors of both types of cells were almost identical in ADSCs and BMSCs.

Conclusion: This finding supports Bone marrow and adipose tissue contains a stem cell population which expressed nestin and neurotrophic factors genes, it seems to be a good candidate for the future cell replacement therapy and improvement of neurodegenerative diseases.

Key words: *ADSCs, BMSCs, Neurotrophic factors, Nestin.*

P-152
Effect of crab shell extract on cell viability and apoptosis of human umbilical vein endothelial cells

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Introduction: Angiogenesis is formation of new blood vessels from pre-existing vessels. There are different therapeutic strategies in researches for treatment of various diseases and cancers to increase or decrease of vessels growth, including the use of natural components instead of chemicals drugs. The aim of this study was to investigation the effect of crab shell ethanolic extract on human umbilical vein endothelial cells in vitro.
Materials and Methods: In this study, human umbilical vein endothelial cells (HUVECs) were used. After preparation of the crab shell extract, the HUVECs were treated with different concentrations of crab shell (100, 200, 400, 800 and 1000 µg/ml) at 24, 48 and 72 hours. Cell viability by MTT assay and apoptosis by TUNEL assay were assessed. One-way ANOVA was used for data analysis. $P<0.05$ was considered significant.
Results: HUVECs viability was decreased in 24, 48 and 72 h, affected by crab shell extract dose and time dependent manner ($p<0.05$). After 72 hours, significant increasing in apoptosis was observed.
Conclusion: Crab shell has antiproliferative effect on human umbilical vein endothelial cells and exerts this effect by inducing apoptosis.
Key words: *Cell viability, Crab shell, Apoptosis, HUVECs.*

P-153
Culture, identification and comparition of in vitro cultured adipose-tissue derived and bone marrow mesenchymal stem cells

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Introduction: Mesenchymal stem cells (MSCs) have been characterized as multipotent cells which are able to differentiate into several mesodermal and this feature along with their extensive growth and comprehensive immunomodulatory properties establish them as a promising tool for therapeutic applications including cell-based tissue engineering and treatment of immune-mediated disorders. Adipose-tissue derived stem cells (ADSCs) had been identified as having similar characteristics to bone marrow mesenchymal stem cells (BMSCs), which possess multi-potent differentiation properties, easy accessibility and rapid proliferation in culture. The objective of this study was to extraction, evaluate the proliferation capacity, identification by MSC marker CD90 expression and multipotential differentiation capacity of ADSCs and BMSCs.
Materials and Methods: We isolated ADSCs and BMSCs from the subcutaneous adipose tissue and bone marrow (femour and tibia) from adult rat subjects, respectively. ADSCs and BMSCs were cultured in α-MEM supplemented with 10% FBS.
Results: ADSCs and BMSCs attached to the flask floor quickly and were carpeted 5 and 7 days after the culture dish completely in primary cultures, respectively. Comparison of doubling time in two groups indicated that ADSCs showed a higher proliferation rate in comparison with BMSCs. Also, It was detected by MTT assays that second passage of ADSCs showed higher proliferation rate at 24 and 48hours post culture in comparison with BMSCs. Both types of cells were positive for CD90.Then ADSCs and BMSCs showed similar adipogenic and osteogenic differentiation potential.
Conclusion: This finding supports the potential role of ADSCs as an alternative to BMSCs for clinical purposes.
Key words: *MSCs, MTTPDT, Adipocytes, Osteocytes.*

P-154
A histopathologic study of the ameriorating effect of grape seed hydroalcholic extract against Fluoxetine toxicosis in male mice

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Introduction: Fluoxetine (FLX) is a selective serotonin reuptake inhibitors antidepressant. FLX affects chemicals in the brain that may become unbalanced and cause depression, panic, anxiety, or obsessive-compulsive symptoms. Grape seed extract (GSE) antioxidants neutralize free radicals and oxidative stress. Therefore this study was designed to investigate Protective effect of GSE hydroalcholic extract against fluoxetine- induced damage on testicular.
Materials and Methods: To follow up present study 24 mature male mice were used. The animals divided into four groups as, control, FLX (20 mg/kg), FLX (20 mg/kg)+ GSE (100 mg/kg) and GSE (100 mg/kg) orally for 42 days. After the last gavage, animals were sacrificed. Histopathological analysis of the testis was carried out. Repopulation index (RI), Tubular differentiation index (TDI), Spermiogenesis index (SPI), Mitotic index (MI), Sertoli cell index (SCI) was measured using a microscope.
Results: Histological results showed that the male mice exposed to fluoxetine had significantly ($p<0.05$) reduction in TDI, SPI, MI, SCI and RI. However, Grape

seed extract could reduce all negative impacts of fluxetine.
Conclusion: Fluoxetine can induce male infertility. Simultaneously administriation FLX and GSE prevent negative effect of FLX on testise.
Key words: *Fluoxetine, Grapes seed, Mice, Testise.*

P-155
The effect of grape seed hydroalcholic extract on testosterone concentration in fluoxetine induced oxidative stress in the mouse testise

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Introduction: The selective serotonin reuptake inhibitors (SSRI), including fluoxetine (FLX) are used for the treatment of depression and psychiatric disorders such as panic disorder and anxiety. Grape seed extract (GS extract) is a natural extract from the seed of grape that is rich in mono-, oligo- and poly- meric polyphenols and anthocyanins, flavonoids. GS extract involves in ameliorating the oxidative stress in vitro and in vivo.The aim of present study was to evaluate the protective effect of Grape seed extract on Fluoxetine-induced testosterone level, TCA and malondialdehyde (MDA) production in mice.
Materials and Methods: In this study 24 mature male mice were used. The animals divided into four groups as, control, FLX (20mg/kg), FLX (20mg/kg) + BGSE (100mg/kg) and BGSE (100 mg/kg) orally for 42 days. Lipid peroxidation levels were measured using the method ofbased on the degree malondialdehyde (MDA) production.
Result: The results showed that in FLX group percentage of Tissue antioxidant capacity and Serum testosterone significantly ($p<0.05$) reduced in comparison with the control, GSE and FLX+GSE groups while in FLX group percentage of the tissue MDA increased significantly ($p<0.05$) in comparison with the control, GSE and FLX+GSE groups.
Conclusion: Fluoxetine can induce male infertility. Simultaneously administriation FLX and GSE prevent negative effect of FLX on testise.
Key words: *Fluoxetine, Grapes seed, Mice, Testosterone.*

P-156
Phenylhydrazine-induced anemia in mice and its effect on testicular tissue and sperm parameters; evidence for protective effect of royal Jelly versus vitamin C

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Introduction: Phenylhydrazine (PHZ) is used to prepare indoles and to form phenylhydrazines of natural mixtures of simple sugars. However, it is used to induce experimental anemia in animal models. On the other hand royal jelly is known as antioxidant compound. Therefore, here in present study we aimed to evaluate the protective effect of royal jelly on PHZ-induced damages at testicular and sperms level and compare its impact with vitamin C.
Materials andMethods: Eighteen mature male mice were randomly divided into 3 groups. In order to induce experimental anemia, PHZ was administrated at dose of 8 mg/kg, ip and then it was continued as 6 mg/kg, every 48 hours, ip in all groups. The test groups subdivided into non-treated PHZ-received, royal jelly-received (100 mg/kg, orally) and vitamin C-received (250 mg/kg, ip). After 35 days, the tubular differentiation (TDI), spermiogenesis (SPI) indexes were evaluated. Sperm count; motility and DNA integrity were analyzed by using light and fluorescent microscopes, respectively.
Results: Royal jelly reduced PHZ-increased percentage of tubules with negative TDI and SPI. No significant differences were observed between royal jelly and vitamin C. Comparing the sperm parameters showed that royal jelly similar to vitamin C ($P<0.05$) improved sperm count, motility and reduced sperm DNA damage.
Conclusion: Our data showed that royal jelly exerts similar effects like vitamin C as an antioxidant agent and can be considered as an appropriate compound in order to inhibit anemia-induced damages at testicles and sperm levels.
Key words: *Phenylhydrazine, Royal Jelly, Vitamin C, Testicular Tissue, Sperm, DNA damage.*

P-157
The effect of retinoic acid in differentiation of male mouse bone marrow derived-mesenchymal stem cells into germ cells

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Introduction: Germ cells are a highly specialized cell population that is requisite for the maintenance of the species. Recent publications about differentiation of stem cells to germ cells have motivated researchers to make new approaches to infertility. Because using embryonic stem cells for fertility purposes has been associated with tumorogenesis and also ethical criticisms, the mentioned cells were suggested to be replaced with some adult multipotent stem cells.To find

appropriate noninvasive source replacement for embryonic stem cells in this study we designed to evaluate differential potentials of bone marrow derived-mesenchymal stem cells (BMMSCs) to germ like cells.
Materials and Methods: To find differentiation capability, after providing purified BMMSCs (The Cells attained from femurs and tibias bones), To identify mesenchymal stem cells, Superficial markers were investigated by flowcytometry to confirm mesenchymal lineage production.Then the cells were differentiated to germ cells mediums containing retinoic acid for 7days. To evaluate germ cells characteristic markers (MVH, DAZL) flowcytometry and imunoflorescence were used.
Results: After 4 passage BMMSCs were spindle shaped and fibroblast-like cells. The cells were able to differentiate into osteoblast and adipocyte cells. Presentation of stem cell superficial markers (CD90, CD73) and absence of endothelial and blood cell markers (VEGFR2, CD45) were confirmative for mesenchymal origination of these cells. This fact was representative for multipotential entity of the examined cells. The flowcytometry and imunoflorescence results showed remarkable expression of germ cells characteristic markers (Mvh, Dazl).
Conclusion: By this study, it was found that germ cell markers were expressed in BMMSCs aftter adding exogenous Retinoic Acid into culture medium.
Keywords: *Mesenchymal Stem Cells, Infertility, Germ cells, Retinoic Acid.*

3- Urology

P-158
Evaluating the spermicidal activity of a new antimicrobial peptide from the Insect Paederus dermatitis, Sarcotoxin Pd

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Introduction: The aim of this study was to evaluate the spermicidal activity of Sarcotoxin Pd as new cationic antimicrobial peptides (AMPs) with antimicrobial properties from the Insect Paederus dermatitis.
Materials and Methods: The purified Sarcotoxin Pd was diluted with Ham's F10 in 40, 50, 60, 70, 80 and 90µg/ml accordingly. 1 ml from peptide solution with different dosage was mixed with 200 µl prepared sperm solution in microtube. Sperm motility, viability and morphology were assessed at different time intervals (0.3, 5, 10, 15 min). Also, the potential cytotoxicity of sarcotoxin Pdagainst normal human cervical cell (HeLa) was measured by the MTT (3-[4, 5-dimethylthiazol-2-yl]-2, 5-diphenyl tetrazolium bromide)-based assay. Eosin–Nigrosin staining and Giemsa staining methods were applied for sperm viability and morphology detection, respectively. Also, for statistical analysis, repeated measure was used. Differences were considered statistically significant if $p<0.05$.
Results: This compound immobilized sperm with its effective dose only within 20 s (EC100) at a concentration of 90 µg/mL and spermicidal activity was time-dependent without any morphological change in the sperm head, midpiece or tail. Also, the cytotoxic effect of sarcotoxin Pd was concentration-dependent and significant cytotoxicity of this peptide was observed at concentrations higher than 24 µg/ml.
Conclusion: Sarcotoxin Pd has spermicidal activity in addition to antimicrobial activities. It seems this peptide might be a potential candidate in order to use in male contraception, although, this preliminary study needs more studies to elucidate final conclusion.
Key words: *Antimicrobial, Sarcotoxin Pd, Sexually transmitted infections, Spermicidal.*

P-159
Ultrasonogrphic findings of 500 infertile men with small testes

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Introduction: The objective of this study is to assess the frequency of microlithiasis, tumor, heterogen echogen texture and cyst in infertile men with small testes who underwent ultrasound compared with fertile group with small testes.
Materials and Methods: Ultrasonography is the primary imaging modality for evaluation of the scrotum. B-mode imaging combined with duplex Doppler interrogation provides valuable information in assessment of the male infertility. Scrotal ultrasound is useful in the evaluation of the testicles and extratesticular scrotal structures (i.e., epididymis, peritesticular veins, and spermatic cord).
Result: We reviewed our experience of ultrasound findings in 500 patients presented at Royan institute from 2009-2013 with infertility. There were 2 groups, group A: general fertile population and Group B: infertile men with small testis. Ultrasound evaluation was done. In group B, Incidence of microlithiasis, tumor, heterogen echogen texture or cyst were more common than group A.
Conclusion: Andrologist (male infertility treatment specialist) must consider the fact that, when patient with

small testis and aforementioned ultrasound findings is presented, further sonographic evaluation is needed.
Key words: *Small testes, Ultrasonography.*

P-160
The correlation of seminal melatonin with sperm conventional parameters, DNA fragmentation and nuclear maturity in candidate male for ICSI treatment

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Introduction: Melatonin, the chief secretory product of the pineal gland, regulates the dynamic physiological adaptations that occur in seasonally breeding mammals in response to the changes in day length. Because of presence of melatonin in semen and membrane melatonin receptor in spermatozoa, the impact of melatonin on the regulation of male infertility is still questionable.The aim of this study was to determine the effects of endogenous melatonin on human semen parameters (sperm concentration, motility and normal morphology), DNA fragmentation (DF) and nuclear maturity.
Materials and Methods: Human semen samples in 75 infertile couples were routinely analyzed and assessed for melatonin and total antioxidant capacity (TAC) levels by ELISA kit and colorimetric assay kit respectively. DNA fragmentation also was examined by the sperm chromatin dispersion (SCD) test. Acidic aniline blue staining was used to detect chromatin defects of sperm nuclei.
Results: The statistical analysis did not show any significant correlation among seminal plasma melatonin and total antioxidant capacity with sperm parameters (concentration, motility and normal morphology) and nuclear maturity. However, a positive significant correlation between DNA fragmentation and melatonin level was detected ($r=0.273$, $p<0.05$).
Conclusion: Melatonin in seminal plasma has positive correlation with sperm DNA damage in subfertile patient. Nevertheless, the mechanism of this phenomenon needs further study.
Key words: *Melatonin, DF, Antioxidant, Sperm parameters.*

P-161
Semen PH correlation to age, volume, viscosity and sperm motility

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Introduction: Men infertility could have different causes. The first step in men infertility treatment is semen analysis. Different factors could analyze in semen experiment. One of the important factors is semen PH which the normal range of it is 7.2-8.
Materials and Methods: In this study, 200 infertile male referred to Qazvin ACECR Telemedicine Infertility Center were analyzed. In these persons the correlation of semen PH to age, sperm motility, semen viscosity and volume were assessed. These persons were classified in different groups of motility pattern, also classified in 3 groups according to viscosity and volume of semen as Hypo viscosity, Normal and Hyper viscosity. Furthermore the age classification was as follow: 20-29, 30-39, 40-49 and 50-59yearsold.
Results: In the study of age and PH, $p<0.05$ and there is a significant correlation between these 2 factors. It means by age increasing, the mean PH increases. About PH and semen volume, there is a significant correlation between these two Parameters that mean by PH increasing the semen volume decreases. Also a significant relation between PH and viscosity was observed. So, PH increasing can due to semen viscosity increasing. In addition, the PH affects sperm motility, it means $p<0.05$ and there is a correlation between them. In this case PH increasing induces increasing in sperm motility.
Conclusion: It seems that PH is a factor that affects male infertility and it has a significant correlation with Viscosity, volume and sperm motility. The analysis of other factors in semen is understudying by this group.
Key words: *PH, Infertility, Semen.*

P-162
Changes of mice testicular sperms membrane glycocalyx after exposure to L-carnitine and Pentoxifylline

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Introduction: The glycoconjugate content of sperms indicates their physiological and fertility properties. Lectin reactivity is indicative of intact, capacitated, and acrosome-reacted sperms. In the epididymis, sperms experience maturation, glycoconjugate modification, and simultaneously, higher L-carnitine (LC) concentrations. The aim of this project was to evaluate the effects of LC and Pentoxifylline (PF) on the integrity, capacitation, and acrosomal reaction of sperms by studying their lectin reactivity.
Materials and Methods: Mouse testicular sperm samples were divided into three parts. Each sample was added Ham's F10 (control) or media containing 1.76 mM LC or PF. At 30 and 90 minutes after incubation, sperm motility was assessed. Peanut agglutinin (PNA), wheat germ agglutinin (WGA), and Concanavalin A (ConA) were used to detect non-acrosome-reacted, non-

capacitated, and acrosome-reacted sperms, respectively and the frequency was evaluated by flow cytometry. Statistical analysis was performed using the ANOVA.
Results: Sperm motility increased after 30 and 90 minutes of incubation in the LC- and PF-treated cultures (p=0.001). LC administration created a significant increase in the percentage of the non acrosome-reacted sperms compared to the control sperms after 30 and 90 minutes (p=0.02 and p=0.03, respectively). The frequency of the non-capacitated sperms in the LC-treated group increased compared to the control sperms after 30 minutes significantly (p=0.01).
Conclusion: Although the administration of LC and PF enhanced sperm motility, LC also impacted glycoconjugates on the sperm surface. Glycoconjugates are involved in the interaction between the sperm and the zona pellucida and subsequently fertilization, thereby probably influencing the male fertility state.
Key words: *Glycoconjugates, Spermatozoa, Lectin, L-carnitine, Pentoxifylline.*

P-163
Effects of L-carnitine and Pentoxifylline on the activity of Lactate Dehydrogenase C4 isozyme and motility of testicular spermatozoa in mice

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Introduction: Extracted sperm from the testis have poor motility. Moreover, their motility changes during their journey through epidydimis. Meanwhile, they face high concentration of L-carnitin. In addition, lactate dehydrogenase C4 (LDH-C4) gene disorders has been shown to cause impaired sperm motility,leading to infertility in male mice.The aim of this study was to evaluate sperm motility and LDH-C4 enzyme activity upon L-carnitine (LC) and Pentoxifylline (PTX) administrations in mice.
Materials and Methods: We extracted testicular sperm of 48 mice and divided them into three equal parts. One part was incubated with Ham's F10 medium (control), the other parts were treated with Ham's F10 containing LC and PTX with a final concentration of 1.76 mM, for 30 min at room temperature. Sperm motility was assessed according to the World Health Organization (WHO) criteria. Sperm LDH-C4 enzyme activity was measured by spectrophotometery method. Statistical analyses were performed using ANOVA and Fisher's LSD test, and a p-value less than 0.05 was considered as a statistically significant difference.
Results: Sperm motility increased after 30 min of incubation in LC- and PTX-treated group (p<0.001). LC and PTX administrations showed a significant increase in the LDHC4 enzyme activity of sperm compared to that of the controls after 30 min (p=0.04 and 0.01, respectively).
Conclusion: The effects of LC and PTX on motility of sperm can be explained by an increase in LDH-C4 enzyme activity that may influence male fertility status.We suggest that LC as a non-toxic antioxidant is more suitable for use in assisted reproductive technique protocols than PTX.
Key words: *L-carnitine, LDH-C4, Male infertility, Pentoxifylline, Testicular sperm.*

P-164
The antipsychotic drug sulpiride induces semen abnormalities and insulin intolerance but does not affect body weight in adult male mice

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Introduction: The propensity of antipsychotic drugs to induce sperm abnormalities, excessive body weight gain and glucose intolerance were interested for many years. Mechanisms of these problems were studied in this study.
Materials and Methods: 20 adult male mice were divided into 2 groups as control and test. The treatment mice received 40mg/kg/day sulpiride solution for 45 days. Then body weight, food intake, plasma and testicular prolactin and testosterone and serum estrogen, insulin and glucose levels were measured. Semen samples were analyzed for sperm abnormalities. Cauda epididymis was used to collect sperm cells and their count, motility and viability were measured. In addition, sperm chromatin maturation and DNA integrity were assessed.
Results: Chronic sulpiride administration did not affect body weight-gain and food intake in male mice. However, blood and testicular tissue's prolactine and estrogen levels and the area under the glucose and insulin curves were significantly elevated. Testosterone levels had significantly decreased. Semen samples showed different problems such as abnormal, immature and dead sperms in comparison with controls.
Conclusion: The present data indicate that sulpiride-induced hyperprolactinemia is associated with an insulin-resistant state. After prolonged administration, sulpiride did not affect body weight. This lack of effect may be related to the impairment of insulin sensitivity, which may prevent body weight-gain and counteract other effects of sulpiride that promote adiposity such as hyperprolactinemia. The changes in insulin sensitivity appear to be related a decrease in androgenic activity, because testosterone and estrogen levels were affected by sulpiride that consequently lowered semen quality.
Key words: *Sulpiride, Sperm, Body weight.*

P-165
Oxytocin can decrease apoptotic index in testis under acute ischemic-reperfusion in a rat model

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Introduction: The aim of this study was to investigate this hypothesis that oxytocin can decrease apoptotic index in testis under acute ischemia reperfusion in a rat model.
Materials and Methods: Twenty adult rats were randomly divided into 4 groups: 1: controls 2: Ischemia-Reperfusion (IR) 3: oxytocin (OT) 4: oxytocin after induction of IR (OTA). Testicular ischemia was achieved by torsion of the left testis 720 clockwise for 2 hours. Two hours after ischemia, torsion was removed and reperfusion was performed. Immediately after induction of reperfusion 0.03 µg/kg oxytocin were administered intraperitoneally to the OTA group. Three hours after surgery left testis were removed and evaluations were made by Jhonson's score, Radioimmunoassay (RIA), immunohistochemistry and histomorphometry for study of maturity of spermatogenesis, endocrine profiles, apoptosis and quantitative studies, respectively.
Results: Induction of ischemia-reperfusion in group2 induced marked degeneration of germ cells, edema and blood vessels congestion in testis. A significant reduced Jhonson's score were detected in IR group in compare with controls ($p<0.05$).and apoptotic index increase significantly ($p<0.05$) in compare with the controls. Sex hormones were not changed in all experimental groups. Administration of OT in OTA group decrease the apoptotic index in compare with the IR group significantly ($p<0.05$) and histological parameters same as germinal epithelium thickness and gem cells number were increased but not significant statically.
Conclusion: These results suggested that oxytocin can decrease apoptotic index and improves complication of acute ischemic reperfusion in testis in a rat model.
Key words: *Oxytocin, Ischemia Reperfusion, Testis torsion, Apoptotic index.*

P-166
Many laboratories have no standardization in performing and reporting the semen analysis

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Introduction: The semen analysis is the most important clinical laboratory test used in diagnosis of male factor infertility. In practice, the careful analysis of sperm concentration, movement, and morphology requires a great deal of technical expertise and procedural care. Although, World Health Organization (WHO) has published a series of laboratory manuals to perform and report semen analysis, in practice the reported lack of standardization, the wide variation among laboratories has led some to consider the semen analysis inaccurate and unreliable. Like many countries, in Iran we have the same problems in semen analysis. The aim of this study was to assess semen analysis reports in Iran.
Materials and Methods: 141 semen analysis reports were collected and assessed from patients referred to Yazd research & clinical center for infertility during September 2013 to march 2014. Demographic data and reported parameters in semen analysis were compared with recommended WHO standards.
Results: None of laboratories reported duration of abstinence, time and type of sample collection. Only 22% of reports had macroscopic parameters of semen analysis. In microscopic parameters section, normal range was mentionedin 51% of reports. No laboratory reported type of counting chamber and method of sample staining for morphology. Non-progressive motility and immotile sperms were not reported in 9.9% and 17% of reports, respectively. 1% of reports were completely qualitative. In none of the reports, WHO guideline edition was noted.
Conclusion: It is strongly recommended that laboratories performing the semen analysis adopt accepted normal range of parameters such as those proposed by WHO.
Key words: *Semen analysis, WHO, Standardization.*

P-167
The detrimental effects of zinc oxide nanoparticles on mouse spermatogenesis

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Introduction: To evaluate the effects of zinc oxide nanoparticleson mouse spermatogenesis.
Materials and Methods: Thirty two adult male NMRI mice were used. Experimental Groups (ZNP-1-ZNP-3) received one of the following treatments daily for 35 days: 5, 50 and 300 mg/kg zinc oxide nanoparticles

respectively. Control group received only distilled water. Epididymal sperm parameters, testicular histopathology, morphometric analysis and spermatogenesis assessments were performed for evaluation of the zinc oxide nanoparticles effects on testis.
Results: Epididymal sperm parameters including sperm num-ber, motility and percentage of abnormality were significantly changed in 50 and 300mg/kg zinc oxide nanoparticles treated mice ($p<0.01$). Histopathological criteria such as epithelialvacuolization, sloughing of germ and detachment were sig-nificantly increased in 50 and 300 mg/kg zinc oxide nanoparticles treated mice ($p<0.001$). 300 mg/kg zinc oxide nanoparticles induced formation of multinucleated giant cells in the germinal epithelium. 50 and 300 mg/kg zinc oxide nanoparticles also caused a significant decrease in seminifer-ous tubule diameter, seminiferous epithelium height and mat-uration arrest ($p<0.001$).
Conclusion: Zinc oxide nanoparticles act as testicular toxicant and further studies are needed to establish its mechanism of action upon spermatogenesis
Key words: *Zinc oxide nanoparticles, Spermatogenesis, Mouse.*

P-168
The detrimental effects of silver nanoparticles on sperm chromatin structure and DNA integrity in mice

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Introduction: Since the sperm chromatin structure and DNA integrity are essential for fertility and regarding the effect of silver nanoparticles on fertility potential of sperm cells, the effects of silver nanoparticle on mouse spermatozoa were evaluated.
Materials and Methods: In this experimental study, 24 adult male Syrian mice were divided in a control group and three experimental groups. The 40 nm silver nanoparticles with three different doses of 50, 100 and 200 µl orally administered for 5 weeks. After this time, the cauda epididymal sperms were aspirated for analysis of sperm parameters (count, morphology and motility) according to WHO criteria. The sperm chromatin structure and DNA integrity were assessed using three different cytochemical tests including aniline blue (AB), toluidine blue (TB) and chromomycin A3 (CMA3) test.
Results: The third experimental group (highest dose of silver nanoparticles), had significantly the lowest mean of sperm count, the lowest percentage of fast progressive motile spermatozoa, and the highest percentage of abnormal form sperm cells. Also, the evaluation of sperm chromatin condensation and chromatin packaging showed that the study groups II and III had thespermatozoa with lesser condensed chromatin than the other groups ($p<0.05$).
Conclusion: According to the results of this study, the negative effect of silver nanoparticles on sperm parameters and sperm chromatin structure and DNA integrity was observed in mice. In general the toxicity of silver nanoparticles was dose-dependent, so a group of mice that had received the highest dose of nanosilver, had the lowest sperm quality.
Key words: *Silver nanoparticles, Sperm, Chromatin, DNA, Mice.*

P-169
Effect of curcumin on dexamethasone-induced testicular toxicity in mice

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Curcumin is a yellow-orange polyphenol derived from turmeric [Curcuma longa L. (Zingiberaceaerhizomes)]. Turmeric is a main ingredient of Indian, Persian, and Thai dishes. Extensive studies within the last half a century have demonstrated the protective action of curcumin in many disorders of the body.This study evaluated the protective effect of curcumin on dexamethasone-induced spermatogenesis defects in mice.Thirty-two NMRI mice were randomly divided into 4 groups. The first (control) group received 1 mL/day of distilled water by intraperitoneal injection for 7 days. The second group received 200 mg/kg/day of curcumin for 10 days. Third group received 7 mg/kg/day of dexamethasone for 7days. Forth group received 200 mg/kg of curcumin for 10 days after dexamethasone treatment. Testicular histopathology, morphometric analysis, head sperm counting, and immunohistochemistry assessments were performed for evaluation of the dexamethasone and curcumin effectsExpression of Bcl-2 was significantly increased in the curcumin + dexamethasone group compared with dexamethasone-treated animals ($p<0.05$). Dexamethasone induced spermatogenesis defects including epithelial vacuolizations, sloughing of germ cells, reduction of seminiferous tubule diameter, reduction in the number of sperm heads and significant maturation arrest ($p<0.001$). Curcumin + dexamethasone treatment significantly prevented these changes ($p<0.05$). The results of this study demonstrate that curcumin increases the expression of Bcl-2 protein, an important anti-apoptotic factor, and improves the spermatogenesis defects in dexamethasone treated mice. Curcumin has a potent protective effect against the testicular toxicity and might be clinically useful.
Key words: *Curcumin, Dexamethasone, Testicular, Toxicity.*

P-170
Toxic effects of Carthamus tinctorius L. (Safflower) extract on mouse spermatogenesis

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Introduction: To evaluate the effects of aqueous extract of Carthamus tinctorius L., also named safflower, on mouse spermatogenesis.
Materials and Methods: Sixteen adult male NMRI mice were used. Experimental group received Carthamus tinctorius L. extract at the dose of 200 mg/kg for 35 consecutive days and control group received only distilled water. Testicular histopathology, morphometric analysis and spermatogenesis assessments were performed for evaluation of the Carthamus tinctorius L. extract effects on testis.
Results: Histopathological criteria such as epithelial vacuolization, sloughing of germ and detachment were significantly decreased in Carthamus tinctorius L. treated mice ($p<0.001$). Carthamus tinctorius L. extract induced formation of multinucleated giant cells in the germinal epithelium. Carthamus tinctorius L. extract also caused a significant decrease in seminiferous tubule diameter, seminiferous epithelium height and maturation arrest ($p<0.001$).
Conclusion: Carthamus tinctorius L. extract has toxic effects on mouse testicular tissue, and recommended to use it with caution if there is a reproductive problem.
Key words: *Carthamus tinctorius, Spermatogenesis, Toxic, Histopathology.*

P-171
Pregnancy outcome of intracytoplasmic injection with epididymal and testicular sperm retrieval in azoospermic patients

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Introduction: Intra cytoplasmic sperm injection (ICSI) is anassisted reproductive technique for treatment of infertility in azoospermicmen. It seems that pregnancy outcome in ICSI following percutaneous epididymalspermaspiration (PESA) is better than using testicular sperm retrieving from testis due to greater motility and better morphology of epididymal spermatozoa. The objective was to determine clinical pregnancy outcome following ICSIwith epididymalspermcomparing to that of testicularspermin men with azoospermia.
Materials and Methods: Sixty men with azoospermia who were candidate of ICSI selected. Sperm retrieval by PESA (n=30) or testicularspermextraction (TESE) (n=30) was performed. The number of embryos and live births were analyzed and evaluated.
Results: No difference was seen in age and duration of infertility between groups. The number of embryos were notdifferent significantly in two groups (3.14±2.28 vs. 3.67±2.89 $p>0.05$). However the live birth rate was higher in the PESA group compared with the TESE group (70.2% vs. 40%; $p<0.05$).
Conclusion: Intracytoplasmic sperm injection using sperm from epididymis is more effective than testicular sperm injection and can successfully be performed to treat men with azoospermia.
Key words: *ICSI, TESE, PESA, Live birth rate.*

P-172
Stereological Study of the Effect of Green tea (Camellia sinensis) Hydroalcholic Extract on Glomeruli Components in Mice Exposed to Sodium arsenite

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Introduction: Sodium arsenite as an environmental pollutant has adverse effects on various body organs. The aim of this study was to investigate the protective effect of green tea extract (GTE) on glomeruli and its components, as well as Serum creatinine and blood urea nitrogen (BUN in the mice following exposure to sodium arsenite.
Materials and Methods: Adult male NMRI mice (30±5 g) were randomly divided into 4 groups (n=6), control, GTE (100mg/kg/day), Sodium arsenite (5mg/kg/day) and Sodium arsenite +GTE, and treated for 34 days. At the end of treatment period, mice were killed and their left kidneys were taken out, fixed, sectioned, processed and stained using Heidenhain& azan method. The Glomeroli and its components, as well as serum samples were analyzed. Data were astatically analyzed using one way ANOVA and Tukey's test and the means difference was considered significant at $p<0.05$.
Results: A significant reduction in the volume of glomeroli and tuft, and the serum creatinine ($p<0.001$) and BUN ($p<0.04$) significantly increased in the Sodium arsenite group when compared to the other groups. The mentioned parameters were normalized in the sodium arsenite + GTE group to the control mice.
Conclusion: Our results showed that green tea could compensate the adverse effects of sodium arsenite on the mice renal tissue; therefore addition of green teato the daily diet of people in industrial cities could protect them from adverse effects of environmental pollutants like arsenic.
Key words: *Sodium arsenite, Green tea extract, Kidney, Stereology, Mice.*

P-173

Celecoxib and silymarin attenuated varicocele-induced damages at testicular and sperm levels; evidence for endocrine and antioxidant statuses

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Introduction: Varicocele (VCL) results in considerable disorders in male reproductive potential. Varicocele exerts its impact via enhancing inflammation and down-regulating testicular endocrine and antioxidant statuses. Celecoxib (CCB) is a non-steroidal anti-inflammatory drug (NSAID), which is used as cyclooxygenase-2 (COX-2) inhibitor. Silymarin (SMN) is a flavonoid complex, which is known for its antioxidant potential. Present study was designed for evaluating the protective effect of CCB and SMN on VCL-induced damages in testicles and sperm cells.
Materials and Methods: VCL was induced in 24 mature male rats and then animals were randomly divided into four groups including; non-treated VCL-induced, CCB-treated (10mg/kg, orally), SMN-treated (100mg/kg, orally), SMN+CCB-treated groups. Following 60 days after VCL induction, spermatogenesis ratio evaluated by assessing tubular differentiation (TDI), repopulation (RI) indexes. Leydig cells steroid foci were evaluated by using epifluorescent staining. Immune cels infiltration, tissue total antioxidant capacity (TAC) and malondialdehyde (MDA) content as well as sperm count, motility, abnormality and DNA damage were analyzed.
Results: CCB and SMN co-administration elevated VCL-reduced TDI, RI and SPI and reduced immune cells infiltration. The Leydig cells steroidogenic foci increased in CCB+SMN, SMN and CCB-treated groups, respectively. SMN+CCB significantly ($p<0.05$) up-regulated VCL-reduced TAC and reduced tissue MDA. All treated animals exhibited remarkably ($p<0.05$) higher sperm count, sperm motility, viability and reduced sperm abnormality and DNA damage. However it was more pronounced in SMN+CCB-treated group.
Conclusion: Our data suggest that, SMN inhibited the VCL-induced damages via up-regulating antioxidant status and CCB limited the disorders by attenuating VCL-induced inflammation.
Key words: *Varicocele, Celecoxib, Silymarin, Inflammation, Oxidative Stress*

P-174

Nano-particle Titanium Dioxide (TiO2)-induced damages in mice testis correlates with enzymatic antioxidant line deficiency

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Introduction: Nano-particle Titanium Dioxide (TiO2) is a non-combustible, odorless powder that is widely used for sunscreens and as coating for self-cleaning windows. There are several reports, which are indicating that TiO2 is able to exert cytotoxic impacts and induce lipid peroxidation and severe DNA damage. In present study we examined the dose effect of TiO2 on germinal cells apoptosis as well as its impact on enzymatic antioxidant status.
Materials and Methods: Twenty four mature mice were randomly divided into four groups as control-sham (received 0.3mL normal saline, ip) and test groups including: low dose (10 mg/kg, ip), medium dose (50 mg/kg, ip) and high dose (100mg/kg, ip)-TiO2-received groups. After 35 days, the tissue levels of glutathione peroxidase (GSH-px), super oxide dismutase (SOD), and catalase (CTS), the serum level of testosterone and Leydig cells steroidogenic foci were evaluated. Germinal cells apoptosis was estimated using TUNEL staining.
Results: TiO2 significantly ($p<0.05$) decreased GSH-px, SOD and catalase levels of the testicles in a dose dependent manner. Epi-fluorescent analyses showed that the intracytoplasmic steroid content of the Leydig cells decreased in TiO2-received animals and developed depending on dose. In a same pattern, the serum level of testosterone decreased and percentage of tubules with apoptotic cells enhanced depending on dose.
Conclusion: Our data suggest that, TiO2 exerts its pathological impact via down-regulating antioxidant status, which in turn is able to adversely impact the endocrine status. Ultimately defected antioxidant capacity associated with damaged endocrine status provokes the apoptosis in germinal cells.
Key words: *TiO2, Oxidative stress, Apoptosis, GSH-px, SOD, Catalase.*

P-175

BSO-induced oxidative stress affects testicular histology, semen parameters and sperm fertility

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Introduction: GSH is the main intracellular antioxidant and its level is important for protecting cell from oxidative stress. BSO inhibits GSH synthesis and cause oxidative stress. The study is designed to investigate the effect of BSO induced oxidative stress on testicular histology, semen parameters and sperm fertility.

Materials and Methods: The adult male mice were divided into two groups of control and experiment. In the experimental group the mice received 2mmol /kg BSO for 35 days as IP injection. All mice were sacrificed at the end of the study and their testes were prepared for histological studies. For determination of semen parameters, sperms were collected from cauda epididymis and analyzed under light microscope. For evaluation of fertility the oocytes were obtained from superovulated mice by tubal flashing and inseminated with sperms. Embryo formation was considered as fertility success and compared in between groups.
Results: Semen Analysis revealed that in experimental group the percent of sperms with progressive motility was less than the control group and the percent of sperms with abnormal morphology was higher than in control group ($p<0.05$). Histomorphometric studies showed that the percent of Tubal Differentiation Index (TDI) and spermatogenic Index (SI) in experimental group were reduced ($p<0.01$). Microscopic studies revealed that experimental group had undergone vacuolar degeneration and nuclear condensation of spermatogenic cells. Sperm fertility, based on embryo formation, was decreased in experimental group.
Conclusion: A morphological change of mice testes in Bso-induced oxidative stress is accompanied by decreasing of TDI and SI values and fertility rate.
Key words: *Oxidative stress, Buthionin sulfoximine, SI, TDI, superovulated mice.*

P-176
Stopping smoking improves semen parameters in smoker infertile men

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Introduction: Infertility affects up to 15% of the couples, which in 50% of cases, a male factor is involved. Several studies showed that smoking has an important negative impact on sperm production, motility and morphology. We investigated the prevalence of cigarette smoking among the infertile men referring to our infertility clinic and also the effect of smoking discontinuation on semen analysis parameters.
Materials and Methods: Between September, 2009 to September, 2013, 235 infertile couples were enrolled in this cross-sectional study. History taking and physical examination were performed by experienced urologist with emphasis on the positive history of cigarette smoking. The patients who were successful in discontinuing cigarette smoking were re-examined after 3 months and the same evaluation including semen analysis were performed for each individual.
Results: Of total 235 patients, 123 were smoker who encouraged stopping smoking. Giving up cigarette smoking in 78 patients resulted in 14-26% (mean: 19%) increase in sperm count as well as 8-27% (17%) improvement in sperm motility and 5 to 20% (14%) in sperm morphology. Also, without any accompanied therapeutic interventions, it resulted in pregnancy in 22 patients (28.2%) and delivery in 16 patients (20.5%).
Conclusion: Although not all the mechanisms through which cigarette smoking could affect fertility are well-known, every smoker must be encouraged to stop smoking, especially if a pregnancy is planned.
Key words: *Smoking, Infertility, Semenanalysis.*

P-177
Evaluation of cryopreserved human spermatozoa parameters after incubating with Iranian traditional herb (Calligonum) extract

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Introduction: Nowadays, freezing process is a common tool in assisted reproductive laboratories. Oxidative stress during freezing process is a major factor of sperm defect after this procedure. Despite of the fact that antioxidant compounds have an effective role on semen freezing techniques, the aim of this study was to evaluate the antioxidant effect of Calligonum on cryopreserved human sperm parameters.
Materials and Methods: 10 normozoospermic patients participated in this study. Semen inclusion criteria were as follows: concentration, $>60\times10^6$/ml; motility, >50%; total motile sperm count, $>40\times10^6$ and strict morphology score, >10%. First of all, semen samples were frozen. Then, semen samples were washed ones with Ham's F-10 medium +10% HAS, after 24 hours of freezing. After washing, the sperm suspensions were incubated for 1 h at 37°C in medium supplemented with 10 µM/ml concentration of *C*alligonum extract. Morphology percent, swim up sperm count, total and forward motility of the spermatozoa were measured using computer-aided semen analyzer (CASA). Data was analyzed by one way ANOVA test.
Results: The total and forward motility were significantly ($p\leq0.05$) higher in sperm swim up with the antioxidant (10 µM/ml) than in the control group. Data didn't show any significant difference between two groups in count and morphology percent.
Conclusion: Our data reveled that *CALLIGONUM* extract can improve motility rate. This is an important factor in ART and affect on embryo quality. These

changes are related to antioxidant properties of *CALLIGONUM* extract.

Key words: *Oxidative stress, Spermatozoa, Antioxidant, Motility, Sperm parameters.*

P-178

Influence of 3-hour abstinence on sperm DNA fragmentation and the maturity of sperm chromatin

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Introduction: Repeated ejaculation was suggested that accompanies with decrease in sperm DNA fragmentation (SDF). Therefore, we conducted this study to evaluate efficacy of 3-hour abstinence in reducing SDF and sperm chromation maturity in fertile men.

Materials and Methods: Thirty seven fertile men were asked to give up from ejaculation for a period of 3-7 days and then give one semen sample (raw 1), followed by a period of 3-hour abstinence (raw 3). Sperm processing was performed using swim up method for first (raw1) and second (raw3) ejaculate of each person to produce corresponding neat samples of N1 and N2, respectively. SDF and sperm chromatin immaturity (SCI) were assayed by SDFA and SCMA kit for raw (raw1 and raw2) and neat (N1 and N3) samples.

Results: SDF in the raw 1 and N1 groups showed no significant difference in comparison with raw 3 and N3 groups while it showed a significant decrease in raw 1 and raw 3 groups compared to N1 and N3 groups (24.22±1.65 vs. 16.83±1.66 and 24.72±1.71 vs. 17.78±1.59). On the other hands, SCI increased significantly in Raw 3 group compared to Raw 1 (29.2±2.4 vs. 24.5±1.7) while it did not differ statistically between N1 and Raw 1 groups, N3 and Raw 3 groups as well as between N1 and N3 groups.

Conclusion: We conclude that 3-hour abstinence cannot decrease sperm DNA fragmentation in fertile men while it cause a slight increase in shedding immature sperm in ejaculate which can partially be excluded using swim-up sperm washing method.

Key words: *Abstinence, Sperm DNA fragmentation, Sperm chromatin maturity, Swim up.*

P-179

The role of Chlamydia trachomatis infection on seminal interleukins and semen parametrs in infected males of infertile couples from Iran

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Introduction: Chlamydia trachomatis stimulates both humoral and cell-mediated immune responses. Given the knowledge that infections may play a causative role in male infertility and male factor is a cause of infertility in 50% of cases, the hypothesis that increasing interleukin levels in seminal plasma correlates negatively with semen parameters in infertile men was tested.

Materials and Methods: The impact of C. trachomatis DNA and antibodies in the male partners of infertile couples and related this to semen FVU samples were examined for C. trachomatis DNA using PCR. Serum samples from 250 men were examined for serum C. trachomatis IgG and IgA and IgM using an immunofluorescence assay. Semen samples were examined for semen analysis & interleukins. Levels of ILs were determined by ELISA.

Results: 45 men were positive for C. trachomatis IgG, 3 for IgM but none were positive for IgA. Concentration of semen leucocytes were correlated with levels of IL-6 (p=0.012). IL-8 levels were negatively correlated with semen volume (p=0.013) and positively correlated with male age (p=0.039) and concentration of seminal leucocytes (p=0.001). Semen PH and level of IL-6 was significantly higher in the IgG positive men (p=0.056; p=0.055) whereas semen volume was significantly lower (p=0.001).

Conclusion: Seminal interleukin levels might be a sensitive and useful marker of silent infection/inflammation of the male genital tract. Since there is no correlation between male age and semen volume, reduced semen volume must be caused by accessory glands infection without damage to sperm or spermatogenesis.

Keywords: *Chlamydia trachomatis, Seminal interleukin, Male infertility, Semen parameters.*

P-180

Comparison of human sperm capacitation status using the measured hyper-activation motility pattern between the DGC and DGC-PVP procedures

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Introduction: Coinciding Polyvinyl-pyrrolidone (PVP) high viscosity, clinical center use from PVP for decreasing motility of sperm during ICSI (Intra-cytoplasmic sperm injection) technique. In animal model, it has been shown that PVP can affect sperm capacitation. Capacitation is a very complex process. One of the visible markers for capacitation is hyper-activation motility. Therefore, the aim of this study was to study of human sperm capacitation status using the measured hyper-activation motility pattern and compare it between two sperm selection procedures: the density gradient centrifugation (DGC) and DGC-PVP.
Materials and Methods: Semen samples (n=10) were collected from infertile individuals and semen parameters were evaluated according to WHO criteria. Each semen sample divided into three portions. A portion of the sample was fresh semen sample and second portion was used for DGC procedure. The third portion was considered as DGC-PVP procedure. Kinematic characteristics of sperm in all groups were assessed using computer assisted sperm analysis (CASA). Results were analyzed by SPSS software version 18:5.
Results: The results of this study showed that percentage of sperm hyper-active in DGC-PVP (2.01%) and semen (5.8%) significantly less than DGC (21.13%).
Conclusion: High percentage of sperm hyper-activated in DGC group reflected that of sperm was more underwent capacitation and such sperm cannot enter DNA damage and apoptosis process. Therefore, selection of sperm from DGC procedure is useful for successful fertilization and pregnancy. PVP is useful for immotility of sperm after DGC and the better selection of sperm based on morphology during ICSI procedure.
Key words: *ICSI, PVP, Capacitation, Hyper-activation, Acrosome Reaction, DGC.*

P-181
KLC3-gene expression comparison between fertile and infertile individuals

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Introduction: KLC3 protein as a member of the kinesin light-chain protein family plays an important role in spermatogenesis, by forming a mitochondrial sheath in the mid-piece of the sperm tail. The expression of this gene in mutated mice was lower than in the wild-type mice, which leads to the reduction of sperm parameters quality. This study, for the first time, aimed to compare the expression of the KLC3 gene between fertile and infertile individuals.
Materials and Methods: The current study is a case-control. Semen samples were collected from 19 fertile and 57 infertile individuals. The infertile group consisted of men who had abnormal sperm parameters according to world health organization (WHO) criteria, and the fertile group was selected from embryo-donor volunteers.Sperm parameters using computer assisted sperm analysis (CASA) and the quantitative KLC3-gene expression using the real-time PCR method were measured. Results were analyzed by SPSS (version 18).
Results: Our results revealed that the KLC3-gene expression in fertile individuals significantly higher than those infertile (p=0.036). The correlation efficiency between quantitative KLC3-gene expression and sperm parameters show a significant correlation between sperm concentration and the KLC3-gene expression (r=0.24).
Conclusion: We concluded that absence of KLC3-gene is associated with abnormal spermatogenesis and defects in sperm motility. Presence of this gene is indicator of correct testicular function in the spermatogenesis stage.
Key words: *KLC3, Infertility, Sperm parameters.*

P-182
Effect of oil and ethanol extract of heraclleum persicum on fertility in male mice

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Introduction: Evaluation of the importance and the effects of plant derived drugs on fertility of laboratory animals have long been recognized. In this research the effects of administration of ethanol extract and oil extract heraclleum persicum on parameters sperm in male mice were evaluated.
Materials and Methods: Eighteen mice were randomly divided into 3 groups, control (n=6), group A (n=6) and group B (n=6).Animal in control group received 1ml of distilled water and test but group A received dose of 500 mg/kg body weight of ethanol extract and group B received dose of 500 mg /kg body weight of oil extract of heraclleum persicumrespectively daily for 30 days. At the end of experiment, fertility indices such as sperm motility, count and morphology were measured according to WHO criteria.
Results: There was a significant difference in level α=0.05 in the sperm progressive (p=0.002), nonprogressive (p=0.002), morphology (p=0.02) and viability (p=0.001) group wich received the extract and oil of heraclleum persicum.
Conclusion: The result of this study showed that the oil and ethanol extract of heraclleum persicum may increase fertility potential of spermatozoa in mice.
Key words: *Fertility, Heracleum persicum, Sperm.*

P-183
Effect of systolic and diastolic blood pressure on sperm parameters in men attending to infertility clinic

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Introduction: It is shown that hypertension may affect androgens. The role of blood pressure on sperm parameters is matter of debate. The main goal was to evaluate the probable association between systolic and diastolic blood pressure and sperm parameters.
Materials and Methods: Semen Sample of men (aged: 27-45 years old) from 40 infertile cases who were attended at Yazd research and clinical center for infertility work-up. Subjects with history of varicocele as well as advanced age and smokers were excluded from the study. The systolic and diastolic blood pressure of men was taken. Semen analysis was done according to WHO guidelines. Sperm count and motility was assessed using Makler chamber. Papanicoula staining method was applied for evaluation of sperm morphology.
Results: The mean age of men was 31.5±4.1. The data showed that there is a significant positive correlation between systolic blood pressure and sperm count (Pearson Correlation: 0.3, p=0.049) and progressive motility (Pearson Correlation: 0.3, p=0.02). There was insignificant correlation between systolic blood pressure and total motility and normal sperm morphology as well. No any significant correlations were found between diastolic blood pressure and sperm parameters.
Conclusion: It seems that cardiovascular system may affect male reproductive system via alteration in testicular vessels. More studies are required to draw final conclusion.
Key words: *Systolic blood pressure, Diastolic blood pressure, Sperm parameters.*

P-184
Assessment of sperm parameters and chromatin status in rat experimental varicocele

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Introduction: Varicocele as a common cause of male infertility is introduced and impairs thermoregulation of testis by disrupting the countercurrent heat exchange mechanism in the pampiniform venous plexus and affect spermatogenesis and sperm function. In addition, it prones sperm to chromatin damage and morphological alternation. Therefore, we aimed to evaluate the effect of varicocele induction on semen parameters and chromatin status in a rat's model.
Materials and Methods: 23Wistar male rats were divided into three groups including left varicocele, control-sham and control groups. Left varicocele was induced by surgery. Two months after the surgery, all the rats were anaesthetized and sperm from bilateral caudal segment of epididymis were extracted. Sperm concentration was determined with Mackler chamber. Sperm motility was assessed by light microscopy using pre-warmed slide. Sperm morphology was assessed following Eosin/Nigrosin staining.DNA fragmentation and protamine deficiency were analyzed byacridine orange and chromomycin A3 staining, respectively.
Results: In the varicocele group, sperm concentration, percentage of sperm motility and normal morphology were significantly reduced in the left epididymis compared to the right. Also percentage of these parameters was significantly reduced in the varicocele group than control-sham and control groups.In the varicocele group, percentage of sperm DNA fragmentation and protamine deficiency were significantly higher in left compared to right. Also percentage of these parameters was significantly higher in the varicocele group than control-sham and control groups.
Conclusion: Induction of varicocele has negative effects on spermatogenesis and following it, on sperm quality, sperm production and destruction of sperm chromatin structure.
Key words: *Varicocele, Epididymis, Morphology, Chromatin integrity, Protamine deficiency.*

P-185
The rate of spermatozoa with residual histones in infertile patients; a five years study

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Introduction: Sperm chromatin condensation is a complex process. During this process 85% of histones are replaced by protamines. Protamine deficiency has a negative impact on male fertility, fertilization and early embryonic development. The main goal was to evaluate the rate of spermatozoa with residual histones in a large community of infertile patients.
Materials and Methods: A total of 1394 men referred to andrology laboratory during 5 years (2008-2013), were divided into two groups. 1044 men who had abnormal sperm parameters were considered as case and 350 normozoospermic men as normal groups. Semen analysis was performed according to WHO guidelines. Sperm chromatin integrity was assessed using Acidic Aniline Blue (AAB) assay.

Results: The rate of AB-reacted spermatozoa were significantly higher in case group compared to the normal group (54.29±19.12 vs. 49.78± 18.32, respectively, p<0.0001). There was a negative correlation between progressive motility, normal morphology and AB-reacted spermatozoa in infertile patients (Pearson correlation= -0.24, p<0.0001 and Pearson correlation= -0.22, p<0.0001, respectively).
Conclusion: The infertile men with abnormal semen parameters showed a higher proportion of sperm cells with residual histones and immature chromatin than those men with normal semen indices. Therefore, it seems evaluation of sperm DNA/chromatin integrity could be regarded as a part of male infertility work-up.
Key words: *Male infertility, Sperm chromatin, Residual histones, Sperm parameters.*

4- Nursing and Midwifery

P-186
The association of depression and common complaints of pregnancy in pregnanat women with sleep disorder

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Introduction: 79% of the American and 87.2 % of the Iranian pregnant women suffer from sleep disorders. These disorders are the result of physiological, hormonal, and physical changes of pregnancy occuring from different causes can affect disorders before, during and after childbirth be involved in causing depression during pregnancy.This study aimed to evaluate the association of depression and common complaints of pregnancy in pregnant women with sleep disorder.
Materials and Methods: This is a cross-sectional study conducted on 972 pregnant women with sleep disorders referring to two selected health care centers in Makou affiliated to Urmia University of Medical Sciences during June-Oct 2012. Data collection tools included demographic characteristics, Pittsburgh standard sleep quality, and Beck depression standard questionnaires. Sampling was done by convenient sampling. Pregnant women with sleep disorders (Based on the PSQI) were selected as the subject's then demographic characteristics and beck depression standard questionnaires was completed by women, and statistical methods used to analysis.
Results: The results indicated depression of pregnant women with sleep disorder were 67.3% and there were significant association (p≤0.05) Between depression to all common complaints of pregnanacy [vomiting (r=0.084), headache(r=0.024), fatigue and drowsiness (r=0.015), heartburn (r=0.065), foot spasm (r=0.032), flatulence (0.063), constipation (0.007), reluctance to activity (0.046), and stress (0.069)] except backache and uregency(p>0.05).
Conclusion: Given that a large percentage of pregnant women suffer from sleep disorders and along with it from depression. Hope this period, takes placed usual care, special programs for research, structured psychiatric interview, changing the social circumstances that many women face them, diagnostic and troubleshooting cause of the disturbance.
Key words: *Depression, Sleep disorder, Pregnant women, Iran.*

P-187
The association of fetal sex and common complaints of pregnancy in pregnanat women with sleep disorder

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Introduction: 79% of the American and 87.2% of the Iranian pregnant women suffer from sleep disorders. Thesedisordersarethe result ofphysiological, hormonal, and physicalchangesoccurring in pregnancy due todifferent causes such as fetal Sex.This study aimed to evaluate the association of fetal sex and common complaints of pregnancy in pregnant women with sleep disorder.
Materials and Methods: This is a cross-sectional study conducted on 972 pregnant women with sleep disorders referring to two selected health care centers in Makou affiliated to Urmia University of Medical Sciences during June-Oct 2012. Data collection tools included demographic characteristics and Pittsburgh Standard Sleep Quality. Sampling was done by convenient sampling. Pregnant women with sleep disorders (Based on the PSQI) were selected as the subjects then demographic characteristics and beck depression standard questionnaires was completed by women, and statistical methods used to analysis.
Results: The results indicated that there were significant association (p≤0.05) between fetal sex to backache (r=0.129) and vomiting(r=0.204). Women with female fetus's more than male experienced backpain and vomiting. Other complaints were not significantly different.
Conclusion: Fetal gender is independently associated with adverse pregnancy outcome. Although the added risk is relatively small, further investigation of the mechanisms underlying this association may contribute to our understanding of the pathophysiology of pregnancy complications such as sleep disorders.
Key words: *Pregnant women, Fetal Sex, Sleep disorder.*

P-188
The impact of behavioral health sleeps education on the psychologic disorder in pregnancy: A randomaized Control Trial, year 2012

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Introduction: 79% of the pregnant women suffer from sleep disorders, as 70% of pregnant women have some of the Depression symptoms. These disorders are the result of physiological, hormonal and physical changes of pregnancy occur from different causes, can affect disorders before, during and after childbirth can be involved in causing depression during pregnancy and may be aggravated by disregarding health behavior. This study evaluated the impact of behavioral health sleep education on the improvement of depression in pregnant women with sleep disorders.
Materials and Methods: This study was a randomized clinical trial, conducted on 96 pregnant women with sleep disorder (According to the Pittsburgh Sleep Quality questionnaire). Tools for data collection included demographic questionnaire and beck's Depression Inventory questionnaire. After sampling (easy), participants were randomly (simple) divided into two groups. case group was presented health behavior sleep education during a four-hour session then followed up by Fill out the beck's Depression Inventory questionnaire in the one and two month after intervention by the subjects. The control group received no intervention (except routine prenatal care). Finally statistical methods used to analysis the result by spss version 18.
Results: Significant change was reported in the depression of pregnant women with sleep disorders in the case group in comparison to the control group one and two month after intervention ($p \leq 0.05$).
Conclusion: Findings from this study add support to the reported effectiveness of behavioral health sleep education in the prenatal care and clinical management of insomnia in pregnancy.
Key words: *Behavioral health sleeps education, Depression, Pregnant women, Sleep disorder.*

P-189
Is maternal age related to pregnancy complications?

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Introduction: Considering maternal age increasing during pregnancy in compare to ago, we evaluated the relationship between maternal age and pregnancy outcomes.
Materials and Methods: Data from a prospective cohort study in which pregnant women who had no parameters to affect pregnancy outcome (36 parameters), were analysed. They were monitored until the end of pregnancy. Pregnancy outcome variables including preeclampsia, gestational age, PPROM, method of child birth, birth weight, birth height, and head circumference were determined by hospital records. Independent T-test and Pearson correlation was used.
Results: The minimum, maximum, and mean values of maternal age at the begining of pregnancy were 16, 39, and 25.65±4.32 years old, respectively. Among 700 pregnant women, 4.47% of them got to preeclampsia, 2.85% to PPROM, 7.37% to preterm birth respectively. The mean birth weight, height, and head circumference were 3161.51±437.01 gr, 49.53±2.30 cm, and 34.80±1.88 cm orderly. Method of child birth in 59.39% of mothers was cesarean section.
Conclusion: Age wasn't significantly related with preeclampsia (p=0.331), PPROM (p=0.816), birth weight (p=0.14, r=0.06), and head circumference (p=0.41, r=0.03). But pregnant women who were older had taller neonates (p=0.024, r=0.09), more cesarean section (p=0.04), preterm birth (p=0.005, r=-0.126).
Key words: *Maternal age, Pregnancy outcome.*

P-190
Relationship between maternal fetal attachment and perceived social support

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Introduction: Understanding maternal fetal attachment and modifying its related factors is very important. It seems that perceived social support affect on maternal fetal attachment. This study aimed to determine the relationship between maternal fetal attachment and perceived social support.
Materials and Methods: This cross-sectional study was carried out in 12 health and medical centers, affiliated to Tehran University of Medical Sciences. Four hundred pregnant women were selected for the study. Data were gathered by using two questionnaires. The first one was the maternal fetal attachment scale (MFA, Cranley) and the second one was perceived social support (Zimet questionnaires). Data were

analyzed by using the Pearson, statistical tests. $p<0.05$ denoted statistical significance.
Results: The mean±SD age of the mothers was 27.97±6.47. The mean±SD of the maternal fetal attachment was 84.72±17.16. The mean±SD of the perceived social support was 60.55±15.52 the relationship between the maternal fetal attachment and perceived social support was statically significant ($p=0.000$, $r=0.74$).
Conclusion: It seems that improve perceived social support may result in better acceptation of maternal fetal attachment and motherhood. Midwife should notice and refer pregnant mothers who do not receive enough social support.
Key words: *Attachment, Maternal-Fetal Attachment, Perceived Social Support.*

P-191
Effects of vitamins B6, B12 and C in pregnancy

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Introduction: The water-soluble vitamins B6, B12 and C play important roles in maternal health as well as fetal development and physiology during gestation. This systematic review evaluates the risks and benefits of interventions with vitamins B6, B12 and C during pregnancy on maternal, neonatal and child health.
Materials and Methods: Relevant publications were identified by searching PubMed and Web of Science databases.
Results: Supplementation with vitamin B6 during pregnancy may reduce symptoms of nausea and vomiting, improve dental health, treat some cases of maternal anaemia, and reduce the incidence of some congenital abnormalities, though additional research is needed to confirm these results. In meta-analysis vitamin B6 supplementation had a significant positive effect on birthweight.
Conclusion: Interventions with vitamin C alone or combined with vitamin E did not systematically reduce the incidence of pre-eclampsia, premature rupture of membranes, or other adverse pregnancy outcomes. In meta-analyses, vitamins C and E increased the risk of pregnancy-related hypertension.Other effects of vitamin C or C and E intervention on maternal and neonatal outcomes, including preterm birth, birthweight, and perinatal morbidity and mortality, were not significant. Deficiency of vitamin B12 is highly prevalent in women of reproductive age, especially amongst populations with limited intake of animal source foods. To determine whether improvement of maternal status reduces the incidence of NTDs in the offspring, increases breast milk vitamin B12 content during lactation, and improves infant vitamin B12 status, RCTs with vitamin B12 supplementation during the periconceptual period and pregnancy are necessary.
Key words: *Vitamin B6, Vitamin B12, Vitamin C, Pregnancy.*

P-192
Support to woman during labor

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Introduction: To evaluate the effectiveness and study of the support given to women by a companion of their choice during labor and delivery.
Materials and Methods: A total of 212 primiparous women enrolled in a randomized controlled clinical trial. One hundred and five women were allocated to the group in which support was permitted and107 to the group in which there was no support. Variables regarding patient satisfaction and events related to obstetrical care, neonatal results and breastfeeding were evaluated. Student's t-test or Wilcoxon's test, chi-square were used in the statistical analysis.
Results: Overall, the women in the support group were more satisfied with labor ($p<0.0001$) and delivery ($p<0.0001$). During labor, patient satisfaction was associated with the presence of a companion (RR: 8.06; 95%CI: 4.84-13.43), with care received (RR: 1.11; 95%CI: 1.01-1.22) and with medical guidance (RR: 1.14 95%CI: 1.01-1.28). During delivery, satisfaction was associated with having a companion (RR: 5.57, 95% CI: 3.70-8.38), with care received (RR: 1.11 95% CI: 1.01-1.22) and with vaginal delivery (RR: 1.33 95% CI: 1.02-1.74). The only factor that was significantly lower in the support group was the occurrence of meconium-stained amniotic fluid (RR: 0.51; 95%CI: 0.28-0.94). There was no statistically significant difference between the two groups with respect to any of the other variables.
Conclusion: The presence of a companion of the woman's choice had a positive influence on her satisfaction with the birth process and did not interfere with other events and interventions, with neonatal outcome or breastfeeding.
Key words: *Support, Labor, Delivery.*

P-193
Reviewing psychological and Emotional effects in infertile and fertle women

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Introduction: Infertility is a major problem so long as there is a serious problem in many communities. For infertile couples. It is among the most important problems that are more serious underlying problems, increased anxiety, stress and depression in infertile women is. Through the support of these couples with infertility and mental - are more socially, economically as well as time and cost of unnecessary treatments are unnecessary. It is a way to deal with such problems of

thinking, mentality, education and the environment in which the individual is reared, is different.
Materials and Methods: This article is Review article and based on the Library, Internet study.
Conclusion: Infertility affect on different aspects of infertile couple. The most important effect of infertility is psycosocial disorders. So infertile couples need to receive psychological care.
Key words: *Infertility, psychological and Emotional effects, Copieng strategies.*

P-194
Relationship between prenatal attachment and duration of exclusive breast feeding in primiparous women

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Introduction: Breastfed is complete and ideal food for infants during infancy. Maximize the benefits of breastfeeding can be achieved when the infant is exclusively breastfed. Several factors affect on ability and willingness of women on exclusively breastfeeding performance. Despite promotional programs, in our countries rates of exclusive breastfeeding in the last few years has been downward.Thus, this study was conducted.
Materials and Methods: This was a descriptive-correlational study which was conducted on 100 primiparous women who referred to selected health centers in Mashhad.Data were collected by maternal-fetal attachment questionnaire, infant feeding daily record form and demographic, pregnancy and postpartum questionnaires. This method is that primiparous with gestational age 35-41 weeks were completed Cranly attachment questionnaire and infant feeding daily record form during 8 weeks after childbirth provided them until completed during postpartum period. Finaly In the 4 and 8 weeks after childbirth, forms have been collected and data were analyzed. Software SPSS v. 16, was used for data statistical analysis.
Results: This study showed that there is a direct and significant statistical relationship between maternal-fetal attachment and duration of exclusive breast feeding during 4 and 8 weeks after childbirth. This means that the mother - fetus attachment is greater the duration of exclusive breast feeding during the first 8 weeks after birth is also higher.
Conclusion: According to the results of this study, maternal-fetal attachment is an important factor affecting the exclusive breast feeding. It is recommended that the mother's mental health programs and training courses to promote exclusive breast feeding should be considered.
Key words: *Prenatal attachment, Exclusive breastfeeding, Primiparous women.*

P-195
Fertility preservation in cancer patients

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Introduction: Survival rates for childhood cancer have improved greatly during the past few decades. With increasing numbers of children cured, attention has focused on their quality of life.fertility preservation is now being recognized as an issue of great importance.
Materials and Methods: In this review article, electronic searches were undertaken inPubMed, Scholar google and up to date since 2014.
Results: The established means of preserving fertility include embryo cryopreservation, gonadal shielding during radiation therapy, ovarian transposition, conservative gynecologic surgery such as radical trachelectomy, donor embryos/oocytes, gestational surrogacy, and adoption. The experimental methods include oocyte cryopreservation, ovarian cryopreservation and transplantation, in vitro maturation, and ovarian suppressionin. In men the established means of preserving fertility include the use of assisted reproductive techniques (ART), cryopreserved sperm in the setting of very low numbers of stored sperm, intracytoplasmic sperm injection for men with poor sperm quality and experimental protocols, such as testicular tissue cryopreservation.
Conclusion: With advances in methods for the preservation of fertility, providing information about risk of infertility and possible options of fertility preservation to all young patients with cancer, and discussing future fertility with them should be also considered as one of the important parts of consultation at the time of cancer diagnosis.Since the efficacy of ART is significantly reduced after chemotherapy, early referral for fertility preservation before gonadotoxic treatment will give these young women the best chance to conceive.
Key words: *Fertility Preservation, Cancer Patients, Infertility.*

P-196
The situation of women's access to prenatal care in the United States of America, Australia, Africa and the Middle East: A literature review

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Introduction: Prenatal care is a key strategy for reducing maternal mortality & morbidity rate; but women report many barriers to accessing prenatal care.

This article reviews the literature from 1980 to present on access to prenatal care and barriers around the world.
Materials and Methods: This article has been prepared with study of more than 63 articles to the computer through variety of databases including: Medlin, Google, pub med, Science direct and academic books.
Results: From 1980, maternal mortality has decreased due to of pregnancy complications; one of the major causes has improved prenatal care in the past century. But there are many barriers to accessing prenatal care. Barriers can be classified into social, maternal and structural dimensions. Societal and maternal reasons cited for poor motivation include a fear of medical procedures or disclosing the pregnancy to others, depression, and a belief that prenatal care is unnecessary. Structural barriers include long wait times, the location and attitude of the clinic staff and provider, the cost of services. The most common reasons related to barrier has been reported insurance issues, the race and culture in the United States of America and Australia, poverty in the Middle East and poverty and low level of education in the African countries.
Conclusion: Quality prenatal care can potentially reduce the rates of infant and maternal mortality and morbidity and reduce rates of long-term disability. Midwives and nurses as primary care providers should be aware of the potential barriers to prenatal care, especially in developing countries.
Key words: *Prenatal care, Midwifery, Health services accessibility, Maternal health care.*

P-197
Women's domestic decision-making power and contraceptive use in Iran

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Introduction: Women's domestic decision-making power is a potentially important but less studied indicator of women's ability to control their fertility. The purpose of this study was to examine women's autonomy and contraceptive use by using women's Domestic decision-making power.
Materials and Methods: In this cross-sectional study, two hundred and seventy women of childbearing age, eligible for family planning and residing in Isfahan, were selected through random cluster sampling in 2013 and they filled a researcher-made questionnaire. Women's decision- making Power was estimated questions on who makes decisions at home. The association between Women's decision-making Power and contraceptive use was analyzed through statistical methods.
Results: The results of this study revealed that the Mean (SD) score of women's household decision-making Power was 50.Women's Domestic Decision-making Power had significant association with the length of their present contraception method (r=0.04, p=0.03). Also reproductive decision-making power had significant association with type of current contraception methods (p=0.001). Domestic decision-making power and reproductive decision-making power were not significantly associated. Basic socio-demographic factors such as age, educational level, employment of women and number of their children had significant associations with type and the length of current contraception methods.
Conclusion: The data of this study shows that women expressed half of the possible autonomy. The study shows that domestic and reproductive decision-making power was significantly related to contraceptive use. This suggests that women's empowerment in reproductive health cannot be separately addressed from women's decision-making power. Thus, an empowerment program should prioritize improving women's decision-making power.
Key words: *Decision-making, Women, Contraception, Iran.*

P-198
Effect of intercourse on less need to induction at term

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Introduction: Coitus in late pregnancy may stimulate cervical ripening and secrete prostaglandin which may lead to uterine contractility and labor onset. The aim of this study was to evaluate the relationship between sexual intercourse and onset of labor and prevention of post term pregnancy.
Materials and Methods: This prospective study was held on 212 pregnant women over 39 weeks of low-risk referred to gynecology clinics at Ghaem and Omolbanin hospitals. Samples were selected by non-probable method based on objectives. Eligible individuals were chosen and categorized into two groups of control (102 persons) and case (110 persons). The Control group had no sexual intercourse until delivery. In case group first vaginal examination and Bishop Score determination and non-stress were done then they had sexual intercourse from the week 39 once or twice a week. Collected data were analyzed by the statistical SPSS software version 16, t-test, chi-square and Mann-Whitney tests. P value less than 0.05 was considered statistically significant.
Results: The mean gestational age in two group had not significant different (p=0.3), need to stimulated delivery (p<0.0001, and rate of cesarean section (p<0.034) were significantly lower while the Bishop scores was higher in the case group (p<0.002). There was no difference in post term pregnancy (p<0.88) and complication of delivery (p<0.68) between two groups.

Conclusion: Sexual intercourse at term may be associated with an earlier spontaneous onset of labor and less need to induction of labor and low cesarean section.

Key words: *Delivery, Labor, Post term pregnancy, Sexual intercourse, Term pregnancy.*

P-199
Perimortem Cesarean section in ongoing maternal death

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Introduction: A perimortem cesarean section is advised in cases of cardiopulmonary arrest after all other resuscitative measures had failed or in conditions that ongoing pregnant maternal death with gestational age older than 28 weeks. It may result in fetal salvage.

Case: We report the case of a 32 weeks pregnant woman with brain tumor who underwent a successful perimortem cesarean delivery. The result of this procedure Led to the birth of a newborn.

Conclusion: Fetal salvage by caesarean section should be considered in cases that it is not possible to survive mother's life.

Key words: *Fetal salvage, Cesarean Section, Maternal Death.*

P-200
Correct scan, for the correct patient, at the correct time: A guideline for sonographic evaluation of the infertility for midwives and nurses

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Introduction: The aim of this article was to describe a guideline for sonography in evaluation of infertility for midwives and nurses.

Materials and Methods: A narrative review was performed within articles published at "PubMed", "Elsevier", "SID" and original text books to reach the aim.

Results: Sonographic evaluation of infertility is indicated in several periods of time during the infertility treatment cycle. Sonography is the first imaging modality in the investigation of the female pelvis which provides information for detecting and characterizing possible factors of infertility such as: endometrial polyp, poly cystic ovary syndrome (PCOS), congenital uterine malformations, uterine fibroma, endometriosis, hydrosalpinx, etc. Moreover, it provides data of ovarian and endometrial responses to hormonal therapy during the treatment cycle. However, pelvic organs are influenced by cyclic changes during menstrual cycle and hormone therapy. Thus, pathologic conditions of pelvis need to be well assessed depending on the day of the cycle. Therefore, best timing of the sonography is the key point for diagnosis and decision making about the patients. With respect to the importance of sonography in infertility workup, we have tried to mention a guideline that every midwife and nurse working at infertility centers needs to know for planning the best time of sonography and to analyze the sonographic findings.

Conclusion: Sonography is an accurate and non-invasive tool that helps midwives and obstetricians to evaluate infertile women and make better treatment choices. Therefore, every midwife needs to learn about the application of which and how to manage patients based on sonography reports.

Key words: *Infertility, Sonography, Menstrual cycle.*

P-201
The effect of chamomilla cream on pain of episiotomy in primiparous women

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Introduction: Episiotomy is a surgical incision of the perineum. Perineal pain is the most common complaint after episiotomy in mothers.Chamomile is in the traditional herbal medicine as a Analgesic. The aim of this study was to determine the effect of chamomilla cream on pain of episiotomy.

Materials and Methods: This triple blind clinical trial was accomplished on114 qualified primiparous women, who were candidate for normal vaginal delivery in OmmulBanin hospital Mashhad in 1392.sampling was convenient and women were randomly divided into two groups intervention (chamomile) and control (placebo). Mothers used 0.5mg of prescribed creams (chamomile or placebo), on the stitches site twice daily for 10 days after delivery. Short McGill pain questionnaire was complete by mother in the 2 hours and 12 hours after episiotomy repair and in the first, seventh, tenth and fourteenth days after delivery.Data were analyzed with SPSS software version 16, Mann-Whitney tests, t, chi-square and Fisher exact.

Results: Episiotomy pain was not significantly different between the groups, in the 2 hours and 12 hours after episiotomy repair and in the first day after delivery. While the amount of pain were significantly different between the two groups in the seventh (p=0.039), tenth

(p=0.047) and fourteenth days after delivery (p=0.039). The mean pain score was at the 7th day 11.360±5.045, at the 10th day 7.160±4.102 and at the 14th day postpartum 4.444±3.431 for the Chamomile group and at the 7th day 13.880±6.844, at the 10th day 8.960±4.819 and at the 14th day postpartum 7.318±4.291 for the placebo group

Conclusion: Chamomile cream can be prescribed for Reduction of pain episiotomy.

Key words: *Chamomilla, Pain episiotomy, Episiotomy*

P-202

The relationship between contraceptive pills and successful treatment of infertility

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Introduction: Today, in some of infertility centers, despite controversial reports on the effects of contraceptive pills on the outcome of infertility treatment, in all patients before GNRH agonists to be typically administered. But in some studies the use of contraceptive pills did not nor has a negative impact effect on pregnancy rates. The purpose of this study was to investigate the effect of contraceptive pills on the outcome of infertility treatment.

Materialsand Methods: A review of intervention studies conducted by searching of proper key words English and Persian in valid journals.

Results: In the study of Esmailzadeh, the use of contraceptive pills before in vitro fertilization treatment had no effect on fertility rate. Researchfindings in study of Talebiyan, Pink, David and colleagues showed that consumption of regimens contraceptive pills together GNRH agonists had no effect on the pregnancy rate. Al Mayzyn also concluded that contraceptive pills on the outcome of in vitro fertilization have no effect. Gary Singer, in his meta-analysis includes numerous studies had shown that the use of pills did not increase pregnancy rate. However Byankys Cooley has reported that the oral contraceptive users had lower pregnancy rates.

Conclusion: According to the results, despite positive effects on effective indicators of treatment success, the need for further studies on the use of contraceptive pills in the treatment of infertility is exist.

Key words: *Contraceptive pills, Successful treatment, Infertility.*

P-203

Body Mass Index (BMI) before pregnancy and postpartum anxiety level in primiparous women

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Introduction: Many documents demonstrates relationship between high Body Mass Index and women anxiety and depression, but among our research now, there are not any evidence about postpartum; so this study describes relationship between women Body Mass Index (BMI) before pregnancy and their postpartum anxiety level.

Materials and Methods: In this study, 54 primiparous women were selected randomly and their BMI before pregnancy was calculated. In postpartum also, the anxiety scale was measured by spielberger questionnaire and entering data in SPSS softwere, was analyzed by Kruskal Wallis Test.

Results: The mean anxiety level of underweight (BMI<18.6), normal (18.6< BMI<24.9) and overweight (BMI>25) groups were orderly as follow: 41.5, 41.52 and 44.18. It seems more the average of BMI before pregnancy, more postpartum women anxiety level but it is not significant Statisticsly (p=0.208).

Conclusion: This study demonstrates that high grade of BMI before pregnancy may result in increasing postpartum women anxiety level, bad mood and delays maternal- neonate communication and corrects breastfeeding.

Key words: *Maternal anxiety, Body Mass Index, Pregnancy, Postpartum.*

P-204

Comparison of the effects of dry cupping and acupressure at acupuncture point (BL23) on the women with postpartum low back pain

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Introduction: Postpartum Low Back Pain (PLBP) affects more than half of women's population. This study aimed to evaluate the effects of acupuncture branches on postpartum low back pain severity among the primiparous subjects visiting the selected educational centers affiliated to Shiraz University of Medical Sciences, Shiraz, Iran.

Materials and Methods: This clinical trial was conducted on 150(each group of 50 people) cases in 2012. Cupping therapy was done every other day in four 15-20 minute sessions a week. Besides, acupressure was applied according to the circular model for 20 minutes. The patients filled out the short form McGill Pain Questionnaires. Then, the data were analyzed using the SPSS statistical software (v. 16) and repeated measurements and Chi-square tests.

Results: In the cupping group, the mean difference of postpartum Low Back Pain intensity reached from

31.8±10.8 before the intervention to 9.0±6.7, 7.5±6.6, and 4.1±3.6 immediately, 24 hours, and 2 weeks after the intervention, respectively and the results of repeated measures ANOVA showed a significant difference between the three follow-up periods ($p<0.05$). On the other hand, this measure reached from 31.1±11.0 before the intervention to 22.1±7.3, 16.2±6.0, and 11.7±5.3 immediately, 24 hours, and 2 weeks after the intervention, respectively in the acupressure group.

Conclusion: The study results showed that these modalities could sedate the pain. Therefore, they can be applied as efficient treatments for reducing the low back pain.

Key words: *Dry Cupping, Acupressure, BL23, Low Back Pain, Postpartum.*

P-205
Quality of life and related factors among infertile women

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Introduction: High levels of stress in infertile women were associated with a decrease in sexual function and quality of life will be affected.

Materials and Methods: This study was correlational. The study population of infertile women who were referred to the Center for Reproductive Health Research Kosar sample consisted of 147 individuals. Using demographic data questionnaire, quality of life in infertile women and irrational thoughts about having children was collected. One-way ANOVA, t-independent, Pearson's correlation and multiple regression analysis were used to analyze the data.

Results: The results showed that 3.48% of infertile women to live a good quality 1.36 of the average quality of life and 6.15% had poor quality of life, and one-way ANOVA between quality of life and a strong desire to have children ($p=0.011$) showed a significant relationship. The Pearson correlation between QOL scores and scores of irrational thoughts regarding having children, there is an inverse relationship ($p<0.001$).

Conclusion: Quality of life of infertile women was associated with irrational thoughts about having children. Infertility counseling improve quality of life and moderator Mvsrmy thinking is the basis for identifying the consultation can be infertile women believe that having children is essential to have a life happiness.

Key words: *Infertility, Life, Irrational thoughts, Having children.*

P-206
Lunar effect on depression, menstruation cycles, labor pain and fetus sex

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Introduction: There are many years that menstruation cycle of women are depends on moon and lunar cycle. It is accepted that menstruation cycle follows lunar cycle before civilization and knowing that it is related to hormonal changes. Somebody believe that two fertility cycles may happen in one menstruation cycle ,one according to ovulation and another one according to lunar cycle. Any way a study in Britain on lunar cycle and fertility showed that sperm count significantly increase during fertility period with lunar cycle. Another study showed that women, whose birth control is according to both lunar cycle and biological menstruation cycle, were effective 98% for birth control. It is notable that our mood and emotional status will rise on full moon.

Materials and Methods: this is a cross sectional comparative study in which the first 6months of years 1392 and 1391compared for number of delivery ,labor pain , false labor and fetus sex according to lunar phase. Data analyzed by SPSS software.

Results: Physicians and nurses, who work in emergency ward, said that the full moon night was the hardworking night in month also depression was more than the others nights. Of course in Beheshti hospital of Isfahan university of Medical science the same results shown in emergency and labor ward.

Conclusion: Anyway theories said that your child`s sex will be determine by lunar factors in pregnancy time. A study in India showed that about83% of women who become pregnant on full moon have born boy new born. Some studies reported that many pregnant women had false labor pain or even rupture of membrane in full moon nights.

Key words: *Menstrual phase, Fertility, Labor pain, Lunar phase.*

5- Psychology

P-207
Zoroastrians support oocyte and embryo donation program for infertile couples

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Introduction: The main goal was to evaluate the attitudes and knowledge of Zoroastrians living in Iran

towards oocyte donation (OD) and embryo donation (ED) program for infertile couples.

Materials and Methods: This cross sectional study consisted of 318 Zoroastrians (n=175 for OD, n=143 for ED) of both sexes. The questionnaire form comprised two parts. Part one consisted general demographic characteristics of the participants. Part two contained twenty multiple-choice questions about attitude and knowledge of participants towards OD and ED.

Results: Majority of the participants supported OD (69.7%) and ED (71.3%) for infertile patients. In addition, 40% and 42% preferred donation program (OD and ED, respectively), compared to adoption. More than half of the participants did not know whether their religion accepts OD and ED program or not. Approximately, 80% of our respondents supported psychological counseling for both donors and recipients. Moreover, about 56% of the participants necessitated the advertisement on OD/ED program in the mass media.

Conclusion: Zoroastrians supported both OD and ED programs equally. It appears that dialogue and advertisement in mass media can improve knowledge of general public in different aspects of third party reproduction regardless of their religious background.

Key words: *Oocyte donation, Embryo donation, Zoroastrians, Iran.*

P-208
Ethical issues regarding fertility preservation for women

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Fertility preservation consists of a set of methods maintaining current ability of people for fertility helps them to have a genetic child in future. Nowadays, these techniques have been welcomed widely as far as they can be divided in to two groups named as medical and social. In the first one, patients due to disease or treatment-related complications may lose their fertility. While, the latter despite health are seeking fertility preservation, because they want pausing their ability to having children in to the future for social and personal reason. Since these methods have been considered invasive for body, many questions and criticisms have been raised about its use for patients and healthy women willing to use them just because of aging. In this descriptive-analytic study, ethical issues were retrieved from books, papers, international guidelines, thesis, declarations and instructions, and even some weekly journals using keywords related to fertility preservation, Embryo cryopreservation, Oocyte cryopreservation, women's reproductive autonomy. At present, application of these procedures approved in cases of medical necessities and it has been considered consistent with beneficence principle which is the most important principle of medical ethics. Regarding social issues despite theobjectionsconsidering them contrary tothe Nonmaleficence principle, many feminists and scholars believe to women's reproductive autonomy, have assigned them ethical provided observation of some conditions.

Key words: *Fertility preservation, Vitrification Freezing, Women's reproductive autonomy.*

P-209
Attitude of Iranian young people toward egg donation from resulting children point of view

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Introduction: Iran is the only Islamic country in which, donation programs are practiced. This study is done to provide an in-depth analysis of young Iranians' attitudes toward oocyte donation from resulting children point of view.

Materials and Methods: As we didn't have access to donation resulting children because of Iranian infertile couples' rejection, Iranian young people, 15-25 years were recruited. Quota sampling method was chosen because the culture, religiosity and education were important in our study. 2 FGDs were held to reach to the data saturation. The participants were asked to give their ideas as donation children. Thematic analysis was used.

Results: Almost all of the participants accept egg donation. Our participants were against disclosure, didn't want to know the donor or have any relation with her or her other children. Social stigma was presented and participants didn't have tendency to share this information with others. Financial incentives were acceptable but disliked as a child with genetic link to the donor. Our participants made a distinction between egg donation and sperm donation, but in presenting their reasons there were only feelings and some social and legal issues. It seems that father is the point of power in Iranian families and he is responsible for family security.

Conclusion: We defined "safeguarding family integrity" as the main concern of our participants. Father was considered the basis of the family and social stigma was considered as the second important concern. Egg donation was considered completely acceptable when is necessary from children point of view.

Key words: *Egg donation, Attitude, Children, Acceptability, Disclosure.*

P-210
Impact of social support on infertile couples

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Introduction: Infertility is a medical condition that affects emotional and socioeconomic dimensions of infertile couples and these factors, subsequently, influence the consequences of infertility treatments. Social support is an important factor that can promote mental and physical health and manage the effects of stress. This review assesses the impact of social support on various aspects of infertility.
Materials and Methods: This article reviews the literature published from 2000-2014 in Sciencedirect and PubMed databases by using keywords [social support, psychosocial support, infertility] in the title and abstracts.
Results: Among 88 articles, 23 literatures were selected. Results of studies in terms of perceived social support indicates that women more than men seek social support and also received more social support from family and friends so less suffer from treatment failure. During treatment, lack of social support is associated with higher stress; anxiety; depression; hopelessness; stigma; relationship, sexual and social problems; lower self-esteem, quality of life and compliance. Also it can causemaking the decision to cut the treatments. In pregnancy through IVF, Social support lead to better mother and fetus attachment, more PTG and less postpartum depression but it has no effect on the relationship between mother and infant in the postpartum period. Lower social support in women with HIV also causes less following the treatment.
Conclusion: Social support can directly or indirectly affect various aspects of life in infertile couples. So paying attention to this important aspect of health is the path to improve the outcomes of infertility.
Key words: *Infertility, Social support.*

P-211
Predicting infertility stress based on the health locus of control among a group of women with fertile problems in Shiraz-Iran

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Introduction: Women with infertility problem experiences high emotional distress such as stress, anxiety and depression. The health locus of control seems to have different impact on health-related problems. The purpose of this study was to predict infertility stress based on health locus of control (internal, powerful others, and chance) among a group of women with fertility problem in Shiraz.
Materials and Methods: A hundred and twenty women with fertile problems were recruited from infertility clinics in Shiraz using convenience sampling. Participants completed the research measures including Fertility Problem Inventory and Multidimensional Health Locus of Control Scale.
Results: Regression analysis indicated that the component of chance locus of control ($p<0.01$) and illness duration ($p<0.01$) significantly predicted infertility stress in women with fertility problem. The participants who attributed their infertility to chance and those who had a longer duration of fertility problem were more likely to experience infertility stress. The two other components of locus of control including internal and powerful others did not predict infertility stress.
Conclusion: This study highlights the importance of perceiving control on the psychological well-being of women with infertility problem.
Key words: *Infertility, Stress, Locus of control, Internal chance, Powerful others.*

P-212
Relationship between marital adjustment and individual fertility characteristics in infertile couple

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Introduction: Marital adjustment is reduced in an infertile couple.Marital adjustment is affected by several factors.This study aimed to identify the relationship betweenmarital adjustment and individual fertility characteristics (age, spouse's age, occupation, spouse's occupation, education, spouse's education, cause of infertility, duration of awareness of infertility and treatment failure) in infertile couple referring to the medical centers in Isfahan in 2012.
Materials and Methods: This study is adescriptive correlational. 120 infertile couples were selected by convenience sampling. Data were collected cross-sectional. Locke Wallace Marital Adjustment Scale and Individual Fertility questionnaire were used to collect the data. Data were analyzed by inferential statistical tests (Pearson correlation, Spearman correlation coefficient, t-independent, one-way ANOVA) through SPSS version 20.
Results: Analysis of the results showed high correlation between man occupation, duration of awareness of infertility, treatment failure and man marital adjustment also there is high correlation between duration of awareness of infertility and women marital adjustment, while there is nocorrelation between age, spouse's age,

occupation, spouse's occupation, education, spouse's education, cause of infertility andmarital adjustment.

Conclusion: The findings of this study showedincreasing duration of awareness of infertility and treatment failure decreases man marital adjustment, while increasing duration of awareness of infertility increases women marital adjustment and there is no correlation betweenothere individual fertility characteristicsand marital adjustment .The present result necessitates paying more attention to the role of individual fertility towards achieving appropriate Counseling and treatment and increasing the marital adjustment.

Key words: *Marital adjustment, Individual fertility characteristics, Infertility*

P-213
Effectiveness of communication skills training program on marital adjustment in infertile couples

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Introduction: Marital adjustment is reduced in an infertile couple. This study aimed to determine the effect of a communication skills training program on marital adjustment in infertile couple referring to the medical centers in Isfahan in 2012.

Materials and Methods: This study is a field trial study using control groups in which 32 infertile couples were selected by convenience sampling, and then, were randomly divided into control and training groups. Data were collected before (T1), 1 week after (T2), and 1 month after (T3) the training. In the intervention group, education was conducted in the form of five 3-h sessions, sequentially held with 1 week interval. Locke Wallace Marital Adjustment Scale and Individual Fertility questionnaire were used to collect the data. Data were analyzed by descriptive statistical tests [*t*-test, analysis of variance (ANOVA), and least significant difference (LSD)] through SPSS version 20.

Results: Communication skills training increased the marital adjustment in infertile couple. ANOVA showed that couple's marital adjustment was significantly greater in the intervention group compared to the control group, after training. LSD test showed no significant difference in marital adjustment in T2 and T3.

Conclusion: Communication skills can have a significant impact on the marital adjustment of infertile couples, and communication skills training can improve the quality of marital life skills through the counseling sessions conducted with infertile couples.

Key words: *Communication skills training, Infertility, marital adjustment.*

P-214
Psychological and social aspects of infertility in men

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Introduction: Research concerning the psychosocial aspects of infertility and infertility treatment focuses more often on women than men. The aim of this review was to synthesize the English-language evidence related to the psychological and social aspects of infertility in men and discuss the implications of these reports for clinical care and future research.

Materials and Methods: A structured search identified 73 studies that reported data concerning the desire for fatherhood and the psychological and social aspects of diagnosis, assisted reproductive technology (ART) treatment and unsuccessful treatment among men with fertility difficulties. The studies are diverse in conceptualisation, design, setting and data collection, but the findings were reasonably consistent.

Results: These studies indicated that fertile and infertile childless men of reproductive age have desires to experience parenthood that are similar to those of their female counterparts; in addition, diagnosis and initiation of treatment are associated with elevated infertility-specific anxiety, and unsuccessful treatment can lead to a state of lasting sadness. Men prefer oral to written treatment information and prefer to receive emotional support from infertility clinicians rather than from mental health professionals, self-help support groups or friends. Nevertheless, structured, facilitated psycho-educational groups that are didactic but permit informal sharing of experiences might be beneficial.

Conclusion: There are gaps in knowledge about factors governing seeking, persisting with and deciding to cease treatment; experiences of invasive procedures; parenting after assisted conception; adoption and infertility-related grief and shame among men. Few resource-constrained countries have any data concerning male experiences of infertility.

Keywords: *Assisted reproductive technologies, Male infertility, Psychologically-informed clinical care, Psychosocial aspects.*

P-215
The relationship of spouse image of body with sexual function and marital adjustment in infertile women

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Introduction: Spouse image of body is one of the body image concepts. It has an important role in self-esteem, marital adjustment and women's sexual health. That is, women with more positive spouse image of body may be more confident that their partners will continue to accept them and thus have more sexual function and relationship satisfaction.This study therefore aimed to the relationship of spouse image of body with sexual function and marital adjustment in infertile women in2011 in Mashhad, Iran.

Materials and Methods: This comparative correlation study was carried out on130 infertile women referred to Montaserieh Infertility Research Center, Mashhad who was selected using convenient. Research tools were consisted of valid and reliable demographic questionnaires including personal and infertility-related information, modified Younesi Body Image Questionnaire, ROSEN Female Sexual Function Index (FSFI) and Spanier Marital Adjustment Scale (DAS). Data analysis was carried out by SPSS software using t-test, one way ANOVA, Spearman and Pearson correlation tests and linear regression.

Results: The mean score of spouse image of body in infertile women was 52.7±10.5 and the mean score of sexual function and marital adjustment were 27.2±3.8 and 113.8±19.7 respectively. 54.6% of the women had low sexual function and 76.9% had high marital adjustment. A direct correlation was also found between spouse image of body with sexual function and marital adjustment in infertile women (p=0.000, r=0.4).

Conclusion: The findings showed that in infertile women with improved spouse image of body will be better sexual function and marital adjustment; therefore we can use these results in implement training programs and consulting, special in infertile women who have sexual and marital disorders.

Keywords: *Body image, Spouse image of body, Sexual function, Marital adjustment, Infertility.*

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