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The 4th International Congress on Reproduction

ISERB 2018

Abstracts

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The 4rd International Congress on Reproduction
Abstracts
ISERB 2018

In the Name of God

The 4th International Congress on Reproduction (ISERB 2018)

25-27 April 2018

4th ISERB Award of Excellence in the Field of Reproduction
25-27 April 2018

Iranian society of Embruology & Reproductive Biology

Iran Scientific Association of Modwifery
2018

Contents

Message from the Congress Chairman ----------
Message from the Scientific Secretary ----------
Chair and the Secretariats of the Congress ----------
Scientific Committee ----------
Abstracts of Oral Presentations ----------
Abstracts of Poster Presentations ----------

***The authors will bear* full *responsibility* for the accuracy of their English abstracts**

Chairman Message of the 4th International Congress on Reproduction

Using modern technologies for diagnosis and treatment of medical problems including infertility has opened a new horizon in front of modern humans and raised hope and quality of life. Although any scientific development increase human potential and power to meet his problems, it brings about various challenges related to the consequences of applying new technologies. Accurate identifying of the problems and related solutions needs a comprehensive campaign by the intellectuals and experts to consider the reproductive issues from the clinical, empirical and ethical perspectives and lay a ground for adjustment of questions and challenges.

The Iranian Society for Embryology and Reproductive Biology has the privilege to organize the "4th Congress on Reproduction". It is our proud that "annually" pull together the players of reproduction and fertility field to introduce the most cutting edge medical achievements and provide the foundation for exchange of scientific knowledge and multidisciplinary cooperation. Focusing on current problems including Endometriosis, PCOs, recurrent miscarriage, animal related cloning, biomarkers in reproductive health, new technologies in embryology and donation related challenges is a base for participation of scientists, local and abroad, to exchange their knowledge and experience in various fields of reproduction and is a hope for multidisciplinary projects to diagnose and treat infertility.

Holding pre-congress workshops including telesurgery by Dr. Shaheen Khazali, one of the best endometriosis surgeon specialists from the *British Society for Gynaecological Endoscopy, and other international training programs will lay the ground for discussion on issues not introduced during the congress and exchange of scientific views among the participants. In addition, PhD students of reproductive sciences programs will discuss on the present problems and barriers on the progress of this field specially obtaining license required for specific activities from the related authorities.*

The society managed to hold a national and international congress with the cooperation of other Iranian organizations like Iranian Society for Reproductive Medicine. Although it took a long time to make the final decision, but for the first time in country, the society accomplished to hold a joint congress by the society and Iran University of Medical Sciences for two successive years. This year the Congress on Reproduction and Congress of Reproductive Health and Childbearing will be held jointly.

Meanwhile, on the seventh anniversary of its establishment and completion of its board of directors in the second period, the society seeks to settle its election electronically under the supervision of Ministry of Health during the congress. We hope to witness a collective participation to elect an active and powerful board of directors.

Beside the congress, ISERB Award of Excellence in Reproduction to introduce pioneers and prominent features, thesis and articles in reproduction and TAKTA Festival to present photos, posters and cartoons about reproduction will be held.

Also, campaign on protecting infertile couples will be held with the cooperation of all fertility centers and non-governmental organizations during the congress. With collaboration of Islamic Republic of Iran Broadcasting and other audio recording and informative media various dimensions of infertility diagnosis and treatment will be introduced that provides free counseling to infertile couples concerning about their problem. Beside the exhibition of reproduction related drugs and equipment, it has been arranged to present fertility centers interested to be introduced.

It hopes your support and *enthusiastic participation* contributed greatly in making the event a success.

Dr. Mohammad Mehdi Akhondi
Congress Chairman of the 4th International Congress on Reproduction

Message from the Scientific Secretary

In these days which more that forty years have been passed from the birth of the first "test tube baby" in the world, the science of reproduction meets remarkable advances as a new branch of medicine. Focusing on the latest developments in assisted reproductive techniques and considering the future of the reproductive sciences, "The 4th International Congress of Reproduction" seeks to bring about the most cutting edges related achievements through introducing new discussions and upcoming challenges among national and international actors.

Researchers who work on reproduction attempt to increase efficiency of the current methods and obtain new techniques for the treatment of infertile couples. However, difficulty and expenses of infertility treatments, social problems and related tensions are obstacle for more developments. New techniques help to improve effectiveness of the related treatments include new advances of molecular genetics, time-lapse imaging for the selection of most qualified embryos, using new drugs, ovarian stimulation, tissue cryopreservation, increasing quality of egg maturation in vitro and using stem cells and biomarkers. Organizing applied workshops by distinguished national and international experts to improve scientific and practical potentials of related participants is one of the aims of ISERB 2018.

Dr. Fardin Amidi
Congress Scientific Secretary of the 4th International Congress on Reproduction

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Oral Presentations

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Andrology lab and ARTs-related test results

نقش آزمایشگاه اندرولوژی در نتایج ART

A-10-304-1

O1: Role of Antioxidants to Overcome Sperm DNA Fragmentation

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Abstract

Sperm oxidative stress and DNA damage affect male fertility. The etiology of sperm DNA damage is multi-factorial and may be due to primary testicular, secondary (e.g. environmental) factors or be the result of aberrant protamine expression, excessive ROS (reactive oxygen species) generation and abortive apoptosis during spermatogenesis. Seminal fluid is a source of antioxidants and protects spermatozoa from oxidative injury; However, sperm cells have little cytoplasmic fluid and little antioxidant capacity. Studies have evaluated the relationship between semen antioxidant levels and sperm DNA damage and have reported conflicting results. Evidences showed that infertile men possess more sperm DNA fragmentation than do fertile men. Therefore, it is important to identify strategies that reduce sperm DNA damage. Several in-vivo and in-vitro studies demonstrated that antioxidants (e.g. vitamins C and E, catalase, glutathione) either individually or in combination have positive effects on rate of sperm DNA integrity and fertility potential. Reported that Vitamin E, C and N-acetyl-L-cysteinen could reduce ROS concentration and improved DNA damege rates. Moreover, the positive effects of combination zinc, selenium and L-Carnitine on sperm motility and DNA integrity have been documented. Most studies are small in size and differ in the target population selected as well as the type, dose and duration of antioxidant therapy, and the mechanism of action of antioxidants has not been established. Large doses of antioxidants can be as risks of depleting the essential physiological levels of ROS and could reduce the interchain disulphide bridges in protamines and promoting DNA decondensation in spermatozoa.

Keywords: Antioxidant, DNA Fragmentation, Sperm.

A-10-507-1

O2: Indirect Co-Culture of Testicular Cells with Bone Marrow Mesenchymal Stem Cells Leads To Male Germ Cells-Specific Genes Expression

Reza Nejatbakhsh *, Mehrdad Ghorbanlou, Nasim Malekmohamadi, Reza Shirazi, Saeed Shokri, Alireza Abdanipour

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Abstract

Background: Non-obstructive azoospermia is mostly irreversible. Efforts to cure this type of infertility have led to the application of stem cells in the reproduction field. In the present study, testicular cells-mediated differentiation of male germ-like cells from bone marrow-derived mesenchymal stem cells (BM-MSCs) in an in vitro indirect co-culture system is investigated. Materials and Methods: Mouse BM-MSCs were isolated and cultured up to passage three. Identification of the cells was evaluated using specific surface markers by flow-cytometry technique. Four experimental groups were investigated: control, treatment with retinoic acid (RA), indirect co-culture with testicular cells, and combination of RA and indirect co-culture with testicular cells. Finally, following differentiation, the quantitative expression of germ cells-specific markers including Dazl, Piwil2 and Stra8 was evaluated by Real-time PCR. Results: Molecular analysis revealed a significant increase in Dazl expression in the indirect co-culture with testicular cells group in comparison to the control group. Quantitative expression level of Piwil2 was not changed significantly in comparison to the control group. Stra8 expression was significantly higher in RA group in comparison to other groups. Conclusion: Indirect co-culturing of BM-MSCs in the presence of testicular cells leads to expression of male germ cells-specific gene, Dazl, in the induced cells. Combination of co-culture with testicular cells and retinoic acid did not show any positive effect on specific genes expression.

Keywords: BM-MSCs, Co-culture, Germ cells, Retinoic acid, Testis.

A-10-717-1

O3: Select the Best Sperm for ICSI with DGC/Zeta procedure may Reduce Abortion Rate

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Abstract

Background: Implantation is a complex biological that is critical to successful pregnancy. Implantation failure is multifactorial in its origin and is a problem that is often unrecognized. One of these effectiveness factors is sperm quality. For this goal, a simple and non-invasive method of sperm selection, performed prior to ART procedures, should be developed. The Novel method DGC/Zeta appears to be a suitable procedure to recover sperm with normal chromatin and intact DNA. Therefore, we aimed to compare the pregnancy outcomes of DGC/ Zeta procedure with routine sperm selection (DGC), in infertile men candidate for ICSI.

Methods: From a total of 100 ICSI cycles studied, 50 cycles were allocated to DGC/Zeta group and the remaining was included in the DGC group. Pregnancy outcomes were compared between the two groups.

Results: In the present study, abortion rate significantly was lower in the DGC/Zeta group compared to the routine DGC method .As well as implantation and pregnancy rate were improved following the combined DGC/Zeta procedure when compared with DGC alone.

Conclusion: Novel method DGC/Zeta may increase implantation rate and pregnancy outcome be due to use of strategy to select the best sperm or to eliminate those that are abnormal from the sperm population.

Keywords: Abortion, DGC, DGC/ Zeta, Implantation, Pregnancy.

A-10-768-1

O4: Correlation Between Cytokine IL-6, And Transcriptional Factors Zing Finger Protein-637 and SOX-2 During Spermatogonial Stem Cells Self-Renewal in Experimentally-Induced Varicocele

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Abstract

Background: It has been reported that, the developed grades of varicocele result in germ cells depletion and severe inflammation in testicular tissue. Thus, the present study was done to assess the cross-link between varicocele-induced cytokine IL-6 and transcriptional factors Zing finger protein-637 (Zfp637) and SOX-2 in experimentally-induced varicocele.

Method: For this purpose, the animals were divided into control (NO=6) and varicocele-induced groups (NO=18). The animals in varicocele-induced group were samplized following 2, 4 and 6 months (NO=6 rats in each). The animals in control group were undergone simple laparotomy. The mRNA and protein levels of IL-6, Zfp637 and SOX-2 were analyzed by using qRT-PCR and western blot techniques. Moreover, to assess the mentioned proteins expression in spermatogonial stem cells (SSCs), the target proteins were stained in mitotic, meiotic and spermiogenic seminiferous tubules.

Results: Observation revealed that, the varicocele diminished Zfp637 expression, time dependently. However, the mRNA and protein levels of IL-6 and SOX-2 were enhanced time dependently in varicocele-induced animals. The IHC analyses exhibited the same patterns of target protein reduction and/or elevation in SSCs during mitotic, meiotic and spermiogenic stages.

Conclusion: In conclusion, our data, albeit for the first time, showed that, the varicocele-induced overexpression of IL-6 suppresses the SSCs self-

renewal through suppressing the Zfp637 expression and stimulating the SOX-2 expression.

Keywords: IL-6, Self-renewal, Sox-2,Varicocele, Zfp-637.

A-10-55-1

O5: New Prognostic Biomarker to Predict in vitro Fertilization Outcomes

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Abstract

Infertility is one of the stressful and critical problems in the individual, marriage, family and the social life. One of the routine methods of infertility in Iran is IVF which is a method of ART technic. cfDNA is currently used as biomarker for the detection of many diseases such as some cancers and gynecological and obstetrics disorders. In this study, we investigated if cfDNA levels in follicular fluid (FF) samples from in vitro fertilization (IVF) patients, could be related to IVF outcomes. In this research cfDNA isolated from 50 samples of both the follicular fluid and the blood samples by NucleoSpin kit. Two housekeeping genes which called GAP DH and ALBUMIN studied by SYBR Green method in Real-Time PCR. Studies on the extracted cfDNA in both groups of successful and unsuccessful in IVF, statistical analysis and their meaningful level achieved. According to the nonparametric hypotheses, on the one hand the H0 theory which is based on similarity of variables such as CTP, CTF, DELTA CT and CT average from the plasma and the follicular fluid rejected in both group. On the other hand, base on 2 statistical test there is no meaningful difference on those variables in the groups. Potential prediction range of follicular fluid cfDNA is extremely higher than the numbers of embryos which are qualified base on morphological standards, indeed this prediction model can constitute a promising biomarker to predict IVF prognosis and to enhance female infertility management.

Keywords: Infertility, IVF, Cfdna, Housekeeping Gene, Real-Time PCR.

A-10-693-2

O6: Study of The Effect of Acid Amine Transfer of Arginine With Tryptophan on Polymorphism Arg194Trp in The XRC1 Gene During The Process of Spermatogenesis in Mouse Models

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Abstract

Today, infertility is considered as the main problem in 10-15% of people. In the meantime, idiopathic infertility (infertility with unknown causes) is widely discussed due to the wide-ranging point of view. In men, abnormal forms of sperm, low numbers and the absence of sperm in semen are the causes of infertility. As we know, sperm production is a complex process in which many genes are responsible for controlling each of these stages (spermatogenesis), so that we can conclude The normal performance of adult sperm depends on the structure of a DNA cloth One of the most effective genes in the spermatogenesis process is the gene XRCC1. Creating a mutation and polymorphism in this gene leads to the displacement of acid amine arginine with tryptophan, which leads to morphological and morphological disorders in the sperm and causes the inability of the sperm to perform the fertilization process. In this study to study polymorphism Arg194Trp in the XRC1 gene that results in the displacement of arginine amino acid with tryptophanIt is necessary to perform spermatic analysis in two groups of idiopathic infertile mouse in the Andrology Laboratory, which has an abnormal morphologic spermatozoicity and mouse with a non-defective fertility period In order to do modeling to prove a hypothetical precursor beginning with polymorphism in the desired design and Perform the RFLP-PCR many parts of the gene desired nucleotide Can be reproduced That can be used to

identify sperm surface acid amine and studied by Elisa test.

Keywords: Polymorphism Arg194Trp, Arginine Acid Amine, Andrology, Sperm Morphology

O7: Oxidative Stress and Its Outcomes Related to Male Infertility, Evidences For Genetic And Epigenetic Interactions

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Abstract
Male infertility is a multifactorial disorder involving a wide range of factors, including inflammation, infection, genetic, epigenetic, environmental and lifestyle-related factors. According to several studies all these factors are involved to produce high levels of reactive oxygen species (ROS) in the male genital system named as oxidative stress (OS). Indeed, the OS is a condition, which basically represents an imbalance between the systemic ROS generation and a biological system's ability to readily detoxify (antioxidant defenses) the reactive intermediates and/or to repair the resulting damage. The OS is able to negatively affect the spermatogenesis as well as sperm cell series via different mechanism affecting their DNA, RNA, lipid and protein contents. For instance, the OS is able to potentially affect the cellular mitochondria membrane and DNA content, leading to severe impairments in germ cell metabolism ratio, mitochondria-dependent apoptosis at both germ cell and sperm levels and hypospermatogenesis or maturation arrest via suppressing ATP production in progressing germ cells during spermatogenesis. Moreover, the DNA content of mitochondria is not protected with histones and has a very limited capacity for DNA repair. Thus, considering that, the sperms contain large numbers of mitochondria, any mitochondrial damages (produced by OS), apart from its effect on sperm DNA damage, results in considerable loss of sperm motility. As another adverse effect of OS in male infertility problems, the oxidative DNA damage (ODD) is able to potentially impair the germ and sperm cells epigenetic via defecting DNA methylation pattern and results in global hypomethylation and genomic instability, which finally is able to end with male infertility. Moreover, the OS-induced changes in histone-protamine replacement and/or impaired histone acethylation pattern, simultaneous with OS on the genital system, negatively affects the spermatogenesis, and results in severe DNA damage, and predispose to Sertoli-cell-only syndrome or testicular cancers. Moreover, the elevated ROS levels imbalances the calcium signalling pathways, protein phosphorylation and various protein-kinase signalling processes. Thus, it could be concluded that, the OS is able to widely and fairly impact the molecular signaling networks of germ and sperm cells via negatively affecting their nucleotide and protein backbones.

Keywords: Infertility, Oxidative stress, Epigenetic, DNA damage, Mitochondria failure.

O8: Clinical Importance of Sperm DNA Damage assessment on ART Outcomes

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Abstract
Considering that standard semen analysis fails to predict male fertility in up to about 40% of the cases, scientists searched for parameters and methodologies to close this obvious gap in andrological diagnostics. As sperm DNA damage has an inverse correlation with ART success, there is ever-increasing support in the literature for routine sperm DNA fragmentation test alongside semen analysis to provide a more

informed choice of ART treatment. DNA testing is essential since high DNA damage increases risk of pregnancy loss, regardless of which test is used [SCSA (perm chromatin structure assay), TUNEL (terminal transferase dUTP nick-end labelling), or alkaline Comet assay]. Moreover, there is sufficient evidence in the existing literature suggesting that sperm DNA damage has a negative effect on clinical pregnancy following IVF and/or ICSI treatment. In fact, these tests help couples make informed decisions about their ART treatment pathway, reducing the financial, emotional and psychological burdens and increasing clinic success rates. Nevertheless, through research into various DNA fragmentation assays, clinical thresholds need to be set so that clinics using the tests will be able to interpret them easily. However, with current treatment pathways, sperm DNA quality is not assessed and therefore not considered to be a severe sperm abnormality. This requires revision given the plethora of studies supporting its inclusion and the inadequacy of conventional Semen analysis. Taken all together, large studies are required with standardized protocols to reduce interlaboratory variation to strengthen the evidence base for sperm DNA testing for clinical use.

Keywords: DNA damage; Human sperm, Sperm DNA fragmentation tests, Assisted reproductive technology outcomes, Male infertility.

O9: Correlation between miRNA-122 in semen and fertility in heroin-addicted men

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Abstract

Background: Addiction as a medical problem in the world is developing among young people. Prescription opioid narcotics as the well-known toxins may be involved in the male fertility and Sperm parameters, most noticeably motility, also decrease with the use of heroin. Use of illicit drugs appears to have a negative impact on fertility, though more in-depth research in this area is required to make a clear link. The aim of this study was to investigate the effects of heroin on sperm parameters and expression level of miRNA-122 in active heroin users.

Methods: Semen were collected from 43 healthy men and 24 men who used only heroin for at least 25 months who did not use any drugs and did not suffer from infertility problems. Computer-based analysis, qPCR real-time for assessment of expression level of miRNA-122 were performed to provide the relationship between addiction and semen profile and expression level of miRNA-122. The differences between groups were determined by independent-samples t-test and Man-Whitney U. The partial correlation and regression analyses were performed between heroin consumption and other parameters. P-value ≤ 0.05 was proposed to be significant.

Results: Our finding showed that semen pH, appearance of WBC, sperm total and progressive motility and viability, abnormal morphology, sperm histone-to-protamine transition, and DFI were significant differences in addicted group vs. non-exposed ones ($P \leq .05$). Real-time qRT–PCR assessment showed that there was a significant increase in expression level miRNA-122 ($P \leq .05$).

Conclusion: We concluded that heroin consumption affect sperm parameters. In addition heroin may increase mRNA levels..

Keyword: Semen Parameters, , Mirna-122, Addiction, Heroin**.**

O10: SPERM DNA FRAGMENTATION: ASSAYS and CLINICAL IMPLICATIONS

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Abstract

In the latest years, interest in sperm DNA alterations and their correlations to either spontaneous or ART-induced pregnancy rate has been increasing more and more. Compared to conventional semen analysis, DNA fragmentation (SDF) evaluation could offer more accurate information about male fertility, because its biological variability seems very low. The available assays are *direct* or *indirect*. The former, by means of probes or dyes, can directly measure SDF (COMET, TUNEL); the latter estimates SDF indirectly, measuring denaturation susceptibility, which is higher in fragmented DNA (SCD, SCSA, Acridine Orange stain [AOS], Aniline Blue staining [ABS]).

Although some studies have found some value in the use of sperm DNA tests in the evaluation of male infertility, the true prognostic value of sperm DNA assessment to predict ART outcomes remains uncertain. Despite all these limitations, however, many studies have pointed out that high SDF levels are associated with a lower pregnancy rate in natural conceptions and after IUI and IVF, and a higher miscarriage rate after ICSI; direct methods may have a higher predictive value of pregnancy outcome. However, in order to provide clinically valid scores, every SDF test requires at least a critical number of sperm cell. TUNEL test seems able to maintain validity even when performed on a low sperm cell number (~200) ; therefore, TUNEL might be useful to determine whether cryptozoospermic patients should perform ICSI with either testicular or ejaculate spermatozoa. Even with all ambiguities, it has been demonstrated that SDF has an impact on natural pregnancy and ART outcomes. More studies can help us to clarify more unknown aspects of the SDF, particularly about which test or tests are much more useful in diagnosis and treatment of infertility.

Keywords: DNA fragmentation tests, semen, ART, male infertility

O11: The relation between dietary antioxidants and other nutrients; male fertility improvement viewpoints

AliReza Alizadeh

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Abstract

It is argued that nutrition is recognized as a major non-genetic factor in fertility. On the other hand, oxidative stress is a major challenge in male infertility, and spermatozoa were the first cell type report to show sensitivity to oxidative damage. Therefore, the basic studies that focus on antioxidant supplementation as well as clinical results of antioxidant consumption confirmed the effective roles of antioxidants in reduction of reactive oxygen species (ROS) production, DNA fragmentation and improved male fertility. However, little information exists on the cross-talk between antioxidants and other nutrients in diet. For example, micro-mineral (selenium or zinc) levels in diet/serum may affect the vitamin E supplementation responses, or dietary polyunsaturated fatty acid concentration may affect antioxidant requirements and ROS production. Moreover, the required levels of some vitamins and micronutrients for animal models were updated by references. Indeed, harmful effects of nutrient's overdose consumption may raise the possibility of 'reductive stress'. It appears that the consumption of the antioxidant mixture is better than one source of antioxidant and dietary patterns such as Mediterranean diet could be recommended. On the whole, other diet ingredients in study designing as well as clinical advice should be take into account after the consumption of antioxidants for male fertility improvement.

Key words: Antioxidants, Diet, Male Fertility

Is now the time for clinical using of in vitro gamete?

آیا زمان استفاده از تولید گامت آزمایشگاهی در بالین وجود دارد؟

O12: Which Group of Fetal Stem Cells is More Capable of Producing Female Germ Cells?

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Abstract
The usage of stem cells in the human new born tissues can be supply a capable source for differentiation of the cells needed. Placenta harbours a plentiful source of various cells with stem cells or stem-like cell properties, which can be used in therapeutic procedures and research. Mesenchymal stem cells (MSCs) have attracted much attention due to their specific differentiation potential and tolerogenic properties. MSCs have been isolated from different parts of placenta; however, in this study, we isolated MSCs from amnion and chorionic membrane, as well as umbilical cord (Wharton's jelly [WJ]) and compared their capacity regarding differentiation toward female germ cells under influence of 10 ng/mL BMP4. All placenta samples were collected from delivering mothers by normal caesarean section and cells were isolated by different methods. Results showed that all isolated cells were mostly positive for the MSC markers CD73, CD166, and CD105, and minimally reacted with CD34 and CD45 (hematopoietic markers). After differentiation induction using third passage cultured cells, immunocytochemistry staining showed that cells were positive for germ line cell-related genes SSEA4, OCT4, and DDX4, and oocyte-related gene GDF9. QRT-PCR results indicated that human chorionic MSCs (HUMSCs) had a greater potential to be differentiated into female germ line cells. Moreover, the results of this study indicate that human umbilical cord MSCs originated from either male or female umbilical cord have the same differentiation potential into female germ line cells. We recommend that for presumptive application of MSCs for infertility treatment and research, HUMSCs are best candidates due to their higher differentiation potential, ease of proliferation and expansion, and low immunogenicity.

Keywords: umbilical cord, germ cells, mesenchymal stem cells, differentiation potential, oocyte, amniotic membrane.

O13: The spermatogonial stem cell technology: from basic knowledge to infertility treatment

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Abstract
Subfertility affects approximately 15% of all couples, and a severe male factor is identified in 17% of these couples. While the etiology of a severe male factor remains largely unknown, prior gonadotoxic treatment and genomic aberrations have been associated with this type of subfertility. Couples with a severe male factor can resort to ICSI, with either ejaculated spermatozoa (in case of oligozoospermia) or surgically retrieved testicular spermatozoa (in case of azoospermia) to generate their own biological children. Currently there is no direct treatment for azoospermia or oligozoospermia. Recent studies have demonstrated that male germ cells can have significant applications in treating male infertility and other diseases.SSC autotransplantation is a promising novel clinical application currently under development to restore fertility in sterile childhood cancer survivors. Spermatogonial stem cells eventually differentiate in the testis to produce haploid sperm. SSCs are rare cells in the testis, and their cellular characteristics are poorly known. We provide an brief overview regarding SSCs and the male germline, since the

development of the spermatogonial transplantation method in 1994, which was a major breakthrough for basic research on SSCs, for clinical applications and in medicine regeneration.

Keywords: Spermatogonial stem cells, Transplanation, culture

O14: Generation of Male Germ Cells from Embryonic Stem Cells

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Abstract

Background: Artificial gamete formation accompanied with progressive success in mouse and human. Stem cell therapy can be served as an alternative therapy for male infertility via formation of male gametes. Here we differentiated mouse Embryonic stem cells (ESc) in to male germ cells using Embryoid body (EB) technique and in the presence of appropriate inducers.

Methods: Primordial germ cells (PGCs), were induced followed the exposure of EBs to various concentrations of BMP4 for 4 and 7 days culture. The specific germ cell markers were detected using Real Time PCR, Immunocytochemistry and flow cytometry. PGCs cells were cultured in mouse spermatogonial stem cell medium, containing: DMEM, μM β-mercaptoethanol, L-glutamine, Bovine Serum, Albumin, transferrin, insulin, bFGF and GDNF. The specific spermatogonial lineage markers were detected using RT- PCR, Immunocytochemistry techniques.

Results: Our results proved Mvh marker was expressed in the adge of induced EBs. The highest expression of gene Oct4 gene in the untreated group and it reduced in the presence with BMP4. The expression of Stella and Mvh as a pre and post migratory markers exhibited the most expression in experiment group. The expression of specific spermatogonial markers DAZL, PLZF, UTF1, VASA were confirmed via RT- PCR and Immunocytochemistry methods.

Conclusion: It is conclude BMP4 is an effective factor to induction of PGCs from mouse ESC. Our culture system leads to derivation of Germ cells lineages in EB population and increase the differentiation of ESCs into spermatogenic cells.

Key words: Artificial gamete, Embryoid Stem Cells, Primordial germ cells, BMP4, Embryoid Bodies, Mvh-positive cells.

Modern technologies in embryology

فن آوری های جدید در جنین شناسی

A-10-527-2

O14: The Effects of in Vitro Maturation Technique on The Expression of Genes Involved in Embryonic Genome Activation of Human Embryos

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Abstract

Backround: In vitromaturation technique (IVM) is shown to have an effect on full maturation of immature oocytes and the subsequent embryo development. Embryonic genome activation (EGA) is considered as a crucial and the first process after fertilization. EGA failure leads to embryo arrest and possible implantation failure. This study aimed to determine the role of IVM in EGA-related genes expression in human embryo originated from immature oocytes and recovered from women receiving gonadotrophin treatment for assisted reproduction.

Methods: In this experimental study, germinal vesicle (GV) oocytes were cultured in vitro. After intracytoplasmic sperm injection of the oocytes, fertilization, cleavage and embryo quality score were assessedin vitroand in vivo. After 3-4 days, a single blastomere was biopsied from the embryos and then frozen. Afterwards, the expression of EGA-related genes in embryos was assayed using quantitative reverse transcriptase-polymerase chain reaction (PCR).

Results: Thein vitrostudy showed reduced quality of embryos. No significant difference was found between embryo quality scores for the two groups (P=0.754). The in vitrogroup exhibited a relatively reduced expression of the EGArelated genes, when compared to thein vivogroup (all of them showed P=0.0001).

Conclusion: Although displaying the normal morphology, the IVM process appeared to have a negative influence on developmental gene expression levels of human preimplanted embryos. Based on our results, the embryo normal morphology cannot be considered as an ideal scale for the successful growth of embryo at implantation and downstream processes.

Keywords: Embryonic Development, Intracytoplasmic Sperm Injection, In VitroMaturation, Ovarian Stimulation.

A-10-773-1

O15: Sex Determination of Preimplantation Embryos Through Non-Invasive Technique on Spent Embryo Culture Media

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Abstract

Background: Preimplantation genetic diagnosis/ screening (PGD/PGS) was introduced as an alternative method to prevent the birth of children suffering from x-liked genetic disorders. The gender of the embryo before implantation is important in some research, furthermore is used for family balancing. PGD/PGS is an aggressive technique. SRY gene expression begins in male embryos following genome activation in preimplantation embryos. The aim of this study was noninvasive Sex determination of preimplantation embryos based on the presence of SRY RNA in the spent culture medium as a biomarker in sexing of human preimplantation embryos.

Methods: In this double-blind study, two groups were evaluated. In the first group, the culture medium of human embryos of ART candidates were received, following RNA extraction, the total RNA was immediately reverse transcribed to cDNA. Then PCR was performed for SRY and GAPDH genes. In the second group, PCR was performed directly on the culture medium. The SRY positive embryos were considered as male embryos and those GAPDH positive and SRY negative were considered as females.
Results: For the first group, 14 samples were evaluated. We correctly diagnosed all 14 samples. In the second group, we were able to correctly diagnose 10 of the 12 samples.
Conclusion: Preimplantation sexing without embryo biopsy on the spent embryo culture media seems to be a reliable tool for non-invasive preimplantation sexing. However, direct PCR-based diagnosis might be lead to false results; this is probably due to DNA contamination of the serum in the culture media.

Keywords: Preimplantation Genetic Diagnosis, SRY Gene, Embryo, Culture Medium

A-10-446-1
O16: Production of Transgenic Murine Blastocyst By DMSO-Sperm Mediated Gene Transfer

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Abstract
Backgrond: One of the methods with high efficiency and simplicity to produce transgenic mice based on transfect spermatozoa with exogenous DNA/DMSO complex which is namely called DMSO-sperm mediated gene transfer (SMGT). SMGT based on the ability of the sperm cells to bind to foreign molecules DNA and insert it into yourself and then transfer this molecules in the egg during fertilization. Shin and his colleagues developed a high efficient and simple method to obtain transgenic offspring that's called DMSO-sperm mediated gene transfer. In this study transgenic murine blastocyst by DMSO-SMGT was produced.
Methods: Mouse sperm collected from caudae epididymis mice and incubated in 37°C for 60 min. Mouse sperm cell suspension (10^7 cells/ml) was supplemented with the DMSO Of final final3%concentration, circle pEGFP-N1 DNA (20 µg/ml) in HTF. The mixture was cooled to 4°C for 10_15 min. Then 10 microliters from sperm suspension used to do IVf. After 4_5 h of in vitro fertilization (IVF), inseminated oocytes were incubated in KSOM. After 4 days transgenic blastocyst obtained.
Results: Transgenic murine blastocyst Produced by IVF of Sperms Transfected with EGFP Transgenic rate approximately 46% obtained.
Conclusion: Despite the advantages of the SMGT method, such as convenience, simplicity and low cost, the efficiency of SMGT is only about 3-6%, researchers trying to find ways to increase the efficiency of this method for producing transgenic animals .DMSO can improve efficiency of SMGT method.

Keywords: Transgenesis, spermatozoa, DMSO, IVF.

A-10-775-2
O17: Preservation of Sperm Motility With Modrate Intensity Static Magnetic Fields

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Abstract

Male infertility include 40to50% of all infertility cases. sperm motility is a one of the important parameters in male fertility.The goal of this study was to preserve sperm motility with modrate intensity of static magnetic field during the sperm are useing for experiment .*Materials and Methods:* After initial examination,the semen sample were collected from normospermic men (n=90), and were allowed to liquefy for 15-30 min. Each sample was divided into two subsamples that were exposed (‘‘treated’’) or not (‘‘control’’) during, 5 hr to a uniform static magnetic field at the center of permanent magnetic. The content of sperm motility was determined by CASA (computer assisted sperm *analysis*). Data analysis was performed using SPSS (version 16) and paired t test. The *p*-value <0.05 is *considered* significant. *Result:* Sperm motility was significantly increased under the influence of static magnetic field while the motility percentage of sham group decreased the motility .The sperm kinematic parameters (VSL, VCL, VAP) were observed retain in the group that was exposed to modrate intensity static magnetic field after 5hr exposed. *Conclusion:* The static magnetic field could have affected human sperm motility. The result of this experiment showed the MF at (modrate intensity) after 5hr retained sperm motility .However, sperm velocity was significantly affected by exposure of sperm to MF. The static magnetic field can affect the human sperm motility by increasing the percentage of motile spermatozoa and the correlated kinematic parameters, but these effects depend on the applied intensity and time of the applied magnetic field

Keywords: Sperm, Static Magnetic Field, Retaine

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Infertility after chemotherapy (Advances and Challenges

تولید مثل پس از درمان سرطان (پیشرفت ها و چالش ها)

A-10-476-1

O18: Evaluation of Sheep Ovarian Tissue Cryopreserved By Slow Freezing or Vitrificaton After Chick Embryo Chorioallantoic Membrane Transplantation

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Abstract

The aim of our investigations was to compare the effectiveness of two methods for cryopreservation of sheep ovarian tissue, slow freezing and vitrification. The quality of cryopreserved tissues was evaluated after 5 days of thawing and chorioallantoic membrane (CAM) transplantation. Follicular structure, stromal integrity and neovascularization were assessed. The areas of fibrosis and necrosis were measured using MICROVISIBLE software, and proliferation was assessed with Ki-67 immunostaning. After 5 days of culture, the proportion of primordial follicles decreased, whereas the primary and intermediary follicles increased insignificantly (p>.05). Only necrosis in the vitrified culture group increased significantly (p<.05). It was established also that 5 days CAM culture was not suitable methodology for detection of folliculogenesis. Follicular quality decreased after culture, but was better in fresh and slow frozen tissues than after vitrification (p<.05). Cellular proliferative activity fell, but it preserved to some extent in all groups. In conclusion, follicles was preserved better in grafted tissue after slow freezing than vitrification and stroma was more susceptible to ischemia in vitrified rather than conventional freezing in this view. Vitrification may not be a suitable alternative to the slow freezing.

Keywords: Ovarian tissue, Slow freezing, Vitrification, Chorio-allantoic membrane, transplantation

A-10-476-3

O19: GDF9-B Promotes Folliculogenesis After Sheep Ovarian Transplantation Onto The Chick Embryo Chorioallantoic Membrane (CAM) In Cryopreservation Program

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Abstract

Ovarian tissue (OT) cryopreservation is one of the available approaches for fertility preservations among young cancer patients. But it has many side effects such as reduction in the GDF9-β expression and delay in follicular growth. The aim of this study was to evaluate if adding GDF9-β can compensate the reduction of this factor during the freezing process and promote folliculogenesis after transplantation of thawed sheep ovarian tissue! Methods: sheep`s OT were frozen and thawed with two methods of freezing; vitrification and slow freezing. Fresh and thawed OTs were transplanted onto the CAM, and they were divided into two groups based on the addition of GDF9-β to the grafted tissue. After 5 days of culture, both histological and immunohistological (Ki-67) assessments were done to evaluate follicular structure, development, and proliferation. The areas of fibrotic and necrotic were measured using MICROVISIBLE software. Results showed that Folliculogenesis took place in all culture groups but was significant only in the + GDF9-β cultured group. Also, better follicular structure preserved in the aforementioned group (p<0.05). More neovascularization (p<0.05) and better transplantation (p>0.05) took place when GDF9-β was added to the culture medium and the areas of fibrosis and necrosis were lower in this group rather than the control group. Follicular proliferative activity was higher significantly only in the slow freezing GDF9-β cultured group.In conclusion, GDF9-β not only can promote folliculogenesis in the fresh ovarian transplant but also can compensate its reduction during the freezing process and be a stimulatory factor.

Keywords: GDF9-B, Folliculogenesis, Sheep Ovarian Transplantation, Cryopreservation

A-10-657-1

O20: Propolis and Improvement of Spermatogenic Cells Population Indices in Oxaliplatin Treated Adult Rats

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Abstract

Background: Chemotherapy is one of the risk factors which affect the fertility. Honeybee gum (Propolis) is an antiseptic, natural antibiotic, free radical scavenger and potent antioxidant used in treatment of various types of cancers. Oxaliplatin (L-OHP) is a third-generation of platinum-based chemotherapies. L-OHP binds to DNA and prevents the DNA replication. It is especially effective in the treatment of colorectal cancer and also other solid tumors such as ovarian and testicular cancer. The aim of this study was to assess the beneficial effects of Propolis in improvement of cellular alteration of spermatogenic cells in L-OHP treated rats. Materials Oxaliplatin was administrated (2.4 mg/kg i.p.) four consecutive days per week for duration of three weeks. Hydroalcoholic extract of Propolis (50 & 100 mg/kg) was administrated to L-OHP treated rats for 21 consecutive days. Formaldehyde fixed testicular tissue samples were stained with hematoxylin and eosin method for quantitative evaluation of spermatogenic cells. Results The population of all types of spermatogenic cells was reduced following the administration of L-OHP in comparison to control group. Only, the population of spermatocytes was reduced significantly. There was no significant change in cell population after low dose administration of Propolis. The administration of high dose of Propolis led to improvement in spermatogenic cells population in comparison to other experimental groups.Discussion Oxaliplatin induced DNA damages can lead to reduction in population of spermatogenic cells. According to antioxidant activities of Propolis, it seems that reduction of oxidative tissue damages could be effective in L-OHP induced fertility problems.

Keywords: Leydig Cells, Oxaliplatin, Propolis, Rat, Spermatogenic cells.

A-10-208-1

O21: The Effect of Melatonin on Expression of P53 and Ovarian Preantral Follicle Development Isolated From Vitrified Ovary

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Abstract

Background: Ovarian vitrification is a strategy for conservation of fertility of young female patients, suffering from infertility, due to iatrogenic loss of ovarian function, resulting from chemotherapy and/or radiation therapy. The purpose of this study was to determine the influence of melatonin on expression of p53 and the developmental rate of perantral follicles isolated from vitrified and nonvitrified ovaries.

Methods: This experimental study was carried out on 40, 14- day- old female mice (NMRI). One ovary from each mouse was used randomly for the vitrification procedure. Preantral follicles with diameter of 120-140 µm derived from vitrified -warmed and nonvitrified ovarian tissues were cultured individually in α-MEM medium supplemented with or without melatonin. The Expression of p53, diameter of follicle, survival rate and number of antral follicles were compared using post-hoc LSD, t-test and chi-square test respectively in four groups; non vitrified and non-melatonin (NVNM), non-vitrified and melatonin (NVM), vitrified and non-melatonin (VNM), vitrified and melatonin (VM).

Results: p53 gene was expressed in four groups and was strongly expressed in the antral follicles of VNM (p=0.011). The addition of melatonin

increased survival rate and the mean diameter of follicles in vitrified group (p=0.001). There were no significant differences in antral formation of follicles between different groups.

Conclusion: Adding melatonin to culture medium, reduced expression of p53 apoptotic gene in vitrified group and improves in vitro maturation and survival rate in isolated follicles from vitrified ovaries.

Keywords: Melatonin, Vitrification, Ovary, Culture, P53 Gene

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Epigenetics and laboratory: The short-term and long-term lab effect on gamete and embryo

اپی ژنتیک و آزمایشگاه: اثر کوتاه و دراز مدت آن بر گامت و جنین

A-10-170-1

O22: Association Between the C677T and A1298C Polymorphisms of Methylenetetrahydrofolate Reductase Gene with Recurrent Spontaneous Abortion in The North of Iran

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Abstract

Background: Spontaneous abortion is a pregnancy condition that occurs in 1-2 percent of women in which MTHFR A1298C and C677T polymorphism are effective factors in women with spontaneous abortion. In this research we studied polymorphisms association with spontaneous abortion in women living in North of Iran.

Methods: In this study, 100 healthy women and 60 patients with more than 2 pregnancy loss were selected as control and treatment groups respectively. 5 ml peripheral blood was taken from each woman and DNA was extracted using DNA™ kits. Then MTHFR A1298C and C677T polymorphisms gene ware using determined PCR-FRI-P.

Results: CC, CT, and TT genotypes frequency of C677T polymorphism MTHFR gene in treatment group was 60%, 31.6%, and 8.33% respectively, while genotypes frequency in control group was 72%, 24%, and 4% respectively (p=0.0807).AA, AC, and CC genotypes frequency of A1298C and C677T polymorphism MTHFR gene in treatment group was 16.67%, 56.67%, and 26.67% respectively, while genotypes frequency in control group was 60%, 27%, and 13% respectively (p=0.0001).

Conclusion: In the present research, no significant difference was found between C677T polymorphism of MTHFR gene and spontaneous abortion. However there was a significant association between MTHFR A1298C polymorphism and spontaneous abortion.

Keywords: Methylenetetrahydrofolate Reductase, A1298C, C677T, Spontaneous Abortion.

A-10-449-1

O23: Long Term Incubation Affects the DNA Integrity and Methylation of Mouse Spermatozoa

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Abstract

Background: The quality of the sperm is influenced by various laboratory factors. This study investigated the effects of long-term incubation at room temperature (RT) versus 37°c on sperm DNA methylation and integrity.

Methods: Mouse sperm samples were divided in to 3 groups(fresh, incubated at RT and 37°c for 24 hours). sperm parameters were assessed according to WHO guidelines. DNA Fragmentation index (%DFI) was evaluated by SCSA. DNA methylation was analyzed by flow cytometry.

Results: Progressive motility and viability were significantly higher after incubation at RT compared with 37° c (P<0.001 and P<0.01, respectively). %DFI after 24 hours at 37° c was significantly higher than that at fresh sample (P < 0.002). Extended incubation at 37°C for 24 hours significantly decreases DNA methylation level compared with fresh sample (P <0.05).

Conclusion: After 24 hours' incubation, sperm DNA methylation and Fragmentation were affected. This study indicates a better sperm quality when incubation is performed at RT.

Keywords: Sperm, DNA Fragmentation, Temperature, DNA Methylation, Flow Cytometry

A-10-767-1

O24: Effect of Experimental Varicocele on DNA Methylation and Histone Acethylation in Testicular Tissue

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Abstract

Background: The varicocele (VCL) has been known as the main reason of male infertility. It has been illustrated that, the VCL negatively affects spermatogenesis via inducing oxidative stress, suppressing testicular endocrine status and heat dependent apoptosis and consequently results in severe DNA damage at sperm level. However, the roles of different genes/proteins in relation with DNA methylation and histone acethylation during spermatogenesis has not been established, yet. Thus, present study was done in order to clarify, whether the VCL affects the epigenetic elements or not?

Methods: For this purpose, 18 mature male Wistar rats (180±20 gr) were divided into control, control-sham and VCL-induced groups. The animals in the control-sham group were undergone simple laparotomy and no surgical interventions were performed in the control group. Following 60 days, the animals were euthanized and the testicles were dissected out. The mRNA levels of DNA (cytosine-5)-methyltransferase 1 (DNMT1), histone acetyltransferases (HATs) and histone deacetylases (HDAC) were analyzed using RT-PCR. Moreover, the 5-methylcytosine (5-mc) staining was done to assay the methylation ratio.

Results: Observations revealed a significant ($P<0.05$) reduction in expressions of DNMT1, HATs and HDAC in varicocele-induced animals versus control and control-sham groups. Moreover, the animals in VCL-induced group exhibited diminished 5-mc+ cells distribution per mm2 of testicular tissue.

Conclusion: Our data showed that, the VCL by down-regulating the expression of DNMT1, HATs and HDAC, as key genes involving in testicular epigenetic, affects the DNA methylation and histone acethylation ratios.

Keywords: Varicocele, DNMT1, HATs, HDAC, DNA methylation, Histone acethylation

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The role of cloning in animal sciences

نقش کلونینگ در علوم دامی

O25: Cloning techniques and applications

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Abstract

In the natural world, cloning has been around for centuries. The clone word is derived from the Greek word "klon", which means "double" or "twin", and also converted into two. The modern concept of this term is the production of one or more living beings that are completely identical to a living creature in terms of all the genetic and morphological qualities. Cloning using somatic cells can be used to produce many copies of farm animals that have special genetic characteristics, to produce transgenic animals for the production of drug proteins or to preserve endangered species. In addition, cloning can be used as an important tool for studying the performance of genes, as well as for the study of embryonic development and genetic diseases. Currently, more than 35 different species of mammals have been cloned in more than 160 laboratories in 37 countries around the world, or are undergoing elementary or basic studies. So far, more than 20 different cloning techniques have been proposed, each of which has been successful in the further improvement of this technique.

Keyword: Clone, cloning, somatic cell, mammals.

O25: Cloning challenges, current and future applications

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Abstract

More than two decades have passed since Dolly the sheep became the first mammal to be cloned using fully differentiated somatic adult cells. Cloning has now been successfully used on more than 21 species. The advent of cloning told the scientific community that reprogramming adult mammalian cells was possible, leading to the development of technology capable reverting adult cells back into stem cells.

Generating stem cells from adult cells, induced pluripotent stem (iPS) cells, in addition to the widespread uses in both research, therapeutics, and regenerative medicine, have reduced the demand for embryonic stem cells, which raises further ethical concerns. On the other hand, advances in gene editing techniques, using CRISPR-Cas9, have opened up new windows to biomedical scientists.

Currently, several commercial companies, either independently or as a joint venture, offer services that use this technology for various purposes. To solve future food shortage by the chance to replicate the best animals and therefore enables them to produce a superior quality of products in a shorter time and the potential application of reproductive and therapeutic cloning in the fields of medicine and agriculture in order to test new drugs and treatment strategies are other advantages of this technology. To save endangered species, production of drug-sniffing dogs or those glows in the dark, creation of cattle that cannot develop mad cow disease, production of transgenic cow capable of lactation of human protein in milk are some of the applications of animal cloning. Additionally, the sex, genetic traits and the commercial value of the animals can be known before birth. As part of the upcoming program, De-extinction or bring back the extinct species and to preserve endangered species; setting up the “Frozen Zoo” that now stores 9,000 vertebrate cells belonging to more than 1,000 different species, are another applications of this technology.

In animal cloning, in addition to concern for the reduction of the gene pool, almost 90 per cent of attempts at cloning fail and if it leads to a successful clone, there is still potential for many abnormalities such as organs malformation, deficiencies in the immune system as well as the possible premature ageing. Therefore, animal rights campaigners have condemned this procedure. In 2016, however, a long term study on

some cloned sheep found no evidence of a detrimental long-term effect of cloning.

Sometimes abnormal cloned fetuses may develop to term, resulting in abnormalities at birth. In large offspring syndrome, as one of the cloning consequences, the offspring may suffer and die from respiratory distress, low-blood sugar, weak immune systems, deformities, and many other problems. The significantly bigger cloned fetus at birth means painful delivery for the mother, which often requiring surgery. Additionally, early pregnancy loss or mid- and late-term spontaneous abortions may be hazardous to surrogates and possibly resulting in retained fetal membranes, metritis (uterine infection), or a mummified fetus.

In human, basically, there are two reasons to clone genetic material; the first is for medicine and transplants and the second is for reproduction. Regardless of the global cloning ban in human, from a technical perspective, doing so in humans and other primates is more difficult than other mammals. One of the reasons is missing the proteins which are essential to cell division, known as spindle proteins which during the process of oocyte enucleation are removed from the cytoplasm, and their absence interfere with cell division.

While human cloning is now illegal in the world, the application of human stem cells is a very promising field of research. Stem cells can be reprogrammed to become any type of cell needed to repair or replace damaged tissue or cells in the body such as spinal injuries and other cases in regenerative medicine. The possibility to bring back lost child and to choose the traits of the baby "**Designer Babies**", in vitro gametogenesis, and to provide both the sperm and the egg from one parent, “one parent” children, are other upcoming cloning applications in humans. The idea of creating 'designer babies' was mainly proposed to help humans avoid hereditary diseases using a combination of nuclear transfer and genetic modification.

From the point of view of ethical concerns associated with therapeutic cloning and the use of embryonic stem cells, one of the solutions is through the “Altered Nuclear Transfer” (ANT) technique. In this approach, after silencing the Cdx2 gene of somatic cell nucleus, the cell is transferred to the egg so that it prevents the resultant zygote from developing the potential capabilities of becoming an embryo whilst simultaneously allowing it to produce pluripotent stem cells.

Apart from ethical issues regarding human cloning, the ri**sk of mutations, the development of new diseases and in the case of t**herapeutic cloning the similarities between stem cells and cancer cells and the **possibility of accumulation of mutations that may lead to cancer are major concerns.**

In conclusion, whatever issues reproductive and therapeutic cloning have, combination of this technology with two breakthrough techniques in stem cell biology and gene-editing is the most promising option for future applications in the fields of therapies, biomedical and pharmaceutical researches, livestock breeding and agriculture.

In the future, embryo complementation and the possibility of transplantation of animal organ to human, the idea of creating 'designer babies' to prevent the children with severe genetic disorders being born, in vitro gametogenesis, personalizing the future of medicine, to produce the animal as a biological incubator are some of the potential benefits and applications of cloning technology. Undoubtedly, the unintended consequences of using this technology and other related technologies should always be taken into consideration.

The effect of infections on reproduction

نقش عفونت ها در تولید مثل

O26: Sperm Washing of HIV Infected Semen in Serodiscordant Couples for IVF/ICSI

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Abstract

Background: Advances in antiretroviral therapy have increased the life expectancy and quality of life of individuals that are infected with HIV-1. People live with HIV are likely want to have children as their clinical condition improves. Serodiscordant couples must always use condoms during intercourse since HIV-1 is primarily transmitted sexually. HIV-1 seropositive men require special assisted reproduction protocols involve the treatment of sperm samples and the confirmation of viral absences before their use.

Methods: After 3-5 days of sexual abstinence, semen samples collected from 30 healthy men. Three concentrations of HIV-1 plasma were spiked in semen samples. For elimination of HIV-1 RNA, a nested tube sperm washing procedure was done. Total RNA was extracted and cDNA was synthesized. ELISA, cell culture assays, Real-time PCR, and nested-PCR used for determining the presence/absence of viral contamination.

Results: ELISA test showed that all spiked-in samples after washing were negative for HIV-1 antigen-antibody. In confirmation of ELISA test, nested PCR and real time PCR showed no detectable HIV-1 RNA after washing.

Conclusion: Our study recommends the safety of sperm washing protocol based the nested tube for semen HIV-1 decontamination. Using this method, a safe pregnancy could be possible through IVF/ICSI of the washed sperms in serodiscordant couples.

Keywords*:* Serodiscordant, HIV-1, Sperm Washing, Nested PCR, Real-time PCR

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The Impact of Ovarian Stimulation on Egg Quality

نقش تحریک تخمک گذاری بر کیفیت تخمک

A-10-564-1

O27: The study of Insulin and PMSG on Ovary in vitro and in vivo

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Abstract

The objective of this study was to determine the actions of different concentrations of insulin alone or in association with Pregnant Mare Serum gonadotropin (PMSG) in organ culture and evaluated follicles growth ,granulosa cells diameter and mRNA expression of cytochrome P450 aromatase (CYP19A1). Ovaries were cultured for 5 days in the absence or presence of insulin (0.2, 1, 5 and 10 µg/ml) alone or plus PMSG (10 ng/ml). In the medium with insulin 0.2 and 1 µg/ml in combination PMSG, follicles size ($P<0.01$), granulosa cells diameter ($P<0.05$) and levels of p450 aromatase ($P<0.05$) were significantly increased compared with other treatments. While in high dose of insulin (5, 10 µg/ml) alone or in combination with PMSG percentage of morphologically normal follicles decreased during 5 days of in vitro culture ($P<0.05$). In conclusion, 0.2 and 1 µg/ml insulin plus PMSG was more efficient in stimulating .follicular development and increasing expression of the CYP19A1 genes.

Keywords: Insulin, PMSG, Organ Culture, Granulosoa Cells, Cytochrome P450 Aromatase (CYP19A1)

A-10-795-1

O28: Follicular Fluid Plgf/Sflt-1 Ratio And Soluble Receptor for Advanced Glycation End–Products Correlate With Ovarian Sensitivity Index In Women Undergoing A.R.T.

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Abstract

Background: Considering potential roles of soluble receptor for advanced glycation end products (sRAGE) and placental growth factor (PlGF) in ovarian function and embryo implantation, in the present study we have evaluated the association of these factors and also PlGF/sFlt-1 ratio with the ovarian response and implantation rate by dividing patients according to the OSI.

Methods: In a cross-sectional study, 90 infertile women who were undergoing ICSI cycle using long protocol were recruited. The patients were divided according to ovarian sensitivity index (OSI). ICSI cycle outcomes were evaluated for each patient and PlGF, sFlt-1 and sRAGE levels of follicular fluid were assayed using commercial ELISA kits.

Results: Follicular fluid (FF) sRAGE levels and PlGF/sFlt-1 ratio were statistically greater in high-responder women than other responders ($p < 0.05$). Positive correlations were obtained between sRAGE level with the number of oocytes, follicles and OSI level. sRAGE levels with a cutoff value of 4.83 (ng/ml) for evaluating the pregnancy outcome showed 81.8 % sensitivity and 60.7 % specificity. Furthermore, there were positive associations between PlGF/sFlt-1 ratio with the number of oocytes, embryos and OSI level.

Conclusion: In conclusion, the results of the current study supported that good ovarian response is independent of pregnancy outcome. Our results showed that FF levels of sRAGE and PlGF/sFlt-1 ratio could be used as markers for determining the high-responder women. Also, FF sRAGE levels could be a good predictor of ART outcome.

Keywords: Ovarian Response, Soluble Receptor for Advanced Glycation End Products, Placental Growth Factor, Embryo Implantation, ICSI Cycle

Endometriosis management: An experience from the past and a look at the future

مدیریت اندومتریوزیس، درس از گذشته ونگاه به آینده

A-10-793-2
O29: Sclerotherapy for Recurrent Endometrioma

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Abstract
Background: Endometioma is a benign, cystic disease in women of reproductive age. Traditionally endometrioma is managed surgically. However sclerotherapy under ultrasound guide (USG) is another less invasive method of management. In this study we performed sclerotherapy for those who had undergone laparoscopic cystectomy and presented with recurrence.
Methods: 22 women with recurrent endometrioma after previous laparoscopic cystectomies. Aspiration of the cysts was performed under USG then cysts were irrigated and washed clean by sodium chloride 9% then the cavity was irrigated by 96% ethanol and aspirated after 5 minutes. Finally ethanol was left in the cyst with a volume equivalent to 50-70% of the original cyst volume. The patients were followed and reevaluated at one, three, six and 12 months after the procedure for their pain, antral follicular count, and recurrence of the disease. Also serum levels for Ca125, AMH, FSH and estradiol were measured and compared.
Results: The mean age was 30.8±1.94 years. The mean FSH declines from 9.10±.71 to 8.73±.78 from the 3rd to the 12th month (p= 0.001). AMH mildly increased from 1.523±.34 to 1.573±.29 (p=0.155). The mean AMH increased from 6.27±1.48 to 7.45±1.80 (p=0.002). Their pain score reduced to 1/10 in the third month (p=0.005). The mean estradiol increased from 70.52±51.2 to 74.09±46.7 (p=0.033). Ca125 reduced during the study period however the value was not statistically significant. 3 women had spontaneous pregnancy and one had IVF pregnancy.
Conclusion: sclerotherapy by ethanol is a safe and effective method for the management of recurrent endometriomas.

Keywords: Recurrent Endometrioma, Sclerotherapy

O30: Down-regulation of β-catenin in endometrium of women stimulated with clomiphene citrate compared with letrozole and natural cycles

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Abstract
Background: Clomiphene citrate (CC) is widely used as the first-line drug for ovulation induction. Because of peripheral anti-estrogenic action, alternatively, letrozole can be used to induce ovulation. The objective of this study was to compare the expression of the key molecule, β-Catenin, in Wnt signaling pathway involved in the proliferation of endometrium.
Methods: A total of 30 women diagnosed with male factor were included in the study and randomly divided into the groups stimulated with CC (100 mg) or letrozole (5 mg), starting on day 3 of the menses for 5 days as well as women who didn't given any treatments. On day 12 of the menstrual cycle, the evaluation of endometrial thickness (ET) using transvaginal ultrasonography and the circulating hormones of estrogen, progesterone, FSH, LH were done. The endometrial samples were taken from using Pipelle suction curette. Using Real-Time PCR and western blot, the mRNA and the protein expression of β-catenin, and GSK3β were measured in tissue samples.
Results: significantly, the ET was reduced in CC-treated cycles in comparison with letrozole. The

women stimulated with CC showed the mean serum level of estrogen and progesterone concentration were higher and lower, respectively, compared to letrozole. The expression of active β-catenin, and inactive GSK3β were significantly decreased at level of protein in CC compared to letrozole group without a significant difference in the mRNA expression.

Conclusion: these results showed that CC adversely influenced the expression of keys molecules in Wnt signaling pathway during proliferative phase, resulting in inadequate endometrial development.

Keywords: Clomiphene Citrate, Letrozole, Endometrium, GSK3β, β-catenin, Wnt signaling.

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PCOs and related treatments in ARTs

PCOS و درمان های آن در ART

A-10-525-2

O31: Association of TaqI polymorphism with Polycystic ovary syndrome in Isfahan

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Abstract

Background: Polycystic ovary syndrome (PCOS) is the most common endocrine-metabolic disorder affecting 5-10 per cent of women in reproductive age and is a common cause of anovulatory infertility. The Vitamin-D receptor (VDR) regulates vitamin D levels and calcium metabolism in the body and these are known to be associated with endocrine dysfunctions, insulin resistance and type-2 diabetes in PCOS. We undertook this study to investigate the association pattern of TaqI polymorphism of VDR with endocrine parameters in obese women with and without PCOS among Iranian women.

Methods: For the present study, 39 obese (BMI≥30) women with PCOS and 40 healthy obese (BMI≥30) women were selected from IVF center in Isfahan. The TaqI polymorphism was genotyped and analysed using PCR-RFLP (restriction fragment length polymorphism). Serum levels of LH, FSH, testosterone and progesterone were measured by ELISA method.

Results: Our results showed that differences between FSH (p = 0.012) and testosterone (p = 0.017) levels in control and patient groups were significant. The level of LH hormone in TT individuals was significantly higher than that of Tt / tt subjects (p = 0.01).Also, the genotype and allele frequency distributions of TaqI polymorphism were found no significant association between the PCOS cases and control women.

Conclusion: TaqI polymorphism of VDR has not shown significant association with PCOS. Further, specifically designed studies on large population are required to conclusively establish the role of VDR polymorphisms in PCOS.

Keywords: VDR gene, Polymorphism, Obese Women, Isfahan.

A-10-370-1

O32: Study The Effect of N-Acetyl Cysteine (NAC) on Apoptotic Factors in Granulosa Cells of Women with Polycystic Ovarian Syndrome

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Abstract

Background: Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder and one of the causes of infertility among women. Oxygen reactive species (ROS) can increases the number of atretic follicles, which occurs as a result of increasing of apoptosis in granulosa cells of the follicles. In this study, NAC was used as a potent antioxidant to reduce oxidative stress.

Methods: 60women entered the study with specific Inclusion and exclusion criteria and divided into 3 groups of 20people. The first group consisted of 20women with PCOS who received NAC 600 mg, TDS for six weeks, The second group included 20 women with PCOS who received placebo TDS for six weeks and The third group included 20women with normal ovarian function and infertility problems due to male or mechanical factors. Follicular fluid was collected after oocyte puncturing and granulosa cells were isolated. By using the Real Time PCR method, the expression of the pro-apoptosis genes such as caspase-3, and the anti-apoptosis genes such as Bcl-2 were investigated in different groups.

Results: The rate of expression of caspase-3 in granulosa cells of the NAC-treated group was lower than placebo and control group. Also, the expression of Bcl-2, in granulosa cells of the NAC-treated group was higher than placebo group and control group, Which indicated that

apoptosis and apoptotic factors decreased in the group receiving NAC antioxidants.
Conclusion: By reducing the level of oxidative stress, using a potent antioxidant such as NAC, apoptosis in granulosa cells in women with PCOS can be reduced.

Keywords: Polycystic ovary syndrome, Granulosa cells, Apoptosis, NAC

A-10-577-4

O33: The Association of 4 STR Markers of PCOS1 Gene With Polycystic Ovary Syndrome

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Abstract
Background: Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders in women. This syndrome is a complex, heterogeneous disorder with unknown determined cause, but there is some strong evidence showingit can classified as a genetic disease. It has shown that PCOS1gene region is a good candidate to examine the risk of developing ovarian syndrome genetically.
Methods: In this study, the polymorphism of 4 STR markers (D19S216, D19S905, D19S1183 and INSR) in this region- located in the short arm of chromosome 19- and the risk of developing PCOS in 110 women referred to Infertility treatment center of jihad daneshgahi of Qom province were done, using polymerase chain reaction techniques were discussed.
Results: The results showed that allele 14 of D19S216 marker, allele 8 of D19S1183 marker and alleles 12 and 14 of INSR marker significantly increase the probability of developing PCOS ($p \leq 0.05$).;however none alleles of the D19S905 marker were significantly associated with the risk of PCOS. Hormonal investigations and demographic studies showed that fasting blood suger, body mass index, family history of PCOS in and blood group O^+ are significantly different in two groups of patients and healthy participants ($p \leq 0.05$).
Conclusion: There were an association between the polymorphism of 4 STR markers (D19S216, D19S905, D19S1183 and INSR of PCOS1 gene located in the short arm of chromosome 19 with the susceptibilityto PCOS in 110 women referred to Infertility treatment center of jihad daneshgahi of Qom

Keywords: PCOS, STR marker, PCR

A-10-404-1

O34: The Effect of Salvia Officinalis Extract on Oxidative Stress Parameters and Insulin Level In Women With Polycyctic Ovary Syndrome: A Randomized, Controled Clinical Trial

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Abstract
Background: Insulin resistance and oxidative stress (OS) are very common findings among patients with polycystic ovary syndrome.**Objective:** The aim of this study was to evaluate the effects of *Salvia officinalis* alcoholic extract on OS parameters and Insulin level in woman with PCOS**Setting:** Academic Medical Centers Affiliated to Iran University of Medical Sciences
Methods: This research was conducted with the approval of the "Ethics Committee of Iran University of Medical Sciences". In the current randomized, Triple-blind, controlled trial, 60 patients diagnosed with PCOS according to Rotterdam Criteria were randomized to take either 300mg oral *S.officinalis* extract (n=30) or placebo (n=30) for 8 weeks. Serum fasting insulin level, malonyldialdehyde (MDA) concentration and Total Antioxidant Capacity (TAC) were measured

once before and once after intervention. The data analyzed using SPSS software version 18.
Results: Fasting insulin and MDA level was significantly decreased in intervention group (P=0.005 and P=0.001 respectively) and TAC increased (P=0.007) after the 8 weeks of taking *S.officinalis* extract.
Conclusion: *S.offici*nalis seemed to decrease oxidative stress and fasting insulin level in PCOS patients.

Keywords: Polycystic Ovary Syndrome, Metabolism, Insulin, Oxidative Stress, Salvia officinalis, Lamiaceae family

A-10-731-1

O35: Synergistic Effects Of Sulpride And SCH23390 On Kiss1 Gene Expressions In L-Dopa Treated PCOS Rats

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Abstract
Background: Polycystic ovary syndrome (PCOS) is an important cause of anovulation in women. Kisspeptin is a hypothalamic neuropeptide and it exerts stimulatory effects on gonadotropin releasing hormone (GnRH) and luteinizing hormone (LH) secretion. Dopamine inhibits kisspeptin synthesis and its release is lower in PCOS women compared to healthy individuals. In the present study the effects of L-dopa and dopamine receptor antagonists were investigated on relative KiSS1 gene expressions in the hypothalamus of PCOS model rats.
Methods: Polycystic ovary syndrome was induced by intramuscular injections of estradiol valerate in fifteen rats. The PCOS rats in three groups received saline, L-dopa (100mg/kg), simultaneous injections of sulpride (10mg/kg), SCH23390 hydrochloride (1mg/kg) and L-dopa (100mg/kg) via intraperitoneal injection respectively. Also, five intact estrous rats as a control group received saline intraperitoneally. Hypothalamic samples were dissected. Mean

Keywords: sulpride, SCH23390, KiSS1, PCOS.

The impact of nutritional/sport supplements and doping on fertility

تاثیر مکمل های غذایی، ورزشی و دوپینگ بر کیفیت باروری

A-10-246-1

O36: Trolox Affects ROS Production and Mitochondrial Membrane Potential of Human Sperm after Cryopreservation

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Abstract

Background: Sperm cryopreservation leads to various structural and functional damage which is named cryoinjury. Cryoinjury decreases the viable and motile sperm, increases reactive oxygen species (ROS) production and also damages the mitochondrial membrane. We investigated the effect of Trolox as a well-known antioxidant on mitochondrial membrane potential (MMP) and ROS production after human sperm cryopreservation.

Methods: Forty normal human semen samples were randomly divided into fresh and cryopreserved groups. Each group was allocated to control, solvent (DMSO) and Trolox subgroups. Origio Cryosperm was used for cryopreservation of samples in liquid nitrogen at least for one month. Trolox and DMSO were added 30 minutes before assessment in fresh subgroups and just before freezing in cryopreserved subgroups. ROS production and MMP were assessed by chemiluminescence and flowcytometric method using luminol and JC-1. Statistical analysis was performed by SPSS 16 software, using ANOVA and t-test. & nbsp;

Results: ROS production in live cryopreserved-thawed cells was increased compared to fresh group. This increment is effectively reduced by Trolox. Furthermore, MMP of live cells decreased significantly after cryopreservation. Trolox increased MMP and kept more cells on depolarized state in both fresh and cryopreserved-thawed sperm.

Conclusion: High levels of ROS can induce more ROS production, which in turn causes more damages to mitochondria. Trolox as a potent cell permeable antioxidant can relatively protect cryopreserved sperm from cryoinjury and mitochondrial damage. The effects of Trolox on cryopreserved sperm was more potent than fresh sperm, because ROS generation in fresh sperm is significantly lower than freeze-thawed sperm.

Keywords: Human Sperm, Cryopreservation, Trolox, Mitochondrial Membrane Potential

A-10-430-1

O37: Protective Effect of Thymus Deanesis Essential Oil Against Hypercholesterolemia Induced Destructionin Rat Testicular Tissue

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Abstract

Background: It has been suggested that Hypercholesterolemia has adverse effects on male sexual performance and testicular tissue. Thymus deanesis, a dietary compound with antioxidant properties, scavenges free radicals. The aim of present study was to explore the possible protective effects of Thymus deanesis Essential Oil against Hypercholesterolemia related damages in rat testicular tissue.

Methods: In this experimental study, 24 male Wistar rats were randomly divided into four groups (n=6) including control, Thymus deanesis Essential Oil (500 mg/kg/day), Cholesterol (1/5 mg/kg/day) and Cholesterol + Thymus deanesis Essential Oil. After 30 days, the testicular tissues of all groups were removed and analyzed by hematoxylin-eosin staining.

Results: Oral administration of Cholesterol decreased body and testes weights in the male rats. Moreover, Cholesterol treatment caused remarkable deterioration of testicular tissue. Interestingly, Thymus deanesis Essential Oil co-administration improves Hypercholesterolemia induced injurious changes in testicular tissue.

Conclusion: Hypercholesterolemia can lead to significant testicular damages in rats. However, Thymus deanesis Essential Oil as a powerful antioxidant may have repro-protective effects in Hypercholesterolemia -treated animals.

Keywords: Thymus deanesis Essential Oil, Hypercholesterolemia, Testis, Rat

A-10-816-1

O38: Methanolic Extract of Coconut Meat Decrease Sperm DNA Fragmentation and Teratozoospermia Index By Reduction of Oxidative Stress In Testis Tissues of Type II Diabetic Rats

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Abstract

Our previous studies showed that methanolic extract of coconut meat (MECM) can improve quality and quantity indices of sperm in diabetic rats. This study was conducted to evaluate the effect of MECM on teratozoospermia index (TZI), Sperm DNA fragmentation (SDF) and oxidative stress indices in testis of type II diabetic rats.Twenty-five adult male Wistar rats were divided into 5 groups including control, Diabetic and 3 treated diabetic groups which received 100, 150 and 200 mg/kg/day MECM by oral gavage for 40 consecutive days. Type II diabetes was induced by high fat diet and 35 mg/kg streptozotocin. Finally, animals were euthanized and their left testis and epididymis was removed. TZI and sperm DNA fragmentation was evaluated under light microscope. Testis tissue samples were stored at -80 ºC until glutathione peroxidase (GPx), superoxide dismutase (SOD), malondialdehyde (MDA) and total antioxidant capacity (TAC) was measured.The results showed that induction of diabetes significantly increased TZI, SDF index and MDA level of testis but decreased GPx, SOD and TAC level of testis while in all treatment groups, these conditions were improved in a dose dependent manner. Our results indicated that administration of MECM in all three dose reduced TZI, SDF index and MDA level of testis and also increased GPx, SOD and TAC level of testis tissue significantly compared to diabetic groups ($p<0.01$). It can be concluded that MECM can inhibit the sperm abnormalities and DNA fragmentation in diabetic patients by reduction of oxidative stress in testis tissues.

Keywords: Coconut, Diabetes, Testis, TZI, Oxidative stress

O39: Pharmaceutical and quality aspects of anabolic supplements

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Abstract

Beyond the pharmacological adverse effects of anabolic supplements on human fertility, underground and non approved production of these medicinal products can mediate great terrible effects caused by their out of standard manufacturing process. The quality of these products is threatened by 4 main risks including: non accurate dosing according to label claim which has led to overdosed by as much as 459% in some cases, heavy metal contamination such as mercury and arsenic, bacterial contamination and hormonal cross contamination. All of these hazards not only can affect the fertility of consumer (directly or indirectly) but also can endanger the whole body health.

Keywords: anabolic supplements, quality, underground manufacturing

Repeated implantation failure

شکست مکرر لانه گزینی

A-10-271-2

O40: Intrauterine Administration of Treated PBMC Prior Frozen/Thawed Embryo Transfer Improves Pregnancy Outcomes in Patients with Repeated Implantation Failures

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Abstract

Background: Implantation success is mainly dependent on local immune-tolerance mechanisms involving a spectrum of cytokines, interleukines and growth factors. The aim of this study was to evaluate clinically the effectiveness of intrauterine administration of treated PBMC prior frozen/thawed embryo transfer for RIF patients undergoing IVF program.

Methods: this study is a randomized clinical trial, including 250 couples (PBMC-test, n= 122 and Control, n= 128) who being part of Frozen-thawed embryo transfer cycles. In tread group a blood sample is scheduled five days before frozen-thawed embryo transfer and PBMC was isolated using a separation protocol based on Ficoll. PBMC is well prepared after a culture for 48-72 h. Then, 0.4ml of cultured PBMC transferred to the patient of PBMC group, in uterus 2-3 days before embryo transfer.

Results: clinical pregnancy rate was increase from 23.4% for control group to 34.4% for PBMC group but this different wasn't statistically significant (p=0.07, chi-square). When we limited our analysis to patient with ≥3 RIF (n=138), there were a significant difference in clinical pregnancy rate (38.6% vs 19.8%) between PBMC and control groups (p=0.02, chi-square).

Conclusions: The findings of this study indicate that the use of PBMC can be an effective treatment for infertile patients with RIF.

Keywords: Peripheral blood mononuclear cells, Corticotropin-releasing hormone, In vitro fertilization, Embryo Implantation, Pregnancy rates

A-10-117-1

O41: Effect of Sequential Embryo Transfer on Pregnancy Rate in Patients With Repeated Implantation Failure

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Abstract

Background: inspite of the most investigation about fertility and fertilization, more than 50% of the embryos transferred on microinjection (IVF / ICSI) cycles can not be implanted. A diversity of treatment plans and protocol modifications are proposed for " low responders ". However, patients with repeat implantation failure (RIF) history inspite of good quality embryos and endometrium, have become a medical challenge for treatment centers. One of the reasons of RIF is the disaccord of timing between the embryo and endometrium, which some researchers believe that the sequential transfer of embryos in the Cleavage and Blastocyst stages can improve pregnancy rate in RIF patients.

Objective: The purpose of this study was to compare IVF outcome following sequential embryo transfer to compare pregnancy rate in RIF patients who their embryos were transferred sequentially on day 3 and on day 5 with RIF patient's that had conventional day 3 or day5 transfer as control groups.

Methods*:* This prospective study was performed in Novin infertility treatment center from June 2015 to Agust 2017. 101 patients with RIF who underwent sequential embryo transfer (on day 3

and on day 5) were analysed on clinical pregnancy rate. 219 patient's with RIF during the same time period who did not have sequential transfer (cleavage transfer : 121, blastocyst transfer : 98) were used as controls.*Results:* The variables such as number of embryo transfer, male factor, tubal factor, etc. were the same in the women surveyed. The results showed that the clinical pregnancy rate was statistically significantly higher in the sequential embryo transfer (ET) group than the day3 group (58.6% vs. 42.5%), while the clinical pregnancy rates of the sequential ET group and blastocyst groups were 58.6% vs. 54.7%, that there was no statistically significant difference.
Conclusion: A sequential transfer in ART cycles for patients with RIF is a very positive approach if the goal is to increase pregnancy and implantation rate, Particularly, pregnancy outcomes have improved compared to day 3 transfer. Priority sequential transfer cycles to blastocyst transfer cycle of not losing the cleavage step in the case of embryos that have lack of blastocyst progression.

Keywords: sequential transfer, RIF, pregnancy rate, day3 transfe

A-10-117-2

O42: Effects of Autologous Peripheral Blood Mononuclear Cells On Implantation and Pregnancy Rate In Patients With Repeated Implantation Failure

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Abstract
Background: Repeated implantation failure (RIF) is a major concern in reproductive medicine, despite several methods that have been described for management. Dysfunction of embryo-maternal immuno-tolerance pathways can be one of the reasons of RIF. It has been suggested that uterine natural killer cells are involved in establishment and maintenance of pregnancy and fetus through producing a range of cytokines. To reach this goal, we used endometrium Immuno-modulation prior to frozen embryo transfer for patients with repeated implantation failures.
Methods: peripheral blood mononuclear cells were isolated from RIF patients, cultured for 3 days and transferred into their uterus about two days before embryo transfer. This method was performed on 68 patients and compared with 83 patients as control group.
Results: pregnancy rate was significantly increased in experimental group versus the control group (58.8% vs 41.2%, P= 0.04). Implantation rate in PBMC group was higher than the control group, but this increase was not statistically significant. Perhaps this could be achieved by increasing cases.
Conclusion: Our study demonstrates that intrauterine insemination of PMBC increases pregnancy rates and can be used in RIF patients.

Keywords: in vitro fertilization, peripheral blood mononuclear cells, uterine natural killer cells, repeated implantation failure, embryo implantation

A-10-800-1

O43: Placental Growth Factor (Plgf) as an Angiogenic/ Inflammatory Switcher: Lesson From Early Pregnancy Losses

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Abstract
Placental growth factor (PlGF) is an angiogenic factor which belongs to vascular endothelial growth factor (VEGF) family. In addition to the angiogenic function of PlGF, in some conditions such as preeclampsia and early pregnancy losses, it can induce inflammatory reactions which could be accompanied with reduced angiogenesis. Hence, it is crucial to investigate inflammatory and angiogenic switching states and understand underlying mechanisms. PlGF is expressed in endometrium, placenta and trophoblast cells and

is involved in maturation of uterine NK cells. Up-regulation of PlGF directs VEGF to VEGFR-2 and reinforces angiogenesis. However, when VEGF/VEGFR-2 signaling pathway is impaired, PlGF may shift to severe inflammation and cause tissue damages which could lead to early pregnancy losses. Downregulation of PlGF has also been reported in pregnancy complications. In this review, we discussed the role of PlGF in embryo implantation failure and early pregnancy loss and also possible mechanisms regarding the role of PlGF in angiogenic/inflammatory switching in early pregnancy losses. Furthermore, we summarized the effects of various compounds on PlGF expression and briefly talked about its therapeutic potential that may be an opportunity for prevention of pregnancy loss.

Keywords: Early Pregnancy Loss, Embryo Implantation Failure, Placental Growth Factor, Vascular Endothelial Growth Factor

A-10-74-1

O44: A Randomized Clinical Trial Oof Intrauterine GCS in Unexplained Repeated Implantation Failure (RIF) Patients: May Intrauterine GCSF Improve Clinical & Ongoing Pregnancy Rate or Decrease Abortion?

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Abstract

Background: To study whether intrauterine granulocyte colony stimulating factor (GCSF) improves the rates of clinical and ongoing pregnancy or decreases abortion rate in unexplained repeated implantation failure (RIF) patients . Design: Registered, computer generated randomized double blinded placebo-controlled clinical trial.setting: University affiliated Avicenna specialized center for fertility and repeated miscarriages Patient(s): 93consecutive, consenting unexplained RIF patients with no history of malignancy or any uncontrolled background disease who were undergoing ICSI-ET program. Intervention(s): 100 numbered, opaque envelopes were assigned in order that 50 patients receive intrauterine G-CSF (Filgrastim, 300 mg/0.5 mL) and the other 50 patients receive 0.5 mL of normal saline as placebo. Main Outcome Measure(s): To determine clinical &ongoing pregnancy rates, rates in each group.
Results: Statistical models assessing GCSF effect on implantation rates demonstrated no effect of G-CSF treatment. Clinical and ongoing pregnancy rates were non-significantly higher and first trimester abortion rate was non-significantly lower in the GCSF group. No adverse side effect was seen in both groups. Conclusions: In our study, intrauterine G-CSF did not effect on implantation rates. There was a non- significant improvement in clinical and ongoing pregnancy and reduction first trimester abortion in unexplained RIF patients (with normal endometrial thickness). Non significantly higher ongoing pregnancy and lower abortion rates in the GCSF group may be due to limited sample size or low GCSF dosage .So further multicenter studies with larger sample size or higher doses of GCSF is recommended. Clinical Trial Registration Number: IRCT2013063011653N2 Key Words: GCSF, pregnancy rate, ongoing pregnancy rate, randomized controlled trial

Keywords: GCSF, Pregnancy Rate, Ongoing Pregnancy Rate, Randomized Controlled Trial

O45: Main Embryonic Factors in Recurrent Implantation Failure

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Abstract

Repeated implantation failure (RIF) is a big challenge in fertility field that mostly occurred due to fault dialogue of embryo during implantation. Both maternal and paternal factors

could affect embryo dialogue with endometrium. Maternal factors influence on embryo quality by impression of oocyte competence. Although the portion of maternal factors in embryo quality is much higher than paternal factors, sperm DNA integrity could strongly affect embryo development and also implantation fate. Some new techniques like IMSI probably assist to select spermatozoa with low levels of DNA damage. Beside quality of oocyte and sperm, culture condition and laboratory quality control are key factors in embryo development. Therefore, embryo culture using high quality media and co-culture system sounds to improve the embryo quality. Moreover, assisted hatching and transfer of embryos at the blastocyst stage are other suggestion to increase implantation chance, clinical pregnancy and ongoing pregnancy rates. It is noticeable that morphological appearance of embryo could not warrant embryo normality; such some embryos with chromosomal aneuploidy have high quality appearance and maybe develop normally until blastulation. Monitoring of embryo development by time lapse imaging and preimplantation genetic screening have been suggested to choose euploid embryo. Apart of embryo quality, embryo-endometrial developmental asynchrony could lead to implantation failure. Evidence suggests that the human embryo implantation rate is significantly reduced when asynchrony between the embryo and the endometrium is greater than ±1.5 days. Endometrial receptivity array and freeze all embryo policy have recently proposed to increase embryo-endometrial developmental synchroniczation and improve implantation rate.

Key words: Embryo, Recurrent Implantation Failure

O46: What is a truly RIF? Individualized definition of RIF

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Abstract

Repeated failure of ART is still considered a major challenge in infertility treatment. The success rate after IVF depends on several factors including the patient's medical characteristics (age,AMH…) and various indications and treatment protocols used for ART in different infertility clinics. Therefore the dynamic nature of success rate affects the clinically challengeable definition of RIF.

For example, if the average implantation rate (IR) is presumed to be 30% , more than 6 embryos should be transferred so that a pregnancy rate(PR) of 90% could be achieved. meanwhile, if the calculated IR is 40% ,the same PR could be occurred by transfer of only 4 embryos.In patients with less predicted IR, number of cycles or embryos needed for a reasonable pregnancy rate is certainly more.

This formula (log [0.7]*0.1 vs log [0.6] *0.1) provided by Bentove et al , makes it possible to calculate the number of required embryos for each patient so that PR remains 90% and the other 10 % of patients who would not conceive ,are considered as truly RIF ones. The log base represents the likelihood for a failed implantation and 0.1 represents 10 % patients who will not conceive.

Therefore, based on any patient's medical history and IVF success rate in a special infertility clinic, RIF should be individually defined for each patient. Attention to individualized definition of RIF, gives the opportunity to calculate the actual number of required cycles more reliably and recommend the most proper approach to each patient.

Keywords: IVF, Implantation, repeated implantation failure, success rate, definition

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CGH array-FISH-NGS and Mosaicism

NGS-FISH-CGH array و موزائیسم

O47: Heterochromatin Polymorphism as A Significant Factor in Recurrent Abortions

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Abstract

Background: Heterochromatin polymorphism is considered a variant of a normal karyotype but is more frequent in recurrent abortions. The aim of the present study was to investigate the contribution of chromosomal abnormalities and the frequency of a particular type of aberration in couples of north Iranian population origin with recurrent abortions compared with patients without abortions.

Methods: In this study 400 couples with recurrent abortions and 400 couples without recurrent abortions were before 6rd months of pregnancy who were introduced to the Medical Genetic Laboratory of Dr. Keshavarz in Rasht. Standard in vitro lymphocyte culture was used for chromosomal analysis. The chromosomes were banded using the Giemsa-Trypsin-Giemsa (GTG) banding technique, and twenty metaphases with a resolution of 450-550 bands were evaluated under a light microscope.

Results: The chromosomal analysis revealed in abortion group a total of 22(5.5%) heterochromatin polymorphism, among these, 13(3.25%) male patients while 9(2.25%) female patient was affected. While in normal group heterochromatin polymorphism were observed in 7 (1.75%) of the whole group. The result of this study show that heterochromatin polymorphism in patients with recurrent abortions is significantly higher than that of normal population ($P< 0.01$).

Conclusion: Although heterochromatin polymorphisms are considered by most clinicians as polymorphisms without any phenotypic effect, there are a number of studies showing a correlation with reproductive failure. It seems that heterochromatin polymorphisms is common in patients with spontaneous abortion and intrauterine fetal death can be seen, the chromosomal abnormalities can play as a key rule for recurrent abortions.

Keywords: Cytogenetics, Heterochromatin Polymorphism, Recurrent Abortions

Donation–related challenges

چالش های موجود در انجام اهدا

A-10-57-1

O48: Factors Associated With Ethical Issues in Embryo Donation From Recipient's Perspective

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Abstract

Introduction: Embryo donation, as one of the novel assisted reproductive technologies (ART), has remained a controversial issue. This is due to this method's need for individuals from outside the family circle. Their presence can cause many ethical issues and complicate the designing and planning of the embryo donation process. This study aimed at determining the ethical issues and associated factors in embryo donation from perspective of recipients.

Methods: This descriptive, cross-sectional study was conducted on 100 embryo recipients referring to Royan Institute, Iran, in 2016. Participants were recruited using convenience sampling method. An embryo donation ethical issues questionnaire developed by the researcher based on the four principles of bioethics was used. data analysis was performed by SPSS software, 21 using Pearson and Spearman correlation tests, independent t-test and One-Way ANOVA.

Results: respect for autonomy was considered as a more important ethical issues in embryo donation from recipient's point of view as compared to other factors. between, the number embryo receives couple's recipient with the score ethical challenges in the principles of beneficence Inverse relationship($p<.05$). between Job's Females recipient whit, the score ethical challenges in the principles beneficence and no maleficence There was a meaningful relationship ($p<.05$).

Conclusion: Legislators and relevant authorities must take measures toward the development of guidelines for this treatment method in the framework of ethics principles and incorporate all four principles independently.

Keywords: Embryo Donation, Ethical Issue, Perspective, Recipient's Donors

A-10-822-1

O49: Selective Single Embryo Delivery Using HEED and SEED Optimizing Results from IVF While Reducing Risks and Side Effects

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Abstract

Although embryo transfer technique has been known to be a major limiting factor in accomplishing a successful live birth from IVF, there has been little progress made in embryo transfer technique in the past 40 years. Here we describe novel techniques of HEED and SEED that will optimize results and reduce risks and side effects from IVF procedures. Using a targeted single embryo delivery whether by HEED or SEED will standardize embryo transfers by allowing a visually confirmed placement of the embryo. In addition, they allow for gentle placement of the embryo at optimum zone(s) of transfer under direct visual placement. Embryo delivery by HEED is used for embryo transfers at cleavage and more advanced stages of embryo development whereas SEED is strictly for blastocyst implantation. SEED will help alleviate problems with embryo implantation and minimize ectopic pregnancies and lost embryos. It will also minimize occurrence of placenta previas from IVF. These benefits with the reduced major pitfalls of the procedure will greatly enhance maternal health and reproductive safety.

Keywords: In Vitro Fertilization, Embryo Transfer, Hysteroscopic Endometrial Embryo Delivery, Sub Endometrial Embryo Delivery, Elective Single Embryo Transfer, Maternal Health, Reproductive Safety

O50: Donation-challenges related

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Abstract

Utilizing advanced assisted reproductive techniques demands preparing a suitable cultural and social context in a society. Putting forward such issues and attitudes in the scientific circles with the aim of constant tackling with problems and preparing the ground to overcome the future ones is really demanding. Furthermore, providing the highest quality infertility treatment services to the recipients is an absolute necessity. Some infertility treatment patients require third party reproduction treatments such as ovum, sperm, embryo donation and surrogacy. Studies conducted by the Jahad Iranian medical universities between 2011 and 2012 revealed the infertility rate in Iran to be approximately 22 percent. (female factor: 44.5 %, male factor 18.5%, both male and female : 10%,unexplained: 2.6%, unknown: 24.4%). Unfortunately, there are no precise and official statistics in Iran regarding the percentage of the infertile population resorting to third party reproduction treatments. However, in other countries around 10_12 percent of Intracytoplasmic sperm injection (ICSI) and Frozen Embryo Transfer (FET) treatments are being replaced by donation methods. Despite aforementioned advances, it is estimated that a very low percentage of infertile couples in Iran receive such treatments. What is of paramount importance in such modern techniques is assessing the mental, physical and genetic health of donors and recipients. Preparations and approval of regulations concerning such advanced reproductive techniques by government agencies such as Iranian Health Ministry in order to prepare appropriate third party reproduction treatments guidelines to be used across the country is a national necessity

O51: ART and Parenthood: A Philosophical Discussion

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Abstract

The definition of parenthood is widely challenged across last decades. A main part of this challenge is derived from the rapid development of assisted reproduction technologies (ART). Though parenthood has been traditionally characterized by genetic relations between the child and her genetic parent, given the various kinds of now established parenting all over the world, it seems that the traditional kind of defining the term is intuitively inappropriate and inacceptable. There are many philosophers who see defining a term like parenthood as a normative task, not a descriptive one. So, they reject genetic exclusivism in accounting for parenthood, and argue for a labor-based account, intentional and voluntarist account, and causal account of the phenomenon. In this paper, I will reject genetic exclusivism too on the basis of ART challenge, but inspired by Wittgensteinian idea of family resemblance, try to show that parenthood should be considered through a series of overlapping similarities, rather than one essential common feature. This kind of considering parenthood would be immune to challenges like ART challenge.

Evaluating fertility drugs used in Iran

ارزیابی داروهای ناباروری مورد استفاده در ایران

A-10-447-1

O52: Glucocorticoid Effects On Tight Junction Genes in An in Vitro Model of The Human Fallopian Epithelial Cells

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Abstract

Background: The tight junction between epithelial cells helps making connections in the fallopian tube and contributes to successful fertilization. Breaking the tight junction complex induces various diseases such as the EP.

Methods: Using the human fallopian tube, epithelial cell line (OE-E6/E7) was cultured in four concentrations of hydrocortisone (0nM, 50nM, 100nM and 200nM) for three durations (24h, 48h and 72h).The genes expression of junctional molecules was investigated by QRT-PCR and compared to control.

Result: Glucocorticoids are effective on the expression of Zona occluding-1(ZO-1), Claudin 4, Claudin3, Desmoglein and E-cadherin genes.The expression of all genes was Up-regulated in the concentrations of 100nM after 48h treatment, as compared with the control (0nM). However, their expression was down-regulated significantly after 72h treatment ($P<0.05$).

Conclusion: The obtained data suggests that a new mechanism is developed for glucocorticoid induction of tight junctions by increasing the expression of claudin-3, claudin-4, E-cadherin, zona occludin-1 and Desmoglein-1 genes. So maybe the occurrence of EP in patients who were treated by IVF method will increase due to the high stress of IVF process which leads to high systemic glucocorticoids.

Keywords: Glucocorticoid, Tight Junction, Fallopian Tube, Epithelial Cell

A-10-678-1

O53: Evaluating the Efficacy of Ofloxacin Antibiotic and Growth Hormone on Rats' Testicles

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Abstract

Background: Several days in vitro sperm storage increases mortality and reduces motility. Some studies on animal semen showed that the sperm cooling led to a longer sperm survival. However, other studies have emphasized the impact of cold damage on sperm quality. Some studies showed the effect of antioxidants, extracellular ATP and NOX5 inhibitor (DPI) on the quality of mammalian sperms. The purpose of this study was to investigate the motility and survival of human sperm at room temperature and 4°C during 72 hours.

Methods: The human samples were divided into two groups; one group at room temperature and other at 4°C. Extender medium was Ham's F10 containing 5% BSA and 1% Penstrep. Each of these two groups was divided into 9 subgroups which contained: Ham's F10, DMSO, Q10 (40 µM), Trolox (200µM), DPI (1µM), ATP (10mM). The sperm medium was replaced every 24 hours. The parameters of motility, were evaluated using VT Sperm analyzer. Sperm survival was studied using eosin staining.

Results: The percent of motile sperm and survival rates decreased with time. After 48 hours in the cooled group, non-progressive motility and survival rate were lower than those stored at room temperature. Antioxidants, DPI and ATP did not significant changes in motility and survival.

Discussion: Sperm quality was similar in both groups after 24 hours. using these methods was prevented from cold shock. With respect to motility parameters, sperm cooling was recommended for in vitro sperm preservation during 24 hours. The antioxidants have no effect on un-stimulated sperm.

Keywords: Rat, Growth Hormone, Ofloxacin, Seminiferous Tubules

O54: Pharmaceutical evaluation of fertility drugs: quality and efficacy aspects

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Abstract

"Safety and quality" is one the most important domains of good medication practice (GMP). The outcomes of infertility treatment plans are strongly influenced by quality of drugs. Nowadays, the most of infertility management protocols employ biological products as the mainstay of treatment. The quality issue is very important in this drug category and can affect by several factors. Important features such as primary and higher order structures, including tertiary conformation, disulphide bonds, aggregate formation, glycopattern, and in-vitro and in-vivo bioactivity can lead to "brand to brand" or even "batch to batch" variation of biological products. It is clear that Physicians' awareness about these characteristics can help them to select more appropriate drug products and so get the better results.

Keywords: fertility drugs, quality, biological products

Lifestyle related with reproduction & childbraring

سبک زندگی در سلامت باروری و فرزند آوری

A-10-52-1

O55: The Effect of Seasonality on Pregnancy Rate in Patients Undergoing Intracytoplasmic Sperm Injection

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Abstract

Background: Assisted Reproduction Technology (ART) is affected by variable factors including cause of infertility, type of treatment, ovulation induction methods and environmental factors. There is no consensus on the effects of temperature and seasonal changes and ART outcome.The aim of present study was to evaluate the effect of seasonality on ICSI outcome.

Methods: Three thousand six hundred seventy patients undergoing their first ICSI cycle during 2011 to 2015 were retrospectively evaluated in the present study .Data were compared between the four seasons. The implantation and pregnancy rate was considered as primary outcome.

Results: There was no significant difference in the sperm morphology, grade A quality embryos, fertilization rate and number of transferred embryos. Total number of retrieved oocytes were significantly higher in summer and winter (P=0.004). There was significant differences in sperm motility (spring: 64.3±18.1, summer: 61.4±18.2, autumn: 62±18.3, winter: 65.3±18.3, P=0.0001) and metaphase II oocytes in different seasons (spring: 7.8±5.6, summer: 8.8±6.3, autumn: 8±5.7, winter: 8.2±5.8, P=0.015). Total number of sperm was significantly higher in spring and winter (P=0.0001). The highest implantation (P=0.0001) and pregnancy rate (P=0.001) were seen in summer.

Conclusion: According to the results, it can be concluded the effect of seasonal variation on the rate of pregnancy and implantation on infertile couples. It seems that together with other factors seasonal changes should therefore be considered in managing of patients

Keywords: Intracytoplasmic Sperm Injections, Seasonal Variation, Infertility

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The role of consultation in reproduction & midwifery

مشاوره در سلامت باروری و مامایی

A-10-308-2

O56: Parents' Informational Needs Following a Prenatal Diagnosis Of Fetal Anomaly: A Qualitative Study in The Iranian Context

Morvarid irani *

Abstract

Background: The availability of prenatal screening during the pregnancy has increased the detection rate of fetal anomalies. Useful information exchange between the healthcare provider and the family is an important component of coping with the stressful occurrence following a prenatal diagnosis of fetal anomaly. So, this study conducted to explore information needs following a prenatal diagnosis of fetal anomaly.

Method: This was done from the perspective of parents following a prenatal diagnosis of fetal anomaly. In a descriptive exploratory qualitative study, using a semi-structured interview and purposive sampling, a sample set of 16 pregnant women and 4 partners city were selected in order to elicit meaning behind their experiences about the subject under study, in Mashhad 2017. Data analysis was carried out using qualitative content analysis.

Results: Results were used to identify a number of information that Parents need. This information included the following: (1) Information for making a decision; (2) Information for next step the near future; and (3) the adequacy of information provided. There is a need for information on multiple subjects following the prenatal diagnosed anomalies, including the prognosis process, day-to-day management and the decisional process regarding the future of the pregnancy.

Conclusion: Parents faced with a prenatal diagnosis of fetal anomaly present a big variety of information needs, which was not provided adequately by healthcare providers. The results of this study highlight the need for good communication based on health provider knowledge of how parents understand and experience of prenatal diagnosed anomalies

Keywords: Keywords: Parents, Prenatal Diagnosis, Fetal Anomaly, Information Needs

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Treatment Management of Infertile Couples

مدیریت درمان زوج نابارور

A-10-468-2

O57: Ovulation Induction with Clomiphene Citrate for Infertile Couple

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Abstract

Background: Among couples unable to conceive without any identifiable cause, 30% are defined as having unexplained infertility. Management depends on duration of infertility and age of female partner. In order to increase pregnancy rate, couples with infertility of unknown origin can undergo ovulation induction and intrauterine insemination. These techniques are able to increase pregnancy rate in case of unexplained infertility. Clomiphene citrate and menopausal or recombinant gonodotropins are the most used drugs to induce ovulation. Aim of the present study was to evaluate the success rate after homologous intrauterine insemination (IUI) combined with clomiphene citrate (CC) stimulation.

Methods: A total of 60 couples were evaluated. Ten couples (16.7%) were excluded from the treatment (vaginal infections 5, tubal occlusions 4 and male sterility 1). Informed consent was applied for every couple. The remaining 50 couples were divided in two groups: group A (25 couples) were inducted with CC, while group B (25 couples) underwent placebo (multivitamin).

Results: In group A (CC) 12 (48%) pregnancies and 2 (8%) abortion were registered, while in group B (placebo) there were 5 (20%) pregnancies and 1 (4%) abortion.

Conclusion: Ovulation inductions with CC, together with intrauterine insemination, improves fecundity in patients with infertility of unknown origin with no need to recur to more invasive techniques.

Keywords: Ovulation, Induction, Infertile couple

A-10-667-1

O58: Association study of rs1874165 & rs2973631 in PRDM9 gene of affected people by azoospermia

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Abstract

Background: Infertility is one of the most common health problems in the world. It affects about 15% of couples, and about half of these cases are a male factor. Male infertility results from multiple genetic and environmental factors that lead to defects in The process of spermatogenesis. Genetic factors include chromosomal abnormalities and single-gene mutations that themselves account for about 10-15% of factors in male infertility. The PRDM9 gene is present in the region of 5p14.2 and 11 exons. The protein product of this gene is a zinc finger regulatory protein that causes mice to methylate lysine in histone H3. If there is a mutation in the PRDM9, it will stop the Meiosis division.Nucleotide changes in rs1874165 and rs2973631 can interfere with male infertility in some populations. In this study, 100 healthy male fertilized men and 100 azoosperm males were examined for rs1874165 and rs2973631.

Methods: After obtaining consent from patients and healthy subjects, blood samples were collected in EDTA containers and then, using the GeneAll kit, the gene was extracted and the polymerase chain reaction amplified a specific region of rs1874165 and rs2973631 And then using enzyme restriction enzyme MboII for enzymatic digestion for rs1874165 and using the ARMS PCR method for rs2973631, results were finally analyzed using chi-square statistical analysis.

Results: The findings of this study indicate that there is a significant difference between rs1874165 and rs2973631 polymorphisms in the

PRDM9 gene between healthy and azoospermic groups.

Conclusion: These two polymorphisms in the studied population can be considered as a genetic factor in male infertility.

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A life cycle perspective to the development of a healthy population

توسعه جمعیت سالم از دیدگاه چرخه زندگی

O59: Prenatal Attachment in Pregnant Women Treated with Assisted Reproductive Techniques: A Systematic Literature Review

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Abstract

Background: It is recognized that pregnancy after assisted reproductive technologies (ARTs) affects couples' emotional well-being. This paper aimed to review the literature on fetal attachment in women treated with ARTs. Study design: A systematic search of the electronic databases was conducted and all observational studies from 1990 to July 2017 were included. In this review, key words "Assisted reproductive technology", "In vitro fertilization", "prenatal attachment" and "Emotional adjustment" were searched in EMbase, MEDLINE/PUBMED, ISI Web of Science, CINAHL and PsycINFO and the Google scholar search engine. A total of ten articles related to fetal attachment in pregnant women treated with ARTs met the study inclusion criteria.

Findings: Feto-maternal attachment was identified to be increased with the progression of pregnancy after ARTs. In general, despite the gestational age, in pregnant women treated with ARTs, the level of attachment to the fetus was either similar to or greater than the attachment in naturally pregnant women.

Conclusion: Regardless of good fetal attachment in pregnant women after ARTs, clinical guidelines in prenatal care should consider fetal-maternal attachment during pregnancy particularly in vulnerable pregnancies including ARTs-treated pregnancy.

Keywords: Pregnancy, Assisted Reproductive Technology, Prenatal attachment

The 4rd International Congress on Reproduction
Abstracts
ISERB 2018

How to design integrated approaches in mother and child care for better outcomes

چگونگی طراحی رویکردهای یکپارچه در مراقبت از مادر و کودک برای نتایج بهتر

A-10-462-1

O60: The Supplementary Effect of 50,000 Units of Vitamin D in Matrnal And Infants

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Abstract

Vitamin D deficiency in mothers is a very important problem with maternal and fetal complications. The optimal protocol for treating vitamin D deficiency and its effects on maternal and infant outcomes is still unclear, and the issue of the safety and effectiveness of vit D supplements during pregnancy has been controversial. About dose of 50,000 units of vitamin D3, are limited in studies. Our goal this study is to review this dose in pregnant mothers and their effects. Especially in Iran, the addition of 50,000 units in addition to various studies is still a challenging topic.

Results: Studies were almost done on 1018 pregnant women , which Approximately 600 of them received a dose of 50,000 units. In these studies, there was a significant relationship between increasing the high dose of vitamin D on the serum level of the mother and its effect on the infant and reducing maternal and neonatal complications.

Methods: A systematic review of some databases such as pubmed, Google scholar, and science direct regarding the key words of vitamin D in pregnancy, vitamin D deficiency in pregnancy, and clinical trials (2008-2017). Conclusion: A dose of 50,000 units of vitamin D3 in patients with low serum levels seems to be more than adequate for current pregnancy and lactating women. This dose can be considered relatively safe for mother and infant. In order to assess the role of vitamin D supplements in pregnancy, especially the dose of 50,000 units, more accurate and more random studies are required.

Keywords: Vit D, Vit D deficiency, Vit D in pregnancy, Clinical Trial.

Poster Presentations

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A-10-354-1

P1: Motility Parameters, Membrane Integrity, Longevity and Total Abnormalities of Frozen/Thawed Ghezel Ram Spermatozoa Treated with Caffeine

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Abstract

Effects of caffeine as metabolism enhancer agent with different concentration have studied on the motility parameters, longevity, total abnormalities and plasma membrane integrity of Ghezel ram spermatozoa after cryopreservation. Ram semen samples were collected and were diluted in Tris based extender with 1.5% lecithin and 7% glycerol divided in to five equal fractions, then caffeine was added at 0, 0/5, 1, 2 and 4 mM/L concentrations in different fractions. After cooling of diluted semen samples they were kept in liquid nitrogen until evaluations. Samples were thawed at 37°C for 30 sec and motility parameters, membrane integrity, longevity and total abnormalities were evaluated. To analyze the obtained data, we first examined them in terms of normality. Then data analysis was performed with SAS software (9.4) using GLM procedure. The results showed that addition of 0.5 and 2 mM/L caffeine increased straight line velocity (VSL), curvilinear velocity (VCL), linearity (LIN) and average path velocity (VAP) parameters in comparison with the control and other groups ($P<0.05$). Sperm abnormality was significantly decreased in group receiving 2 mM/L caffeine ($P<0.05$). Sperm viability was increased in group receiving 1 mM/L compare to the other groups ($P<0.05$). However, the addition of caffeine had no significant effect on the total and progressive motility and plasma membrane integrity. The results of this study showed that the addition of 0.5 and 2 mM/L caffeine in Tris-lecithin based extender can improve the quality and motility characteristics of freeze-thawed semen.

Keywords: Cryopreservation, Caffeine, Motility characteristics, CASA.

A-10-354-2

P2: Antioxidant Effect of Caffeine in Ghezel Ram Spermatozoa Cryopreservation Media

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Abstract

Despite significant improvements in sperm cryopreservation, this process affects the quality of sperm by generating reactive oxygen species and reduction of antioxidant activity. Caffeine, as a cyclic nucleotide phosphodiesterase inhibitor has antioxidant and free radical scavenging properties. Therefore, the aim of this study was to investigate the effect of caffeine in the soybean lecithin extender on the performance of freeze-thawed sperm in Ghezel ram. Semen collection was performed using artificial vagina twice a week. Collected samples were diluted using Tris based extender with different levels of caffeine (0, 0.5, 1, 2, 4 mM/L). After cooling and freezing of semen samples, they were kept in liquid nitrogen. After thawing, membrane integrity, lipids peroxidation, total antioxidant capacity, glutathione peroxidase and superoxide dismutase activities parameters in seminal plasma were evaluated. To analyze the obtained data, we first examined them in terms of normality. Then data analysis was performed with SAS software (9.4) using GLM procedure. The results showed that addition of 1 mM/L caffeine increased glutathione peroxidase activity and total antioxidant capacity in comparison with other groups ($P <0.05$). However, the addition of caffeine had no significant effect on the superoxide dismutase activity, and MDA concentration. In conclusion, addition of 1 mM/L caffeine in Tris-lecithin based extender can improve quality of freeze-thawed spermatozoa due to increases glutathione peroxidase activity and total antioxidant capacity, which could reduce the oxidative damages of sperm during freeze-thawing process.

Keywords: Methyl xanthine, Caffeine, Cryopreservation, Antioxidant, glutathione peroxidase.

A-10-409-1

P3: The Effect of Tribulus Terrestris Extract on Motility and Viability of Human Sperms After Cryopreservation

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Abstract

Background: Semen cryopreservation produces significant amounts of reactive oxygen species (ROS), which may lead to impairment of sperm morphology, function, and ultimately, male fertility. Since Tribulus terrestris has antioxidant and free-radical-scavenging properties, this study aims to reveal the effect of the Tribulus terrestris extract on motility and vitality of human sperms after cryopreservation.

Methods: Semen specimens from 80 healthy volunteers were divided into eight groups: fresh control (group I), freeze control (group II), groups III, IV, and V, which had 20, 40, and 50 mg/mL doses of Tribulus terrestris extract added before cryopreservation, and groups VI, VII, and VIII, which were supplemented by these extract doses after the freeze-thaw process. To evaluate the effects of the Tribulus terrestris extract, the semen samples were incubated with the extract and evaluated with a light microscope for motility and viability.

Results: After cryopreservation, a significant improvement in spermatozoa viability was observed in group VII. In groups VII and VIII, motility, according to World Health Organization (WHO) criteria, increased considerably ($p < 0.001$). There was no significant difference among groups III, IV, and V.

Conclusion: The present study demonstrated that the protective effects of Tribulus terrestris, which improves human sperm motility and viability, may be due to its antioxidant properties. On the basis of the results, the researchers concluded that Tribulus terrestris can be used as a safe therapeutic alternative to current modalities for the management of motility dysfunction in males.

Keywords: Tribulus Terrestris, Human Sperm, Motility, Viability, Cryopreservation, Reactive Oxygen Species.

A-10-450-1

P4: Effects of TypeIII Antifreeze Protein on Human Sperm Cryopreservation

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Abstract

Lower fertility in humans with frozen-thawed semen is attributed to sperm damage that is believed to be due to formation of ice crystals during cryopreservation process. It is shown that addition of AFP in the extender can improve the quality and fertility of cryopreserved sperm of some animals but there is no study about impact of AFP on human sperm cryopreservation. In this study, separate experiments were conducted to evaluate the effect of antifreeze proteins III (AFP III) at 0 (control), 0.01, 0.1, 1 and 10 µg/mL concentration, on post thaw quality of human semen. For experiment, 20 normal semen samples were divided into four aliquots and diluted (at 37 °C having 40×10^6 sperm/mL) in GEYC with 10% glycerol medium containing above mentioned concentrations of AFP III, then filled in 0.5 mL straws, kept over liquid nitrogen vapors for 10 min and plunged in the liquid nitrogen. After one week of storage in LN2, semen straws were thawed at 37 °C for 30 s to assess *sperm* parameters according to WHO 2010 and plasma membrane integrity (PMI) also DFI. In experiment, improvement ($P>0.05$) in sperm percentage of total motility , plasma membrane integrity and DFI was recorded in extender containing 1 µg/mL AFP III compared to control.

In conclusion addition of AFP III with 1 µg/mL concentration in the extender can improve the progressive motility, plasma membrane integrity and increase viability of cryopreserved human semen.

Keywords: Antifreez Proteiniii, Sperm, Cryopreservation

A-10-577-2

P5: Effect of Camp Analog and an Inhibitor of Phosphodiestrase on Sperm Hyper – Active Motility Patterns.

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Abstract

Background: The role of cAMP analog and an inhibitor of phosphodiestrase on sperm hyper – active motility has been well known. cAMP analog and an inhibitor of phosphodiestrase is routinely used for increases of motility mammalians sperm. Therefore, we decided to evaluate the effect of cAMP analog and an inhibitor of phosphodiestrase on sperm hyper – active motility patterns.

Methods: Fifteen semen sampes from individuals referring to andrology unit of Qom Fertility and Infertility Center were collected for this study. All the samples were processed with DGC(Density Gradient Centrifuging). After Incubation sperm with cAMP analog and an inhibitor of phosphodiestrase , percentage of hyper – activated sperm was assessed using CASA (Computer – Aided sperm Analysis) system and compared before and after incubation cAMP analog and an inhibitor of phosphodiestrase.

Results: The results of this study showed that percentage of hyper – activated sperm were significantly increased after incubation with cAMP analog and an inhibitor of phosphodiestrase (P</0.004).

Conclusion: Our results indicate that cAMP analog and an inhibitor of phosphodiestrase may be useful on hyper- active motility .

Keywords: Sperm, Campanalog ,Inhibitor of Phosphodiestrase, Hyper – Active Motility

A-10-577-1

P6: Association of Antioxidant Enzyme Leveland Sperm Parameters in Fertile And Infertile Men

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Abstract

Backgournd: ReactiveOxidative stress (ROS) affects fertility and influences on the sperm quality, a molecular marker of stress related infertility. In the current study, we aimed to assess the TAC (total antioxidant capacity) and MDA (malondialdehyde) as stress oxidative markers in infertile men with Teratoastenozospermia and fertile men, and moreover, their correlation with sperm parameters.

Methods: The study was carried out inUnit of Infertility Research Center of the ACECR, Qom.Iran,This case control study was performed on 25 infertile men with Teratoastenozospermia and 25 men with proven fertility.The semen analysis waspreformed according to WHO criteria.The ferric reducing ability of plasma (FRAP) and thiobarbituric acid (TBA) reaction methods were used for seminal plasma TAC and MDA assay, respectively.

Results: Sperm Pregressive motility (a+b) (%) (28,94±19,93 vs. 37,59±16,44, p<0,04) and sperm morphology (%) (4,10±3,21 vs. 5,57±5, 64,P< 0.04) were observed in infertile men with Teratoastenozospermia compared to fertile men.Lower TAC levels (1.7±0.2 vs. 1.3±0.4 mmol/L, P=0.0004) and higher MDAlevels (2.5±1.1 vs. 5.8±1.9 mmol/L, P < 0.0001) were

showed a negative correlation was found betweenTAC and MDA levels in infertile men.
Conclusions: Decreased antioxidant enzyme levels (TAC) are associated with infertility. The MAD levels were significantly higher inpatients with abnormal semen parameters. High degree of correlation betweensperm parameters and antioxidant enzymes suggests the ability ofabnormal spermatozoa to produce reactive oxygen species resulting inreduced levels of antioxidant enzyme.

Keywords: Reactive Oxygen Species (ROS) , Total Antioxidant Capacity(TAC), Malondialdehyde (MDA), Infertility

A-10-605-1

P7: Developing a Probe for Detection of Sperm Capacitation

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Abstract
Currently, the diagnosis of male infertility is based on results of semen analysis, which includes the evaluation of sperm motility, morphology, and concentration. While based on the World Health Organization (WHO, 2010) normal sperm have concentration of $\geq 15 \times 10^6$/ml, total motility of ≥40%, and morphology as ≥4% normal forms, the functional tests for detection of normal sperm seem to need development. Among them, detection of sperm capacitation not only is important for determining the percentage of normal spermatozoa during semen analysis, but also it is important for determination of the suitable protocols during assisted reproductive technology (ART). In this study a probe for detection of sperm capacitation were developed using biochemical studies. The results indicated that the probe may provide a new diagnostic tool.

Keywords: Sperm capacitation, Assisted Reproductive Technology (ART), World Health Organization (WHO), Semen analysis.

A-10-642-1

P8: The Effects of of Myoinositol on Standard Parameters, Oxidative Stress and DNA Fragmentation of Human Cryopreserved Sperm

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Abstract
Cryopreservation has been extensively used in assisted reproductive technology and it is an important task to improve current methods of sperm cryopreservation. Myoinositol is involved in several systemic processes and in mechanisms of signal transduction in the plasma membrane as precursor of second messengers. On the male reproductive function, MYO appears to regulate seminal plasma osmolarity and also sperm maturation, motility, capacitation and acrosome reaction. Recently an antioxidant action has also been suggested. The aim of this study is to evaluate the beneficial effect of MYO supplement in freezing media on the post thaw sperm quality. Semen samples from 40 normozoospermic men were divided into two aliquots and frozen with 2mg/ml MYO free /or supplemented freezing medium. Post thaw process, computer-aided semen analysis was used to analyze sperm motility and morphology. Reactive oxygen species (fluorometry of DCFH-DA), total antioxidant capacity, lipid peroxidation (colorimetric assay by ELISA reader) and DNA fragmentation (TUNEL staining) were evaluated. MYO significantly improved progressive motility and normal morphology in treated samples ($P < 0.05$). Lipid peroxidation can be precluded in samples frozen with MYO supplemented freezing media ($P < 0.05$). While MYO did not affect significantly the amount of ROS ($P > 0.05$), it was

associated with a significant increase in total antioxidant capacity (P < 0.05). In MYO treated samples, DNA fragmentation was lower than control ones (P < 0.001). The findings support the use of 2mg/ml myoinositol supplemented freezing media in sperm cryopreservation to increase sperm quality after freezing-thawing procedures.

Keywords: Myoinositol, Human sperm cryopreservation, Sperm parameters, Oxidative stress, DNA fragmentation.

A-10-69-1

P9: Sperm DNA Fragmentation and Antioxidant Therapy in Infertile Men With Varicocele

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Abstract

The Varicocele (VCL) has been implicated as a major cause of male infertility in in 35% of men with primary Infertility and in up to 80% of men with secondary infertility. A number of studies have demonstrated increased levels of ROS and reduced total antioxidant capacity (TAC) in men with a clinical diagnosis of varicocele. These reports suggest that, the sperm dysfunction in varicocele patients may be in part related to oxidative stress and as a negative predictor of fertility potential men with DNA damage higher that 30% have very low potential for in-vitro and in-vivo fertility. In line with this issue, several positive results were obserened after oral administration of various antioxidant agents/chemicals in varicoceles with moderate DNA damage. For instance, the administration of glutathione (GSH), every day for 2 months, could significantly boost sperm count and motility in men with VCL. In other study, the carnitine and acetyl-ℓ-carnitine for 6 months could fairly enhance the sperm parameters, including DNA integrity. In another study, 20 infertile patients with grade I varicocele were given multivitamins (L-Carnitine, vitamin C, coenzyme Q10, vitamin E, vitamin B9, vitamin B12, zinc, selenium) daily, for 3 months and the results showed increased sperm basic parameters and a decrease in sperm DNA fragmentation. Morover, A complex of acetyl-L-carnitine, L-carnitine fumarate and alpha-lipoic acid have been shown to up-regulate sperm quality even after varicocelectomy. Thus, the management of DNA damage in varicoceles is also challenging and antioxidant therapy in patients with VCL, proportionately can improve semen quality.

Keywords: Varicocele, Sperm DNA damage, Antioxidant, Sperm

A-10-732-1

P10: Expressions of Transcriptional Factors SOX2, Oct4, Nanog in Experimental Varicocele; Correlation with P21 Expression In Stages IX-XII Of Spermatogenesis

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Abstract

Background: The varicocele (VCL) has been reported to pathologically affect the spermatogenesis. The SOX2, as main pularipotency/self renewal regulator of SSCs, in association with Oct4, as target gene of SOX2, results in Sox-2-Oct4 complex, which in turn triggers the SSCs self-renwal. The Nanog has been reported to express in SSCs during stage XII of spermatogenesis, resulting in SSCs subpoulation self-renewal. Moreover, the p21, as cyclin dependent kinase inhibitor, has been known as a negative regulator of SSCs proliferation. Thus, the present study was performed to analyze the cross-link between transcriptional factors SOX2, Oct4 and Nanog with p21 during stages

IX-XII of spermatogenesis in experimentally-induced VCL versus control animals.
Methods: For his purpose, 18 mature Wistar rats were randomly divided into control-sham, 2 months and 4 months VCL-induced groups. Simple laparotomy was performed in control-sham group. Following test termination, the mRNA levels of SOX2, Oct4, Nanog and p21 were evaluated using RT-PCR. By using IHC staining, the SOX2+, Oct4+, and p21+ cells were traced in seminiferous tubules in stages of IX-XII.
Results: The animals in VCL-induced groups, represented diminished expression of Nanog, enhanced mRNA levels of SOX2, Oct4 and p21 versus control-sham animals. Moreover, the numbers of SOX2+, Oct4+, p21+ and Nanog+ cells per seminiferous tubules (stages IX-XII) were increased and decreased, respectively.
Conclusion: The overexpression of p21 negatively regulates the Nanog and its promoter SOX2-Oct4 complex genetic cross-link, which ultimately results in SSCs self-renewal suppression in VCL condition.

Keywords: Varicocele, Self-renewal SOX2, Oct4, Nanog, p21

A-10-355-1

P11: A Review on the Impact of Men's Age Increase on Infertility Treatment through ICSI / IVF

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Abstract
Backgournd: In recent years, the prevalence of infertile diseases has increased rapidly. One of treatment routes in ART is to use ICSI / IVF; which is a new technology in producing zigot in vitro, and this treatment route is influenced by factors. There are a number of different factors, which the age is one of them. Since age in ART has always been a determinative factor for the success or failure of ICS/IVF, the age of men was virtually ignored, so it decided to review the research on the effect of men's age on the success rate of fertility.
Method: To do this, we used google scholar's medical pub-med search engines which include two sections of the semen analysis (volume, concentration, sperm motility, energy, morphology) and sperm genomic decay, TuNEL assay, an line blue staining and flaoresent in situ hybridization; these experiments were performed in two groups of peympanes 40 and over 40 years old.
Results: The results showed there was no significant difference between the semen parameters of groups 1 and 2, and the analysis of SGD tests showed that the age of the men would increase the DNA and chromatin decomposition, as well as the amount of aneuploidy.
Conclusion: These tests showed the increase in age of men is one of the factors affecting infertility treatment through IVF / ICSI and also increases the likelihood of abortion

Keywords: Men's Age, Semen Analysis ,SGD, Ivf/Ics

A-10-691-1

P12: Toxicity of Zinc Oxide Nanoparticles on Adult Male Wistar Rats

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Abstract
The purpose of this study was to investigate the effects of zinc oxide nanoparticles (nZnO) on adult male Wistar rats.Thirty male Wistar rats divided into five groups of six animals each were used for this study. For ten days, Groups one to four continuously received 50,100,150 and 200 mg/kg nZnO, respectively. Group five served as the control group. At the end of the study after anesthetizing the animals and removing the

epididymis, sperm analysis was performed. The sperm count was assessed using a haemocytometer. Also, the qualitative and quantitative morphology and motility of sperms were observed with a light microscope and their vitality was studied with Eosin dye. Then, the percentage of live sperms to the total sperms was evaluated with a magnifi- cation of 40. The dead sperms were observed in reddish color. The results are analyzed using SPSS statistical software .The results of this study showed that nZnO at concentration more than 50 mg/kg lead to significant changes in oxidative stress and sperm quality and quantity. According to the obtained results the sperm count and vitality of all groups decreased significantly compared to the control group. Furthermore, while sperm motility decreased by increasing the concentration of zinc oxide nanoparticles, the reduction was not significant at the 50 mg concentration. All levels of zinc oxide nanoparticles had a significant impact on sperm morphology. In conclusion, the toxicity of nZnO is more significant when the concentration is increased; however, the use of low doses requires further investigation.

Keywords: ZNO Nanoparticles , Oxidative Stress System, Sperm Analysis , Histopathology

A-10-693-1

P13: Molecular examination Superoxidation The sides of the mitochondria membrane in adult spermatozoa In mouse models with standard fertility and idiopathic infertility

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Abstract

The sperm motility is due to the formation of transverse waves along sperm whales, which is affected by a very complex molecular process. Given the exact morphology of the sperm, we know that the motor and the energy source required for the regular movement of the sperm by the flagellum, its neck portion. With a closer look and molecular examination, we can see the origin of these movements that have mitochondria in the neck of the sperm. By providing the necessary energy, mitochondria generate fluid and flaccid movements like in a flugelum and direct sperm to the ovule for fertilization. The aim of this study was to investigate genes and molecular pathways affecting the spermatocyte mitochondria of azoospermic and neuromozospermia mouse. In order to investigate the effect of molecular signaling pathways and genetic factors affecting the mobility of spermatozoids, we need two groups of mice that have at least one successful fertility and the other have infertility due to sperm motility. To record the data before the study And comparing the results between the two groups of sperm analysis experiments for both groups and using the common molecular methods such as Real Time PCR and RT PCR, we will record the data for the desired results of the study.

Superoxidation, energy of mitochondria, Sperm flaglom, Andrology, Idiopathic infertility

P14: In vitro cytotoxicity of folate-silica-gold nanorods on mouse acute lymphoblastic leukemia and spermatogonial cells

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Abstract

Background: The purpose of this study was to evaluate in vitro cytotoxicity of GNRs on the viability of spermatogonial cells and mouse acute lymphoblastic leukemia cells (EL4s).

Methods: Spermatogonial cells were isolated from the neonate mice, following enzymatic digestion and differential plating. GNRs were synthesized, then modified by silica and finally conjugated with folic acid to form F-Si-GNRs. Different doses of F-Si-GNRs (25, 50, 75, 100, 125 and 140 µM) were used on the both cells. MTT assay was performed to examine the GNRs toxicity. Flow cytometry was used to confirm the identity of the EL4s and spermatogonial cells. Also, the presence of spermatogonial cells was determined by the expression of specific spermatogonial genes and transplantation into recipient testes. Apoptosis was determined by flow cytometry using an annexin V/propidium iodide kit.

Results: Flow cytometry showed that SSCs and EL4s were respectively PLZF and H-2kb positive. The percentage viability of SSCs and EL4s that were treated with 25, 50, 75, 100, 125 and 140 µM of F-Si-GNRs was 65.33±3.51%, 60±3.6%, 51.33±3.51%, 49±3%, 30.66±2.08% and 16.33±2.51% for SSCs and 57.66±0.57%, 54.66±1.5%, 39.66±1.52%, 12.33±2.51%, 10±1% and 5.66±1.15% for EL4s respectively. The results of the MTT assay indicated that 100 µM is the optimal dose to reach the highest and lowest level of cell death in EL4s and in spermatogonial cells, respectively.

Conclusion: As conclusion, cell death increased alongside increasing concentrations of F-Si-GNRs. Following utilization of F-Si-GNRs, there was a significant difference in the extent of apoptosis between cancer cells and SSCs.

Keywords: Spermatogonial cells; Gold Nanorods; Mouse acute lymphoblastic leukemia cells (EL4s); Folic acid; Cytotoxicity

A-10-41-1

P15: Effects of Resveratrol on Sperm Parameters Disorders Induced By Morphine in Mice

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Abstract

Addiction is a problem which has increasingly developed among the various populations throughout the world. Morphine is one of the alkaloids of opium derived from the opium poppy. Resveratrol is a phytoestrogen and antioxidant of the red grape. The main goal is to investigate whether the Resveratrol could inhibit morphine adverse effects on sperm cell viability, count,

motility and testis histology and testosterone hormone and nitric oxide levels in mice.In this study, 48 male rats were divided into 8 groups: control, morphine treated group (20 mg/kg/day); Resveratrol -treated groups (2, 8, 20 mg/kg/day); and morphine and Resveratrol treated group were administered interperitoneally for 14 consequent days. These mice were randomly assigned to 8 groups (n=6) and sperm parameters (sperm cell viability, count, motility and morphology), testis weight, testis histology and testosterone hormone and nitric oxide were analyzed and compared. Then the data were P<0.05 was considered significant. The results indicated that morphine administration significantly decreased testosterone level, count, viability and motility of sperm cells and testis weight and increase nitric oxide compared to the saline group (P=000). However, administration of resveratrol and resveratrol plus morphine significantly boosted motility, count, viability of sperm cells, somniferous tubule diameter and testosterone while the decrease nitric oxide level in all groups compared to morphine group (P<0/025).It seems that resveratrol administration could increase the quality of spermatozoa and prevented morphine-induced adverse effects on sperm parameters.

Keywords: Resveratrol, Sperm Parametrs, Morphine, Mice, Spermatozoa, Testosterone.

A-10-181-1

P16: Magnetic Nanoparticles Cytotoxicity Effects on Mouse GV Oocytes

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Abstract

Background: Recently, nanoparticles are widely used in diagnostic medicine or treatment. Vitrification of oocytes is a promising technique to preserve fertility, but it has deleterious effects on oocyte quality and leads to low-quality embryos. Supplementation of vitrification solution by nanoparticles could improve oocytes modality and its production competence in high quality embryos.

Methods: To assess the toxicity effects of magnetic nanoparticles (Fe3O4), immature oocytes (GVs) were derived from 6-8 weeks-old NMRI mice and exposed to equilibration medium (7.5%EG plus 7.5%DMSO (v/v)) 5 min, then treated with vitrification solution (VS) (15%DMSO, 15%EG, 0.5 mol/L sucrose) supplemented by nanoparticles (VS+5: 5µgr/ml, VS+10: 10µgr/ml or VS+20: 20µgr/ml) 1 min, then they were exposed to warming solutions in three-step sucrose dilution: W1 (1.0 mol/L sucrose) 370c, W2 (0.5 mol/L sucrose) and W3 (0.25 mol/L sucrose) RT for 1, 3 and 3 min. IVM were performed for warmed immature oocytes. Viability and maturation rates were measured by trypan blue and hoechst staining.

Results: IVM rate significantly decreased in VS+20 as compared to control and VS groups but there were no analytically differences between VS and control groups in comparison with VS+5. Treatment of oocytes by VS+10 and VS+20 caused dramatic decrease in oocyte viability rate as compared to control group but this parameter didn't show any comparative reduction in VS+5 versus control group ($P<0.05$).

Conclusion: Using 5µgr/ml Fe3O4 nanoparticles in vitrification solution as compared to other concentration of nanoparticles did not have malicious effects on maturation and viability rates of mouse immature oocytes.

Keywords: Oocyte, Vitrification, Nanoparticles, in Vitro Maturation

A-10-796-1

P17: Prostaglandin E Pathway in Uterine Tissue During Window of Preimplantation in Female Mice Mated with Intact and Seminal Vesicle–Excised Male

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Abstract

Prostaglandin E2 has been introduced as an important factor for embryo implantation. The present study was carried out to evaluate the seminal fluid effect on PGE2 pathway in uterus tissues of mice during window of preimplantation. The mRNA expressions of microsomal PGE synthase and cytosolic PGE synthase as well as protein expression of PGE receptor 2 and 4 were determined in uterine tissue of control and seminal vesicle excised (SVX)mated female mice

during days 1 to 5 of pregnancy using qPCR and Western blotting, respectively. We found that mRNA expression of mPGES at day 1 and 2 of pregnancy was significantly higher in the control group than the SVX-mated group (P<.05), but such result was not obtained for cPGES expression. The protein levels of EP2 at day 1 to 4 of pregnancy were significantly higher in the control group compared with the SVX-mated group (P<.05), also the EP4 levels were significantly different between the control and SVX-mated groups at the first day of pregnancy (P<.05). Implantation rate was higher in the control group and also there were positive correlations between mPGES and EP2 expressions in the fifth day of pregnancy with implantation rate. Our results demonstrated significant effect of SF on uterine expressions of the evaluated factors, especially mPGES and EP2. Regarding the correlations between levels of these factors and implantation rate, we suggest that possibly one of the important mechanisms of SF in affecting female pregnancy is through mPGES and EP2

Keywords: Embryo Implantation, Prostaglandin E, Seminal Fluid, Uterus

A-10-523-1

P18: A Reveiw on Electromagnetic Fields (Emfs) and The Reproductive System

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Abstract

Environmental factors, such as electromagnetic waves, induce biological and genetic effects. One of the most important physiological systems involved with electromagnetic fields (EMFs) is the genital system. This paper reviews the effects of EMFs on human reproductive organs, female animals, fetus development and the importance of two types of natural antioxidants, i.e., vitamin E and fennel. The studies presented in this review referred to the effects of different exposures to EMFs on the reproductive system, and we tried to show the role of natural antioxidants in reducing the effects of the exposures. Many studies have been done on the effects of ionizing and non-ionizing electromagnetic waves on the cell line of spermatogenesis, sexual hormones, and the structure of the testes. Also, about the hormonal cycle, folliculogenesis and female infertility related to EMF have been given more consideration. In particular, attention is directed to pregnant women due to the importance of their fetuses. However, in addition to the studies conducted on animals, further epidemiological research should be conducted.

Keywords: Electromagnetic fields (EMFs), Reproduction system, Antioxidants

A-10-527-1

P19: The Effects of In VitroMaturation Technique on The Expression of Genes Involved in Embryonic Genome Activation of Human Embryos

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Abstract

Background: In vitro maturation technique (IVM) is shown to have an effect on full maturation of immature oocytes and the subsequent embryo development. Embryonic genome activation (EGA) is considered as a crucial and the first process after fertilization. EGA failure leads to embryo arrest and possible implantation failure. This study aimed to determine the role of IVM in EGA-related genes expression in human embryo originated from immature oocytes and recovered from women receiving gonadotrophin treatment for assisted reproduction.

Methods: In this experimental study, germinal vesicle (GV) oocytes were cultured in vitro. After intracytoplasmic sperm injection of the oocytes, fertilization, cleavage and embryo quality score were assessedin vitroand in vivo. After 3-4 days, a single blastomere was biopsied from the embryos and then frozen. Afterwards, the expression of EGA-related genes in embryos was assayed using quantitative reverse transcriptase-polymerase chain reaction (PCR).

Results: The in vitro study showed reduced quality of embryos. No significant difference was found between embryo quality scores for the two groups (P=0.754). The in vitrogroup exhibited a relatively reduced expression of the EGArelated genes, when compared to the in vivo group (all of them showed P=0.0001).

Conclusion: Although displaying the normal morphology, the IVM process appeared to have a negative influence on developmental gene expression levels of human preimplanted embryos. Based on our results, the embryo normal morphology cannot be considered as an ideal scale for the successful growth of embryo at implantation and downstream processes.

Keywords: Embryonic Development, Intracytoplasmic Sperm Injection, In VitroMaturation, Ovarian Stimulation

A-10-557-1

P20: Comparison of The Efficacy Of Two Culture Media Handmade (Hams F10 With Umblical Serum) And Commercial (G1/G2) On Invitro Development Of Mouse Embryos

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Abstract

Improvement of the culture medium is one of the general concerns in infertility and animal breeding research. Providing all the needful conditions during a successful IVF, sperm capacitation and development of embryos are considered to be the main challenges in the field. Umbilical cord serum is one of the components which considered to optimize the culture medium. In this research, we investigated the effect of hand-made Hams f10 medium supplemented with human umbilical cord serum (HUCS) with commercial G1/G2 medium supplemented with human serum albumin (HSA), on In-Vitro development of mice embryos. Oocytes were collected after superovulation with HMG and hCG. The harvested oocytes then divided in three groups including 60 oocytes for each one of groups, G1/G2 supplemented with HUCS, Hams f10 supplemented with HUCS and Hams f10 supplemented HSA, as a control. Sperms were collected from epididymal tail and after capacitation were added to the drops containing the oocytes. After fertilization, embryos were evaluated every 24 hours. Results in 24, 48 and 72 hours, revealed no significant differences between experimental groups. At 96 and 120 hours of embryo culture again no significant changes were observed however, only in the group in which the HUCS was supplemented, morula stage embryo was seen. Based on the results, we conclude that the hand-made Hams F10, beside on its cheaper price compare to the G1/G2, is an adequate substitute

medium for culturing preimplantation mice embryos.

Keywords: IVF, Umbilical cord serum, G1/G2, Hams F10.

A-10-475-1

P21: Dopaminergic Neuronal Differentiation Method for Adipose Stem Cells

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Abstract

Background: Adipose stem cells (ASCs) have been proposed as a promising source of stem cells in nerve regeneration due to their close embryonic origin and ease of access. The generation of dopaminergic neurons from stem cells holds great promise for future research and in the clinical treatment of neurodegenerative diseases, such as Parkinson's disease . The aim of this study was to evaluate the efficacy of dopaminergic and motor neuronal inductive media on transdifferentiation of ASCs into dopaminergic-like cells**.**

Methods: Isolation, cultivation, and identification of ASCs were performed with morphological analyses and flow cytometry. Differentiation media for the induction of dopaminergic neurons containing sonic hedgehog (SHH), fibroblast growth factor 8 (FGF8), and basic fibroblast growth factor (bFGF) were prepared. The efficacy of neural induction was evaluated by detecting the expression of neuron cell-specific cell markers by immunocytochemistry.

Results: The ASCs-derived dopaminergic neurons express dopamine-specific markers, synthesize, and secrete dopamine. The described method could be used to generate dopaminergic neurons for various model systems in which dopaminergic cells are implicated in pathophysiological conditions.

Conclusion: These findings suggest that in response to the neuronal inductive stimuli, ASCs acquire a phenotype resembling dopaminergic neurons. Such ASCs-derived dopaminergic neurons may provide an alternative stem cell source for therapy-based treatments of neuronal disorders like PD.

Keywords: Adipose Stem Cells, Dopaminergic Neurons, Transdifferentiation

A-10-530-1

P22: Embryo Vitrification at 2-Cell Stage Appears Not To Affect Blastocysts Cell Number In Mice

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Abstract

Embryo vitrification is a key component of assisted reproductive techniques (ART). This approach prevents ovarian hyperstimulation syndrome and multiple gestation and also decreases risk of breast and uterine cancers. But the effect of this procedure on preimplantation embryo development is questionable. In this study, by counting cell number at blastocyst stage, the quality of the embryos cultured after vitrification/thawing were evaluated. 2-cell mouse embryos obtained from IVF divided into two groups; in group I embryos cultured in KSOMaa medium supplemented with 10% bovine serum albumin (BSA) under mineral oil for 96 h at 37 °Cin a humidified atmosphere of 5 % CO2 and 95 % air. In group II embryos were vitrified/warmed and then cultured in the same conditions as the first group for 72 h to obtain blastocysts. The blastocysts then were double stained and the

number of inner cell mass, trophectoderm and total cells were figured and then compared between two groups. The result showed that the number of trophectoderm, inner cell mass and total cells in group II have no significant difference in comparison to group I ($p < 0.05$). In conclusion, preimplantation embryo vitrification does not affect the quality of the blastocysts in term of their cell number.

Keywords: Embryo vitrification, ART, Inner cell mass, Trophectoderm, Blastocysts, Mice

A-10-775-1

P23: Maintain The Stability of the Classical Parameters of The Sperm in Static Magnetic Feild

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Abstract

Magnetic field therapy and bioenergy therapy, is an alternative therapy that uses magnets practice that uses static (i.e. unmoving) magnets to Increased health improvement rates,and Magnetic therapy is a promising treatment method now aday .The purpose of this study was the evaluation of protective effect of modrate intensity of magnetic field on the sperm classical parameters. Materials and Methods:In this study,90 normozoospermic semen samples referring to Royan institue were collected and then were allowed to liquefy for 15-30 min. Each sample was divided into two subsamples that were exposed (‘‘treated’’) or not (‘‘control’’) during, 1-5 hr to a uniform static magnetic field in the center of permanent magnetic. During the experiments, a small portion of the treated and the control samples was taken away and observed every 60,180,300 min from start of treatment. The content of sperm motility was determined by CASA (computer assisted sperm analysis)and The content of sperm alives was evaluated using eosin/nigrosin staining. The p-value <0.05 is considered significant.   Result: Sperm motility was significantly retained under the influence of static magnetic field while the motility percentage of sham group decreased the motility. Also the sperm viability parameters in the group that was exposed to static magnetic field maintained after 5hr exposed. Conclusion:.The result of current study clearly shows that using static magnetic field to processed sperm can lead to maintain some sperm parameters such as motility ,and viability during time

Keywords: Sperm, Static Magnetic Field, Motility, Viability.

A-10-464-1

P24: Blastocentesis; a New Methods of Sampling in Pre-Implantation Testing

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Abstract

Nowadays, pre-implantation testing is vastly used for lots of patients applying ART. PGT can be vastly used in patients with a previous history of genetic disorders and chromosomal abnormalities,

as well as screening common chromosomal abnormalities to increase the fertility rate in patients enduring IVF. The overall procedure contains profiling embryos before implanting, sometimes oocyte, by molecular or cellular testing on obtained cells or fluids. Sampling techniques are improved towards precise exams with the less harming effect on the embryos and can be categorized as invasive and non-invasive ways. The conventional invasive techniques contain biopsies of Polar body, blastomere and trophectoderm, the latter is the most common method which gains more single cells whilst keeps ICM intact whereas less number of cells could be obtained in blastomere biopsy and finally the polar body biopsy is limited to testing oocytes. In all of these techniques, physical damaging the embryo is inevitable. Some Researchers are developing less invasive techniques, for instance blastocentesis that in this article we are going to have a brief look at it. In this method the trophectoderm is punctured by aid of a micro-needle so the blastocoele fluid is aspirate, provided DNA of shattered cells which could be analysis to predict the health condition of the embryo, especially the ploidy condition. In some surveys using the mentioned fluid as a source of both nuclear and mitochondrial DNA is suggested. By blastocentesis the structure of embryo can be preserved and damaging the cells can be avoided.

Keywords: Blastocentesis, PGD, Pre-Implantation Testing, embryo biopsy, genetic disorder, chromosomal abnormality, ART, IVF.

A-10-49-1

P25: Fertility Preservation in Patients with Prostate Cancer

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Abstract

Backgound: Prostate cancer is the first men's cancer, with 1288 cases for 100,000 people per year. An increasing number of younger men are diagnosed each year with prostate cancer and data have shown that sexual function is highly important to this younger cohort. These men are sufficiently young that future fertility could be an issue for them, all the more, it is a tendency to have children later in life. Different approaches are available for these kind of patients to preserve fertility.

Methods: A literature review on prostate cancer and fertility over the last 10 years was carried out on PubMed database. The literature was based on evidence and practical considerations. Thirteen research articles were selected according to their relevance.

Results: Several approaches such as total prostatectomy, external radiotherapy, prostate brachytherapy, hormonotherapy, chemotherapy, active surveillance, sperm preservation, and focal therapy could be implemented on prostate cancer patient. It is worth mentioning that although different therapeutic methods are developed for targeting dysfunctional prostate in order to keep fertility of the patients, their adverse side effects are should not be ignored.

Conclusion: In the era of prostate-specific antigen screening, some of the patients diagnosed with prostate cancer still want to maintain their reproductive abilities. All the management options for prostate cancer that mentioned would be harmful for men's fertility. However, fertility options and potential counseling should be part of the routine pretreatment appointments for men undergoing treatment of prostate cancer.

Keywords: Fertility Preservation, Sperm Preservation, Prostate Cancer

A-10-334-2

P26: Protective Effects of Propolis on the Alteration of Leydig Cells Population in Rat Testicular Tissue Following Treatment with Oxaliplatin

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Abstract

Background: Propolis (honeybee gum) is an antiseptic and natural antioxidant. Propolis is a potent antioxidant and a free radical scavenger. Phenolic compounds, such as flavonoids, are major components and mainly responsible for the biological activity of Propolis. Oxaliplatin (L-OHP) is a third-generation of platinum-based chemotherapies. L-OHP binds to DNA and prevents the DNA replication. It is especially effective in the treatment of colorectal cancer. Chemotherapy is one of the risk factors which affect the fertility. The aim of this study was to evaluate the protective effects of Propolis on the alteration of Leydig cells population in L-OHP treated rats.

Methods: Oxaliplatin was administrated to adult rats (2.4 mg/kg i.p.) four consecutive days per week for duration of three weeks. Hydroalcoholic extract of Propolis was administrated to L-OHP treated rats orally in dose of 50 and 100 mg/kg for 21 consecutive days. After euthanizing, formaldehyde fixed testicular tissue samples were stained with hematoxylin and eosin method for quantitative evaluation of Leydig cells number.

Results: The mean of Leydig cells population was decreased significantly in L-OHP treated group in comparison to control animals. The mean of Leydig cells population in Propolis treated L-OHP groups was higher than non-treated L-OHP group.

Discussion: Platinum-based chemotherapy agents through induction of DNA damages can induce apoptosis in spermatogenic cells. According to the results and antioxidant activities of Propolis, it seems that reduction of oxidative damages through administration of antioxidant agents, may be effective in L-OHP induced fertility problems.

Keywords: Leydig Cells, Oxaliplatin, Propolis, Rat.

A-10-371-1

P27: Three-Dimensional Wet-Electrospun Poly(Lactic Acid)/Multi-Wall Carbon Nanotubes Scaffold Induces Differentiation Of Human Menstrual Blood-Derived Stem Cells Into Germ-Like Cells

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Abstract

Infertility caused by the disruption or absence of germ cells is a major and largely incurable medical problem. Generation of gametes derived in vitro from stem cells hold promising prospects which could potentially help infertile men and women. Menstrual blood-derived stem cells are a unique stem cell source. To maintain the three dimensional structure of natural extra cellular matrices in vitro, scaffolds can do this favor and mimic a microenvironment for cell proliferation and differentiation. According to previous studies, poly (lactic acid) and multi-wall carbon nanotubes have been introduced as novel and promising biomaterials for the proliferation and differentiation of stem cells. This study designed a 3D wet-electrospun poly (lactic acid) and poly (lactic acid)/multi-wall carbon nanotubes composite scaffold to compare infiltration, proliferation, and differentiation potential of menstrual blood-derived stem cells toward germ cell lineage with 2D culture. Our primary data revealed that the fabricated scaffold has mechanical and biological suitable qualities for supporting and attachments of stem cells. The differentiated menstrual blood-derived stem cells tracking in scaffolds using scanning electron microscopy confirmed cell attachment, aggregation, and distribution on the porous scaffold. Based on the differentiation assay by RTPCR analysis, stem cells and germ-like cells markers were expressed in 3D groups as well as 2D one. It seems that poly (lactic acid)/multi-wall carbon nanotubes scaffold-seeded menstrual blood-derived stem cells could be viewed as a novel, safe, and accessible construct for these cells, as they enhance germ-like generation from menstrual blood-derived stem cells.

Keywords: 3D Scaffolds, Wet-Electrospun Poly (Lactic Acid)/Multi-Wall Carbon Nanotubes Nanofiber, Menstrual Blood Stem Cells, Germlike Cells, Infer Tility.

A-10-476-2

P28: Ovarian Tissue Cryopreservation in A Young Girl with Acute Lymphocytic Leukemia Before Hematopoietic Stem Cell Transplantation: A Case Report

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Abstract

With the rising in the survival rates of cancer patients, ovarian tissue cryopreservation has been used increasingly for the purpose of future fertility preservation. A 22-year-old girl with Acute Lymphocytic Leukemia, after 6 months of chemotherapy was a candidate for ovarian tissue cryopreservation. Despite chemotherapy, AMH survey was normal. After laparoscopic ovariectomy, immature oocytes from antral follicles underwent IVM and then were frozen. Ovarian tissue cryopreservation was done too. In the histology survey, follicular density was acceptable. This case shows that only having a history of chemotherapy doesn't exclude the patient from a fertility preservation program. Other clinical conditions also should be considered.

Keywords: Fertility Preservation, In-Vitro Maturation, Ovarian Cryopreservation.

A-10-543-1

P29: Application Of Stereological Methods For Unbiased Estimation Of Sperm Morphology In The Mice Indused By Busulfan

Sakineh Panahi *

Abstract

busulfan is an anticancer drug,which causes the apoptosis germ cells and azoospermia in humans and animals. Abnormal morphology of spermatozoa related to the male infertility.the sperm morphology is evaluation if sperm size,shape and zppearance characteristics should be assessed by carefully observing a stained sperm sample under the microscope.evaluation of sperm morphology has been considered as one of the most important factors for a successful fertilization and determining sperm quality.the mice were assigned to tow experimental groups: control and busulfan.each group included six mice that were housed under standard conditions.the volume was estimated using the nucleator method.the sperm's flegellum and mid-piece length was estimated by counting the number of intersections between the tails and merz grid test line in an unbiased counting frame,superimposed on live images of sperms.our results demonstrsted a significant different in the volume and surface of the sperm's head and the length of the sperm's flagellum in the control and busulfan groups.busulfan can effect on the volume of the sperm's head and the length of the sperm's flagellum in rat.

Keywords: Busulfan, Sperm Morphology, Stereology.

A-10-31-1

P30: Study of The Effects of Lactoferrin in Reduction of Cyclophosphamide-Induced Embryotoxicity: in Vitro Fertilization Study In Mouse

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Abstract

Background: Cyclophosphamide (CP) as a widely used chemotherapeutic agent causes several side effects including reproductive toxicities. The Objective of this study was to evaluate the possible protective effects of lactoferrin (LFN) with anti-inflammatory and antioxidant properties against CP-evoked reproductive toxicity in mouse.

Methods: In this experimental study, 32 adult female NMRI mice were divided into 4 groups of 8 animals each. Cyclophosphamide was administered to two groups of mice at a dose of 200 mg/kg intraperitoneally on days 1 and 14. One of these groups received LFN at a dose of 0.2 mg/kg orally four hours after CP treatment. Vehicle-treated control group and LFN-only treated group were also included. In vitro fertilization was evaluated in all animals after 28 days.

Findings: Cyclophosphamide administration resulted in significant reduction in fertilization and blastulation rates. Co-administration of LFN with CP restored above-mentioned parameters toward normal values.

Discussion & Conclusions: These findings indicate that LFN can have potential protective effects in CP-induced reprotoxicities.

Keywords: Cyclophosphamide, Lactoferrin, Fertility, Mouse.

A-10-765-1

P31: Pregnancy and Breastfeeding After Breast Cancer Treatment

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Abstract
Background: The incidence of breast cancer, which is the most common cancer in young women, is increasing. Early diagnosis and promotion of therapeutic methods have led to a reduction in mortality and increased life expectancy and a desire for pregnancy in survivors of breast cancer. The increase in the number of women seeking Breast cancer who are getting pregnant, made us to decide to review the challenges facing these women.
Results: The results of this study showed that the best pregnancy time in these women was at least 2 years after the end of treatment because of the high risk of relapse in this time period and pregnancy and lactation after breast cancer treatment were safe and pregnancy complications were exceptionally Cesarean section, preterm labor, and low birth weight in the rest are similar to the general population. Chemotherapy regimens contain highly genadotonic agents that increase the risk of premature ovarian failure in young women, and ovarian damage can be permanent or temporary.
Methodology: This study reviewed 18 articles published in relation to the aforementioned title between 2007 to 2017, which were retrieved using search keywords in google scholar , sid , pubmed , sciencedirece ..

Keywords: Pregnancy, Breastfeeding, Breast Cancer, Early Ovarian Failure.

A-10-405-1
P32: Fertility Outcome of Patients with Testicular Tumor

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Abstract
Background: Testicular cancer (TC) is the most curable type of cancer, with a survival rate of more than 95%. Oncologists are faced with the challenge that gonadotoxic cancer treatments can compromise future fertility, either temporarily or permanently. TC therapy can result in subfertility or sterility due to gonad removal or permanent damage to germ cells from adjuvant therapy. Our aim was to investigate the long-term effects of TC treatments on male fertility and on the offspring of patients.
Research method: In this review study, the databases including Sid, Magiran, Google Scholar, Pubmed were searched. The criteria for entering the study, the timeframe for publication of the article, was proportional to the purpose of the study.
Results: Treatment for TC is a combination of orchiectomy and either radiotherapy or chemotherapy.Treatment can cause infertility by causing oligospermia or azoospermia. In addition, after treatment, DNA damage to the sperm can be seen. The lowest fertility rates have been observed among TC patients who were treated with chemotherapy followed by radical orchiectomy and retroperitoneal lymph node dissection. As radiation and chemotherapy can significantly compromise the DNA integrity and quality of sperm after treatment, semen cryopreservation before treatment should be recommended for most patients. There is no data to suggest that children born to TC patients post-chemotherapy have an increased risk.
Conclusion: Awareness of established fertility preservation techniques and assisted reproductive technologies is essential to ensure appropriate counseling of young cancer patients who wish to choose   biological parenthood in the future.

Keywords: Chemotherapy, Fertility,Radiotherapy, Sperm Bank, Testicular Cancer.

A-10-800-2
P33: Microrna-Mediated Drug Resistance in Ovarian Cancer

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Abstract

The development of intrinsic or acquired resistance to chemotherapeutic agents used in the treatment of various human cancers is a major obstacle for the successful abolishment of cancer. The accumulated efforts in the understanding the exact mechanisms of development of multidrug resistance (MDR) have led to the introduction of several unique and common mechanisms. Recent studies demonstrate the regulatory role of small noncoding RNA or miRNA in the several parts of cancer biology. Practically all aspects of cell physiology under normal and disease conditions are reported to be controlled by miRNAs. In this review, we discuss how the miRNA profile is changed upon MDR development and the pivotal regulatory role played by miRNAs in overcoming resistance to chemotherapeutic agents. It is hoped that further studies will support the use of these differentially expressed miRNAs as prognostic and predictive markers, as well as novel therapeutic targets to overcome resistance in ovarian cancer.

Keywords: Chemotherapeutic Agents, Mirnas, Multidrug Resistance, Ovarian Cancer

A-10-366-1

P34: Remodeling of Histone H3 Lysine 27 Trimethylation in Early Mouse Zygote

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Abstract

Remodeling of Chromatin is a multi-stage process in the newly fertilized oocyte that changeover between gametic chromatin and embryonic chromatin and will shortly become transcriptionally competent. Trimethylation of histone H3 at lysine 27 (H3K27me3) is a suppressive epigenetic mark that appears during pre-implantation development changes in mice. In general, histone methylation is associated with gene silencing, with the exception of h3k4, which is linked with increased gene transcription. The aim of this study was assessing the levels of H3K27me3 in early mouse zygote using immunofluorescence staining. Zygotes were fixed at 6 hours after insemination and stained with an antibody specific for modification in h3k27me3. Results showed that asymmetric staining of H3K27me3 in the maternal and paternal PNs of mice. H3K27me3 staining was positive and negative in maternal and paternal PNs, respectively. Detailed analysis of the early zygote stage in mice shown that immediately after fertilization, at PN0, H3K27me3 was only limited on the maternal PN, and this asymmetry was continued until the initial PN4 stage when the male PN becomes slowly positive for H3K27me3. In conclusion, early asymmetry H3K27me3 staining may be due to the paternal protamines was being exchanged via maternally-stored histones, however the maternal chromatin stains intensively for H3K27me3.

Keywords: Zygote, H3k27me3, Mouse, Chromatin, Epigenetic

A-10-612-1

P35: Effects Of Methamphetamine on Spermatogenesis Indices Of Adult Male Rats

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Abstract

Background: Several studies have shown that Methamphetamine (MAMP) has inhibitory effects on oogenesis and spermatogenesis, and causes impair fertility. In this study, we investigated the effect of MAMP administration on spermatogenesis indices in the testis of adult male rats.

Methods: In this experimental study, 50 male Wistar rats were randomly divided into control (received no treatment) (n=10), Vehicle (received saline for 7 and 14 days) (n=20) and experimental (received MAMP (5 ml/kg, IP) for 7 and 14 days) (n=20). We count the number of spermatogonia, spermatocytes and Leydig cells. Spermatogenesis indices which include: tubular differentiation index (TDI), spermiogenesis index (SI), repopulation index (RI) and the mean seminiferous tubules diameter (MSTD), were studied. Data were analyzed by one-way ANOVA, using SPSS software version 20. P-value <0.05 was considered statistically significant.

Results: This study showed that MAMP caused a significant decrease in number of seminiferous tubules' cells and spermatogenesis in treated group compared with the control. Also, results showed a significant decrease in spermatogenesis indices including TDI, SI, RI and MSTD in 14th day, compared with control group (P<0.001).

Conclusion: The data showed the adverse effects of methamphetamine administration (for 7 and 14 days) on testes structure and spermatogenesis indices in rat testis tissue. The underlying mechanism(s) needs further investigation.

Keywords: Methamphetamine, Spermatogenesis index, Testis, Rat

A-10-798-1

P36: The Role of Exosome On Male Infertility

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Abstract

Backgournd: During the past decade, miRNAs have been found to perform a pivotal role in various biologic processes, including development ,cell growth .and differentiation .Several studies report testicular-expressed miRNA changes depending on the stage of spermatogenesis.
Method: All papers on the effect of exosome on male infertility by semen analyies indexed in databases pubMed, and Wiley Library and such journals as Science Direct and Springer without any time limit were explored. At first 117 relevant papers were found and finally 5 ones were chosen based on inclusion criteria of present study.
Finding: Exosome will have a good effect on semen such as: higher sperm motility, prolong effective survival time, improve sperm plasma membrane integrity increase total antioxidant capacity (T-AOC) activity and decrease malondialdehyde content.
Conclusion: there are not enough research on this title to exactly recognize the effect of exosome on male infertility.

Keywords: Exosome,Male Infertility,Semen Analysie

A-10-61-1

P37: Investigation of Genetic Diagnostic Components of Sperm Stem Cells (Ssc) in Moghani Sheep.

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Abstract

The proliferation and enrichment of spermatogonial stem cells in the culture medium is important because the colonization of these cells is a valuable source of germ cells for subsequent studies such as freezing , the transplantation of these cells in the treatment of infertility, genetic manipulation and differentiation in the laboratory environment and maintain fertility in cancer patients. In order to extract the reliable source of stem cells, testicular tissue of Moghani sheep was examined as a sample and during the four stages, the collection and preparation of testicular tissue, tissue enzyme digestion, cell transfusion from cells and spermatogonial stem cells were performed. In the case of six genes that are expressed as spermatogonia (c-KIT2 - THY1, PLZF, PGP9.5, DAZL, VASA) properly identifying spermatogonia gene specific primers were designed and constructed. After cell cytoplasmic RNA extraction, RT-PCR was obtained from the mRNA that were designed using primers, cDNA synthesis was perfofmed and its amount was amplified by 35 cycles and electrophoresis was performed. In the study of bands obtained from electrophoresis under ultraviolet light, it was determind that the genes were expressed in spermatogonia. The results showed that cell cultyre from isolation and proliferation of these cells is suitable for testicular tissue of eagle sheep was appropriate and cells that grow beyond the ability to express pluripotent periods in acceptable and non-differentiated media.

Keywords: Azoospermia, Spermatogonian, Moghani Sheep, Adult Stem Cells, RT-PCR.

A-10-377-1

P38: Effects of Two Amino Acids On Motion Parameters of Freeze-Thawed Stallion Spermatozoa

Najmeh Davodian*

Abstract

Artificial insemination of mares with frozen-thawed semen has greatly improved in the last decade. However, because of cryodamage to sperm cells, its fertility rate is low. some amino acids are known to be involve in protecting animal cells against hypothermia, and perform cryoprotective action in freezing media . In this study, effects of two amino acids, glutamine and proline, as supplements of freezing extender were studied during cryopreservation of stallion spermatozoa. Ten ejaculates from five fertile stallions collected by artificial vagina, were frozen in basal medium as control (E1) and basal medium containing 3mM (E2), 30mM (E3) and 60mM proline (E4), 5mM (E5) and 50mM glutamine (E6) and 3mM proline plus 5mM glutamine (E7). The CASA were performed after thawing. E2 increased progressive motility ($p<0.001$), motile spermatozoa ($p>0.05$), and values of VCL, VAP, MAD, ALH, BCF and STR compared to control extender, while E3 led to a less motile and progressive motile sperm. E3, E4 and E6 was found to provide lower mean values of LIN, WOB and STR than control group, whereas E5 enhanced LIN and decreased MAD value significantly ($p<0.05$). There was no difference between CASA parameters of E7 and the control. The higher motility of stallion spermatozoa in diluent containing 3mM proline may allow for the more efficient use of frozen-thawed stallion semen for insemination, and could contribute to the improvement of semen cryopreservation in the world horse industry.

Keywords: Glutamine, Proline, Post-Thawed, Stallion Sperm, Motion Parameters

A-10-377-2

P39: Enzymatic Antioxidant Activity of Stallion Spermatozoa Cryopreserved With Extenders Containing Glutamine And Proline

Najemh Davodian*

Abstract

Considering the role of amino acids glutamine and proline as antioxidant in improving the post-thaw motility of stallion spermatozoa, the present study was carried out to investigate the possible effects of glutamine and proline in the composition of freezing extender on MDA concentration as an indice of lipid peroxidation as well as activities of the antioxidant enzymes catalase (CAT), superoxide dismutase (SOD) and glutathione peroxidase (GPX) of equine semen during cryopreservation. Ten ejaculates from five fertile stallions collected by artificial vagina, were frozen in basal medium (INRA82) as control (E1) and basal medium containing 3mM proline (E2) and 5mM glutamine (E3). The biochemical assays were performed after thawing. The results showed that MDA, GPX and SOD remained unchanged with different extenders, but CAT activity significantly increased in E3 group ($p<0.05$). In the present study, increase of catalase enzyme in the presence of 5mM glutamine together with no effect on preventing MDA formation and trace decline in some post-thawe motion parameters show that cryodamages leading to a decline in motility parameters of stallion spermatozoa examined in this study are irrelevant of oxidative stress. Our study revealed that inclusion of glutamine and proline in freezing extender resulted in no effect on enzymatic antioxidant status and lacked toxic effects, but were ineffective in cryopreservation of stallion spermatozoa as well. Thus, it seems that oxidative stress might play a minor role in frozen stallion semen with high sperm quality and motility.

Keywords: Glutamine, Proline, Post-Thawed, Stallion Sperm, Antioxidant Activity.

A-10-377-3

P40: The Effect of Seminal Plasma in Extenders Containing Glutamine and Proline on Oxidative Stress And Motility of Cooled Stallion Sperm

Najmeh Davodian*

Abstract

Preservation of cooled equine semen against oxidative stress and loss of motility might be improved by addition of specific components to extenders. This study tested the hypothesis that supplementation of extenders with proline and glutamine for cooling storage of equine spermatozoa in the presence of seminal plasma (SP) affects motility, lipid peroxidation and enzymatic antioxidant status. Ten semen samples from five fertile stallions diluted in basal medium (E1), containing 5mM glutamine (E2) and 3mM proline (E3) stored in 5 for analysis of motion parameters at 1.5, 24 and 48 hours storage. Sperm pellet after SP removal resuspended in basal medium (E4), containing 5mM glutamine (E5) and 3mM proline (E6) stored in 5°C for 1.5 hours to determine malondialdehyde (MDA), catalase (CAT), glutathione peroxidase (GPX) and motility . The motion parameters of E1, E2 and E3 didn't change over time. At 1.5 hours of storage, there wasn't significant difference in motion parameters of E4, E5 and E6 but motility reduced in E3. In E2 and E3 MDA decreased, CAT increased and GPX remained unchanged. In E5 and E6 MDA decreased but CAT and GPX decreased with E5. The present study revealed that in the absence of SP, motion parameters were not affected by aminoacids. In the presence of SP, glutamine and proline significantly increased CAT level of cooled sperm and proline significantly reduced motility. In conclusion negative effects of proline on motion parameters seems to be related to interaction with SP which is completely irrelevant to lipid peroxidation and antioxidative pathways.

Keywords: Stallion, Sperm, Seminal Plasma, Glutamine, Proline, Oxidative Stress, Cooling Storage.

A-10-373-1

P41: The Dietary Effect of Omega-3 Fatty Acids From Linseed Oil On Fresh And Post-Thaw Sperm Quality In Holstein Bull.

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Abstract

The goal of this study was to investigate the dietary effect of omega-3 fatty acids from linseed oil on fresh and post-thaw sperm quality in holstain bull. ten fertile bulls were assigned to tow treatment groups and suplemmented for 12 weeks with encapsulated fat including: (P) 300 g palm oil; (L) 300 g linseed oil. classical semen evaluetion including assesment of sperm motility, membran integrity (eosin-nigrozin), membran activity (HOST), morphology (hankok) and MDA content test were conducted. in the post-thaw sperm, total and progressive motility of group L were significantly greater than the group P, membran integrity and activity of group L significantly increased compared to the group P Abnormal sperm in the group L significantly less than the group P. There were no significant differences MDA content between treatments. There were no significant differences in vulome semen, concentration sperm, motility and viability sperm in fresh sperm Therefore, It was concluded that the feeding 300 g linseed oil to the holstain bull could improve sperm cryosurvival.

Keywords: Omega-3 Fatty Acids, Linseed Oil, Bull Sperm

A-10-461-1

P42: Evaluation of The Effect of Compounds Affecting Microtubule Structure Of Bovine Matured Oocytes on Hand-Made Cloning Performance

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Abstract

Visible oocyte nucleus in hand-made cloning of domesticated species via induction of metaphase plate protrusion improve the efficacy of this process by increasing the number of oocytes for enucleation and attain the cytoplasts with the least amount of lost cytoplasm. For this purpose, the present investigation was carried out use of microtubule stabilizing (paclitaxel and cytochalazin B) in comparison to depolarizing (demecolcine) chemical agents for induction of metaphase plate protrusion in *in vitro* matured bovine oocytes which makes it easy to remove the maternal chromosomes for nuclear transfer (NT) in hand-made cloning process. After *in vitro* maturation of bovine oocytes and remove the zona pellucida, oocytes were incubated in Medium 199 supplemented with 20% FBS containing 0.5 µg/ml demecolcine, 1 µg/ml paclitaxel, or 1 µg/ml cytochalazin B for 90 min at 39°C for induction of protrusion of metaphase plate and subsequent removing the protruded cytoplasm under a stereomicroscope using finely drawn hand-made pipettes. This stage is a prerequisite for production of reconstructed embryo with somatic cells. After statistical analysis, the results of this study indicated that the maximum protrusion of division spindle was occurred with demecolcine (83.01 vs. 52.6 and 45.23 for cytochalazin B and paclitaxel, respectively) ($P<0.05$). This result has been achieved by considering the less impression of these compounds on development of the reconstructed produced embryos. Therefore, it can be concluded that demecolcine is a good chemical agent with desired instill of spindle apparatus protrusion to use in production of SCNT derived embryos with hand-made cloning method.

Keywords: Hand-made cloning, Demecolcine, Paclitaxel, Cytochalazin B, Bovine.

A-10-448-1

P43: Molecular Identification of Chlamydia trachomatis in Women with Recurrent Miscarriage with the Aim of Infection Control in Pregnancy

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Abstract

Background: Determination of the prevalence of Chlamydia trachomatis as an obligate intracellular bacterium, and one of the main causes of genital and sexually transmitted diseases, which is asymptomatic or associated with symptoms, can lead to a prenatal care system in the prevention of miscarriage. By identifying this abundance, planning can be made to achieve the control of recurrent abortion. Therefore, the main goal of this study is using the PCR molecular method to detect this bacterium in women with recurrent miscarriage.
Methods: In this study, during April to December 2017, samples were collected using endo-cervical swab from a total of 100 women (with a history of recurrent miscarriage) who referred to infertility and perinatal clinics of Sarem Hospital. Samples were evaluated with two objectives: vaginal culture and PCR testing. DNA was extracted by using phenol-chloroform method. The PCR test was done for detection of Chlamydia trachomatis.
Results: From a total of 100 vaginal samples, 14 cases (14%) were positive for chlamydia trachomatis. These positive samples also were reported positive in terms of bacterial infection by vaginal culture and patients had higher than normal WBC count. & nbsp.
Conclusion: Regarding the prevalence of chlamydial infection that is commonly found in the studied population, screening for pregnant women is recommended. Moreover, due to the advantages of PCR testing, because of high sensitivity and reduced response time, the use of molecular method for diagnosis of this bacterium in women with recurrent miscarriage has been proposed as a part of the country's health programs.

Keywords: Molecular Identification, Chlamydia trachomatis, Recurrent miscarriage, Infection Control

A-10-416-2

P44: Investigation of The Association of Chlamydia Infection in Infertile Women With Biomarkers

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Abstract

Background: The present study aimed to identify Chlamydia trachomatis bacteria in infertile women and its correlation with AMH and MFG-E8 markers in women referring to Alhadi Hospital in Shoushtar in 2017.
Method: A descriptive study of analytical type. 50 infertile people aged 15-45 years old and 25 healthy fertile individuals referred to the women's clinic were selected as the sample size with inclusion criteria and divided into 4 groups. The serum levels of chlamydia (IgG) and hormones with The use of ELISA was analyzed. Data were analyzed using statistical tests and spss21 software.
Results: Out of 75 participants, 43 infertile people with Chlamydia and 26 infertile without chlamydia and 16 infertile people with Chlamydia, 15 were fertile without Chlamydia. There was a significant correlation between chlamydia and infertility by independent t-test. P <0.05. Also, for the study of biomarkers, only MFG-E8 was significantly associated with Chlamydia (P = 0.001). However, there was no significant difference between the two fertility and infertile groups in terms of MFG-E8.
Discussion and Conclusion: The MFG-E8-AMH is an ideal marker for ovarian function than other

hormonal markers. There was no significant difference in the level of AMH in relation to Chlamydia infection.

Keywords: Infertility, Chlamydia trachomatis, AMH, MFG-E8.

A-10-119-1

P45: Review study: Sperm washing and assisted reproductive technology in HIV-discordant couples.

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Abstract

Background: HIV affects mostly men and women in their reproductive years. 37 million people worldwide are infected with HIV and 86% reproductive age group are 15-44 years. today, serodiscordant couples consider having children. Assisted reproduction techniques can reduce the risk of infection. Sperm washing coupled with (IUI),(IVF) or (ICSI) is safely used in serodiscordant couples.the aim of this study is to evaluate the effectiveness of semen washing in HIV-discordant couples in which the male partner is infected.   .

Method: all papers on Sperm washing and assisted reproductive technology in HIV-discordant couples indexed in databases medline,chochrane libraray and such journals as springer, SCOPUS during January 2008-January 2018 were explored.at first 190 relevant papers were found and finally 9 ones were chosen based on inclusion criteria of present study.

Finding: 5 studies were retrospective and 4 prospective. In total, 1429 couples were examined. For the preparation of sperm, in all 9 studies, the technique of Discontinuous density gradient had been used and in 6 studies swim-up technique was added to it. 4 studies were with IVF+ ICSI, 2 studies were with IUI, 2 studies were with IVF+ICSI + IUI and 1 study was with ICSI. The techniques used after sperm washing in 3 studies were Real-time, in 4 studies were RT-PCR and 2 studies were with both methods. No HIV transmission occurred in any study.

Conclusion: ART with sperm washing may help HIV-discordant couples achieve pregnancy and integration of semen washing into HIV prevention intervention could help further reduce.

Keywords: HIV, Assisted reproduction, Sperm washing, Reproductive techniques

A-10-357-1

P46: Comparison of Mycoplasma Genitalium Diagnostic Primers in Vaginal Samples of Women With Recurrent Abortions

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Abstract

Background: There are several infectious agents that cause abortion and infertility. Mycoplasma genitalium is one of the most important pathogenic mycoplasmas in women and its detected quickly can be a solution to treatment and prevention. It has been different molecular methods and various primers for multiple target gene, developed to identify this bacterium.

Purpose: The aim of this study was to evaluate the important primers for the detection and diagnosis of Mycoplasma genitalium by molecular methods in women with recurrent abortions.

Research method: In this study, 100 samples of vaginal discharge from women were collected from their cervical area. DNA extraction from patient samples was performed using Boiling/DNG-PLUS. Two PCR tests were optimized on the standard strain. The tests were

also examined for the limit of detection (LOD) and specificity. Results: In this study, two PCR tests optimized & amplicons 427bp and 335bp were amplified using specific primers of Mycoplasma genitalium. In specificity test, primers created bands only with DNA of Mycoplasma genitalium and there were no bands of DNA with other microorganisms. LOD for both tests were calculated 10 copy/reaction. Of 100 samples examined, for amplicon 427bp only one (1%), and for amplicon 335bp, seven samples were positive (7%).

Discussion and Conclusion: between two important primers examined primer with a product of 335bp, was efficient more positive results were obtained which indicates that the primer is better than other primer. It is therefore justified in molecular diagnostic tests Mycoplasma genitalium more effective primer was used.

Keywords: Mycoplasma genitalium, abortions, Detection, PCR

A-10-422-1

P47: PCR Detection of Cytomegalovirus in Women With Recurrent Abortions

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Abstract

Background: According to WHO reports, 43% of women and 30.7% of men suffer from infertility. Infectious agents are an important factor in sterility and infertility .*Cytomegalovirus* is one of the infectious agents that can affect infertility . Rapid diagnosis of this agent can be a pioneer in the treatment and prevention of which molecular techniques can be used for diagnosis.

Purpose and Importance of Research: The purpose of this study was to investigate the role of *Cytomegalovirus* in infertile women with recurrent abortions, by PCR method.

Methods: Research was conducted on 100 samples of vaginal discharge in women with recurrent abortions from Sarem Hospital in Tehran. Samples DNA were extracted by boiling/DNG method and optimized PCR test was performed on samples DNA. The test was also examined in terms of limit of detection (LOD) and specificity.

Results: In this study PCR test was optimized and 257bp PCR product was amplified by using of *Cytomegalovirus* specific primers. Specificity test showed primer 100% specificity.The limit of detection of PCR for *CMV* was 100 Copy/reaction. 5% of samples were positive by PCR Test.

Discussion and Conclusion: This assessment demonstrates the role of *Cytomegalovirus* in infertility and the occurrence of repeated abortions, which, of course, requires further studies in this context

Keywords: Cytomegalovirus, Infertility, Recurrent abortion, PCR

A-10-427-1

P48: Effects Of Live Yeast Supplementation On Ovarian Dynamic And Reproductive Performance In Transition Dairy Cows During High Ambient Temperature

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Abstract

Two series of experiments were conducted to investigate the reproductive performance of transition dairy cows in response to supplementation with a live yeast culture (Probio-Sacc®, Biochem, Germany) under high ambient temperature. In Exp. 1, two groups of 6 periparturient Holstein cows were fed a diet

without or with 4 g yeast/d/head starting 21 d prepartum through 8 wk postpartum to investigate estradiol and progesterone and ovarian follicular dynamics. In Exp. 2, from d 1 through d 70 postpartum, a total of 150 Holstein cows (75 cows per group) were assigned at random into 1 of 2 groups and received either 0 or 4 g live yeast/d/head to investigate their reproductive performance at 120 and 150 d postpartum. In 1st exp, circulating progesterone and estradiol-17 beta concentrations were found to be greater in yeast-supplemented cows than those receiving no yeast. The mean diameter of the ovulatory follicles was greater (17.2 vs. 18.4 mm; P < 0.01) in yeast-fed cows than those in control treatment. Duration of estrus was also shortened by an average of 2.6 d (P = 0.05), which is indicative a faster resumption of ovulatory activity. In 2nd exp., days open, days to first service, conception rate at d 120 and 150, and the proportion of pregnant cows at 120 and 150 postpartum were observed to be higher for cows receiving yeast supplement compared with no yeast.Overall, it appears that live yeast supplementation would beneficially improve the reproductive performance and ovarian dynamic of dairy cows during the heat stress.

Keywords: Heat stress, Live yeast, Reproductive performance, Transition dairy cow

A-10-589-1

P49: Placenta Structural Changes in Heavy Smoker Mothers: A Stereological Aspect

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Abstract

Background: Smoking during pregnancy is able to alter structure and function of placenta. In the present study, quantitative changes of placenta in smoker mothers were investigated compared to healthy controls by Cavalieri point counting method.

Methods: Twenty placentas from heavy smoker mothers and non-smoker controls (n=10 in each group) were selected. Systematic uniform random sampling (SURS) was used for sample selection and tissue sectioning. Quantitative parameters of the placenta in the selected sections was estimated after Masson trichrome staining. Differences between the two groups were determined by the Mann Whitney-U test and the significance level was set at P<0.05.

Results: Results showed that there was a significant difference in the placental weight, total volume of placenta, intervillous space, fibrin, and syncytiotrophoblast between the heavy smoker group and the control group (P<0.05). The difference in the volume density of fibrin and blood vessels between the smoker and control groups was statistically significant (P<0.05).

Conclusions: Our finding suggested that quantitative parameters of placenta significantly changed in placentas from smoker group compared to controls. These changes can be associated probably with pregnancy complications in smoker mothers and may affect the development and survival of the fetus and even its future life.

Keywords: Placenta, Pregnancy complications, Smoking, Trophoblast

A-10-779-1

P50: Comparison of PCR and Culture Methods to Determine Mycoplasma Hominis in Woman's Endocervical Samples Referred yo Infertility Hospital of Hamadan.

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Abstract

Background: Mycoplasma hominis bacterium of Mycoplasmataceae family and is commensal in the female genital tract. With surveys conducted in recent years, to the presence of these potential pathogenic bacteria in the human body and in disorders such as vaginitis, infertility, abortion, preterm delivery and other diseases have been mentioned. The aim of this epidemiological-descriptive analytical research, the frequency of Mycoplasma hominis in the patient's women referred to Hamadan Fatemyeh Hospital in 2016.

Methods: In this research, from 234 women patients with have at least one of disorders symptoms such as vaginitis, infertility, abortion, preterm delivery, by using the swab, endocervical samples taken. By eliminating the filtration medium and PCR molecular techniques to trace the 16s rRNA gene used as bacterial diagnostic methods. Descriptive statistics were used to analyze the data.

Results: The prevalence of Mycoplasma hominis in the study population was 13.7% in both methods. Relationship of infection with a number of disorders mentioned above was important so that 10.3% of patients with infertility and 12.3% of them colonized with vaginitis by Mycoplasma hominis. Agreement coefficient between culture and PCR methods for the detection of this bacteria is very high (k = 0.5).

Conclusion: The prevalence of Mycoplasma hominis in the study population is significant, so further investigation is necessary. Although molecular techniques such as PCR to detect these bacteria are very sensitive, but still, culture method has sensitive desirable.

Keywords: Mycoplasma Hominis, Infertility, Vaginitis, Abortion, Culture, PCR.

A-10-810-1
P51: Infections and Tubal Factor Infertilities (TFIs) (A Systematic Review)

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Abstract

Background: Approximately 10-15% of the couples suffer from infertility as one of the social problems. About 30% of infertility is caused by fallopian tube obstruction. Some infections cause tubal inflammation and fibrosis, leading to obstruction and infertility. Therefore, this study reviews the effect of infections and tubal factor infertilities.

Methods: In this study, 74 papers were extracted using the keywords such as infection, infertility, infertility factors, Chlamydia trachomatis, Neisseria gonorrhea and Mucobacterium tuberculosis in PubMed, Science Direct, SID and Google Scholar. After assessing the inclusion and exclusion criteria and based on the Prisma checklist, 27 papers were excluded, and 47 papers from 2004 to 2016 were listed and data were extracted.

Findings: Tubular factors are one of the most important causes of infertility. Infection in fallopian tubes can lead to infertility in addition to pain and other problems or ectopic pregnancy. Mostly, certain organisms such as Neisseria gonorrhea, Chlamydia trachomatis, and Mycobacterium tuberculosis cause the fallopian tube disorders, thereby increasing the potential infertilities.

Conclusion: Given the role of infections in infertility, timely diagnosis and treatment of infections play a vital role in solving this social problem.

Keywords: Infection, Infertility, Infertility Factors, Chlamydia trachomatis, Neisseria gonorrhoeae, Mycobacterium tuberculosis.

A-10-812-1
P52: Effects of Asalouyeh `s dust on Growth and Fetal Evolution in Rats

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Abstract

Background: The globe has become hotter and polluted. Asalouyeh in south of Iran is one of the most polluted areas of the world due to the heat and moisture and hydrocarbon microparticles. The aim of this study was to measure the effect of Asalouyeh region on growth and development of embryos.

Methods: In this interventional study, 30 female rats were randomly divided into 3 equal groups (each group including 10 rats). The first group (control) was placed in an environment free of dust for three weeks. The second and third groups were subjected to air polluted machine in Gorgan (clean) and Asalouyeh for 21 days, respectively. Then, at the time of delivery, various factors such as height, weight, head circumference, abdomen, and tail length were measured and entered into SPSS 21. Independent-samples T-test and one-way ANOVA test was used. This proposal has accepted the IRCT number.

Results: The results of this study have shown the effects of Asalouyeh `s dust on some fetal evolutionary parameters such as maternal weight, fetal weight, head circumference and height had decreased significantly (P ≤ 0.05). However, non-significant changes were seen in the two other groups included the control group and the clean air group. (P> 0.05) Discussion and **Conclusion:** Assalouyeh's atmosphere containing infected microparticles which has high toxicity to fetal growth and development and most of its toxic effects on the development of the fetus and its organellation.

Keywords: Asaluyeh, Embryo, Rat, Dust Microparticles, Iran, Hydrocarbon.

A-10-309-1

P53: Compare of The Short and Long Term Estrus Synchronization Protocols on Reproductive Performance of ewe

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Abstract

To evaluate effects of the short term (7 days) and long term (14 days) progesterone based estrus synchronization protocols on reproductive performance of ewes out of the breeding season (May of 2017), Lori ewes (n=60) were randomly assigned to one of two estrus synchronization treatments; The short term protocol consisted of a 7-day treatment with controlled internal drug release (CIDR) devices, administration of GnRH at CIDRs insertion on Day 0, and pregnancy mare serum gonadotropin (PMSG) and PGF2α at CIDRs removal on Day 7. The long term group as control treatment consisted of a 14-day treatment with CIDR devices and administration of PMSG at CIDRs removal on Day 14. Fertile rams were introduced into both groups at CIDRs removal. Induce estrus, Fertility, twining, litter size and fecundity were calculated. Data were analyzed in Chi- Square method by SAS 9.1. Estrus expression during first cycle in short and long term treatments was 95 and 100%, lambing rate was 70.00 and 63.33%, twining rate was 14.28 and 10.52%, litter size was 1.14 and 1.10 and fecundity rate was 0.80 and 0.70 respectively. Results shown that there was no significant difference between two estrus synchronization protocols in all of studied parameters in this breed. Therefore, it seems that to selection one of two treatments, researches should be perform about this two protocols in terms of economic expenses and practicality in this breed.

Keywords: Ewe, CIDR, Fecundity, Twining.

A-10-795-1

P54: Follicular Fluid Plgf/Sflt-1 Ratio And Soluble Receptor for Advanced Glycation End–Products Correlate With Ovarian Sensitivity Index In Women Undergoing A.R.T.

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Abstract

Background: Considering potential roles of soluble receptor for advanced glycation end products (sRAGE) and placental growth factor (PlGF) in ovarian function and embryo implantation, in the present study we have evaluated the association of these factors and also PlGF/sFlt-1 ratio with the ovarian response and implantation rate by dividing patients according to the OSI.

Methods: In a cross-sectional study, 90 infertile women who were undergoing ICSI cycle using long protocol were recruited. The patients were divided according to ovarian sensitivity index (OSI). ICSI cycle outcomes were evaluated for each patient and PlGF, sFlt-1 and sRAGE levels of follicular fluid were assayed using commercial ELISA kits.

Results: Follicular fluid (FF) sRAGE levels and PlGF/sFlt-1 ratio were statistically greater in high-responder women than other responders ($p < 0.05$). Positive correlations were obtained between sRAGE level with the number of oocytes, follicles and OSI level. sRAGE levels with a cutoff value of 4.83 (ng/ml) for evaluating the pregnancy outcome showed 81.8 % sensitivity and 60.7 %

specificity. Furthermore, there were positive associations between PlGF/sFlt-1 ratio with the number of oocytes, embryos and OSI level. **Conclusion:** In conclusion, the results of the current study supported that good ovarian response is independent of pregnancy outcome. Our results showed that FF levels of sRAGE and PlGF/sFlt-1 ratio could be used as markers for determining the high-responder women. Also, FF sRAGE levels could be a good predictor of ART outcome.

Keywords: Ovarian Response, Soluble Receptor for Advanced Glycation End Products, Placental Growth Factor, Embryo Implantation, ICSI Cycle

A-10-808-1

P55: A Review of the Effect of Clomiphene Citrate for Ovulation on Infertile Women

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Abstract

Backgournd: Ovulation stimulation with Clomiphene Citrate is the most commonly used treatment in infertility.In about 25% to 35% of couples suffering from infertility there are some defects in ovulation, so ovulation stimulation is the most commonly used treatment for infertility. This review article is designed to evaluate the effect of Clomiphene Citrate on ovulation in infertile women.

Methods: This review article has been conducted by searching through the following international databases: Magiran, Scopus, Science Direct, Web of Science, Google Scholar, Pubmmed, and SID, using the following key words: Clomiphene Citrate, Ovulation, and Infertile Women. From among these vast databases 60 research articles were extracted, and after analyzing input and output criteria based on Prisma checklist, 15 research articles were eliminated and finally 45 research articles from 2000 to 2017 were listed and the data were extracted from them.

Results: Considering the long half-life, the effects of peripheral anti-estrogen properties, numerous side effects such as vasomotor disorders, hot flashes, nausea, pelvic discomfort, breast pain and, most importantly, excessive ovarian excitability and side effects resulting from it, it seems that drugs with less complications and better therapeutic effects, such as Letrozole, can be given priority.

Discussion and Conclusion: Today, letrozole can be used as an auxiliary or alternative to Clomiphene for stimulation of ovulation in infertile women due to its less unwanted side effects.

Keywords: Clomiphene Citrate, Stimulation of Ovulation, Infertile Women.

A-10-441-1

P56: Ovarian Hyperstimulation Syndrome Model in Mice

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Abstract

Ovarian Hyperstimulation syndrome (OHSS) is a potentially life-threatening complication caused by ovarian stimulation during which the ovaries become severely stimulated. OHSS is induced by an ovarian release of angiogenic, vasoactive. The ovaries are swelling and being painful. Since the negative effects of OHSS are not really clear, therefore, an animal model is needed in order to

evaluate OHSS effects on embryo. In this study we use Dana protocol to generate OHSS model in mice for first time in Iran. PMSG (20 IU/d) was administered ip to 6-week-old NMRI female mice for three subsequent days, followed by HCG administration (7 IU/d) on the fourth day. Mice were anesthetized 48 hours after HCG. Evans blue dye was injected Iv.After 30 minutes, 2 mL of sterile saline was injected ip, after which the abdominal cavity was opened and 1 mL of fluid centrifuged and pipetted into ELISA plates to record absorbance at 620 nm. 48 hours after HCG administration, we assessed body weight, ovarian weight; and vascular permeability to verify the OHSS model. Enhanced micro vascular permeability and its related edema that resulted in increased body weight along with ovary enlargement confirmed the OHSS model in mice OHSS is a potentially life-threatening complication in which affects people at risk especially young women and those who has a strong track record of polycystic ovarian disease or hypothyroidism to be taken hyper prolactinemia. Young women with polycystic ovary syndrome who have many follicles in the ovaries themselves are at high risk for ovarian Hyperstimulation syndrome.

Keywords: Ovarian Hyper Stimulation, Animal Model, Mice

A-10-57-2

P57: The Strategy of Pain Management in Women With Endometriosis

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Abstract

Background: patients with chronic pelvic pain associated with endometriosis, which is a puzzling and problematic gynecologic condition that has continued to plague women and baffle doctors and researchers worldwide. the present study aimed to examine the success strategy of pain management among women suffering from endometriosis
Methods: Databases including Medline, EMBASE and Cochrane library were searched systematically to obtain English articles using relevant keywords. All study designs such as randomized clinical trials, cohort studies, case-control studies and case-studies focusing on medical treatment of endometriosis-related pain were included. Of 45 initially identified articles through electronic search, 38 relevant studies were selected of which, 22 were included in the final analysis.
Results: Medications for endometriosis can be categorized into low-cost drugs including oral contraceptives (OCs) and most progestogens, and high-cost drugs including dienogest and GnRH agonists. As the individual response to different drugs is variable, a stepwise approach is suggested, starting with OCs or low-cost progestogens, and stepping up to high-cost drugs only in case of inefficacy or intolerance. OCs may be used in women with dysmenorrhea as their main complaint, and when only superficial peritoneal implants or ovarian endometrioses.
Conclusion: several drugs can be used with a similar magnitude of effect, in terms of pain relief, independently of the mechanism of action. Conversely, safety, tolerability, and cost differ. This has important practical implications, given that prolonged periods of treatment should be planned in symptomatic women not seeking pregnancy.

Keywords: Pain , Management , Endometriosis

A-10-644-1

P58: Evaluation of Quality of Life After Laparoscopic Surgery in Women Suffering From Endometriosis

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Abstract

The purpose of this study was to evaluate the quality of life in women with endometriosis after laparoscopic surgery. This research has been done with semi-experimental design with pre-test and post-test type of a group. The statistical population consisted of all married women aged 20-45 years’ old who suffered from endometriosis referring to endometriosis surgery centers in northern Tehran from October 2016 to March 2017 (N=180). The samples (n=120) were selected randomly based on multi-stage cluster. The short form endometriosis health profile (EHP-5) was used for investigating quality of life. The result of t-test confirmed the hypothesis at a confidence level of 0.01. In other words, laparoscopic surgery improves the quality of life in women with endometriosis.

Keywords: Quality of Life, Laparoscopic surgery, Endometriosis.

A-10-570-1

P59: Frequency of Regulatory T Cells in Peripheral Blood Mononuclear Cells (PBMCs) of Endometriosis Patients

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Abstract

Background: Endometriosis is a chronic inflammatory condition characterized by the growth of stromal cells outside the uterine cavity. Regulatory T cells (Tregs), as part of the immune system, might play a role in the pathogenesis of endometriosis via abrogating local cellular immune responses. Thus, here we evaluated Treg frequency in PBMCs of non-endometriosis and endometriosis patients.

Methods: PBMCs were obtained from peripheral blood of endometriosis and non-endometriosis women and Tregs subpopulations were analyzed by flow cytometry using CD4+, CD25+, and FoxP3+ markers. Furthermore, FoxP3 mRNA expression was analyzed by quantitative real-time RT-PCR.

Results: There was no significant difference in the percentage of CD4+CD25+FoxP3+ Tregs cells between endometriosis and non-endometriosis samples. In addition, we observed no marked differences between the groups with respect to FoxP3 expression. However, the percentage of Tregs and FoxP3 expression increased in peripheral blood in the secretory phase when compared to proliferative phase in both endometriosis and non-endometriosis groups.

Conclusion: The results of several pioneer studies have well proved the existence of Tregs in ectopic lesions obtained in secretory phase from endometriosis patients. However, with respect to the circulating Tregs, the reports in the literature are controversial. To our results, there was no difference with respect to Treg number in the secretory phase between non-endometriosis and endometriosis patients. Hence, the tissue change in the percentage of Tregs during endometriosis does not necessarily show itself at the peripheral blood level.

Keywords: Endometriosis, Regulatory T Cells, Foxp3, Secretory Phase.

A-10-802-1

P60: Vitamin D Deficiency May Be a Modifiable Risk Factor In Woman With Endometriosis

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Abstract

Background: This study examined to determine the levels of 25(OH) D in endometriosis patients and to clarify the association between the endometriosis and intake of calcium and vitamin D dietary.

Methods: A total of 200 women with endometriosis as endometriosis group and 154 healthy women (control group) of reproductive age were included in this study. The plasma detection of 25(OH) D (vitamin D3) was measured by the high pressure liquid chromatography method in endometriosis and control (healthy) group. Participants in two groups were asked about intake of calcium dietary and vitamin D.

Results: Our result showed the association between deficiency of 25(OH) D level and endometriosis risk (OR=29.4, P<0.001). Also, the intake of dietary calcium was inversely associated with recurrence of endometriosis. However, this association was not observed between vitamin D intake and endometriosis.

Conclusions: Our results showed that the decreased level of VD is associated with the endometriosis risk. Accordingly, the authors validate that vitamin D deficiency may have an emergence and predispose factor of endometriosis; Also a decreased risk of endometriosis with increasing Ca intake was observed. Therefore, using of Ca as dietary supplementation may be useful in the managing of endometriosis patients.

Keywords: Vitamin D deficiency, Endometriosis, Calcium intake.

A-10-353-1

P61: Anti-Inflammatory Action of Gamma (Γ)-Irradiated Genistein on Ovary Tissue Modification in Polycystic Ovary Syndrome

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Abstract

Background: Radiation has long been applied in the various fields, such as sterilization of medical supplies and food components and increases the antioxidant activity of bioactive materials. Genistein is well known as a bio-functional material that is present in soybean, and associate with prevention and therapy of various diseases, such as inflammation and oxidative damage. According to Rotterdam criteria, about 15.2 % of Iranian women suffer PCOS. Studies suggest that oxidative stress could be concern in pathobiology of this incident disorder.

Methods: In this study the syndrome induced by muscular injection of 40 mg/kg Estradiol Valerate to 24 female Wistar rats, weighing 170-180 g. Control group receive no injection. After 60 days the animals divided to control, PCOS and PCOS treated with irradiated genistein (2 and 5 mg/kg) groups. After 21 days interperitoneal treatment of irradiated genistein, the ovaries of all groups histologically studied.

Results and Discussion: There was a signification polycystic improvement in ovaries treated with high concentration of irradiated genistein in comparison with PCOs group and also granulosa layer increase, thickness of the theca layer decrease, reduction of cystic follicular number and corpus luteum increase were found, that could be a sign of renewed ovulation.

Conclusion: irradiated genistein could decrease PCOS histological signs that lead to ovulation rate reduction, and have reparation effects on ovary tissue. It is possible that, this ability is because of irradiated genistein antioxidant and anti-inflammatory effects that motivate reduction of cysts number and natural development of follicles.

Keywords: γ-irradiated genistein, Polycystic ovary, Infertility.

A-10-58-1

P62: The Relationship Between Metabolic Syndrome, The Nutritional Condition of PCOS Women and Serum Androgen Levels in Four Different Subtypes of PCOS Based On The Rotterdam Criteria

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Abstract

Poly Cystic Ovary Syndrome (PCOS), is the most common endocrine disorder among women in reproductive age. This study aimed to determine the relationship between Metabolic Syndrome (Mets) and the nutritional status of patients with PCOS and serum androgen levels in four different subtypes of PCOS. The study subjects were compared with (PCOS women in reproductive age (40-18 years old)) the matched control group. Case group, was divided to 4 subgroups based on diagnostic Rotterdam criteria. Clinical, hormonal and biochemical assessments was done and food frequency questionnaire was completed for all subjects. Diagnosis of Mets, was carried out based on NCEP ATP III criteria. A statistically significant difference in hormonal factors (androgenic components) and some nutritional components was observed among the PCOS subgroups with each other and with the control group ($P<0.05$). A significant association was found between some of the nutritional components with some of the Mets components in all subgroups of PCOS and the control group ($P<0.05$). Serum total testosterone level was significantly higher in PCOS women with the Mets than those with no Mets ($P<0.05$). A significant association was found between some of the nutritional components with androgenic

components level in all subgroups of PCOS and the control group(P<0.05). The majority of investigated nutritional components in PCOS women with and without Mets, have shown a significant difference (P<0.05). Unfavorable nutritional condition increase risk of Mets in women with PCOS, via the influence on the Mets components and androgenic components.

Keywords: Polycystic Ovary Syndrome, Metabolic Syndrome, Nutritional Status, Hyperandrogenemia

A-10-58-2

P63: Comparison of Selenium Dietary Intake in PCOS Patients With and Without Metabolic Syndrome

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Abstract

Background: Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder in reproductive-age women in Iran. PCOS is one of the risk factors of metabolic syndrome (MetS). PCOS and MetS have an inflammatory etiologic foundation along with oxidative stress. Selenium is an anti-oxidant micronutrient. Present study aimed to compare the dietary intake of selenium in PCOS women with and without MetS.

Methods: 42 participants eligible for this case control study were selected by convenience sampling method. The case group included 14 PCOS patients with MetS and the control group included 28 PCOS patients without MetS. Dietary intake assessment of selenium was carried out by a 168 item Food Frequency Questionnaire. PCOS and MetS were diagnosed using the Rotterdam criteria and NCEP ATP III respectively. Statistical analysis was performed using SPSS22 software and T-test. Significant P-value was considered 0.05.

Results: Dietary intake of selenium was significantly lower in PCOS women with MetS than the control group (P <0.001). Conclusion: Regarding the research results, it is suggested that administration of selenium supplementation and the increased consumption of this antioxidant micronutrient in the PCOS patients diet is useful to prevent of MetS occurrence and progression in these patients.

Keywords: PCOS, Metabolic Syndrome, Selenium

A-11-88-1

P64: Protective Effect of Aloe Vera Extract Against Bisphenol A- Induced Poly Cystic Ovary Syndrome in Wistar Rats

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Abstract

Background: Bisphenol A (BPA), an environmental pollutant, affects the reproductive health of wildlife and possibly of humans because it induces ovarian toxicity. BPA can induce poly cystic ovary syndrome. Thus, the aim of the present study was to investigate if BPA induces oxidative stress and hormonal disorder in the ovary of rats and if coadministration of *Aloe vera* extract, can prevent adverse effects.Materials and **Methods:** In this experimental study forty adult female Wistar rats (200 ± 20 g) were divided into 5 groups. Group1 control; group2 vehicle (5ml/kg b.wt./day); group3 (400 mg *Aloe vera* gel/kg b.wt./day); group4 (10 mg BPA/kg b.wt./day, dissolved in 5ml/kg olive oil); group5 (BPA+ *Aloe vera*), daily and orally for 8 weeks. At the end of the study, the rats were anesthetized and 2 ml blood samples were obtained for evaluation of sex hormones and oxidative stress markers. Also, both ovaries were collected for histological

examinations.
Results: BPA significantly decreased estradiol (P<0.05). Malondialdehyde (MDA) incresed, thiol protein (G-SH) and total antioxidant capacity (TAC) decreased. Histopathological results of BPA group showed fewer corpus luteum and antral follicles, more atretic follicles and several cysts. But, co-administration of *Aloe vera* with BPA accelerated the total antioxidant capacity and ovarian tissue structure healing.
Conclusion: Given these findings, *Aloe vera* gel extract can overcome the damaging effects of BPA on the reproductive system of rats and protects rats' ovary folliculogenesis and hormone production against BPA-induced toxicity

Keywords: Aloe vera, Bisphenol A, Rat, Ovary

A-10-340-1

P65: The Prevalence of Polycystic Ovarian Risk Factors in Women Participating in Premarital Counseling in Shahid Beheshti University of Medical Sciences in 2017

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Abstract
Backgournd: Polycystic ovary syndrome (PCOS) is the most common endocrine disorder and metabolic heterogeneity in women of childbearing age. Patients suffering from infertility, endometrial cancer, late post menopause, mental and metabolic disorders. Estimates are not precise about the prevalence. The aim of this study was to determine the prevalence of risk factors for polycystic ovary syndrome in women participating in premarital counseling courses in this university.
Methods: Cross-sectional study was performed on 652 women who participated in premarriage courses in December 2017 .The participitants first completed the consent form, then a demographic questionnaire and a researcher-made questionnaire on risk factors for polycystic ovaries. At least two symptoms Of the 4 common symptoms were accepted as diagnostic criteria for polycystic ovary. Data was analyzed by descriptive statistics and SPSS software.
Results: Participant in the age group of 14- 51 and the mean age was 26.1 years in the study. 11.44% had a history of previous polycystic ovary syndrome , 6.6% might be suffering of the syndrome.. The prevalence was higher in the city and in the age group of 30 years and older. The most common symptom was hirsutism (39.27%) and the most rare was galactorrhea (38.8%).
Conclusion: The prevalence of this syndrome in the target group of the study is as likely as 17.64%, which is consistent with national statistics. The health system by, applying these findings in national health programs can reduce the socioeconomic and social burden of the syndrome.

Keywords: Women, Polycystic Ovary Syndrome Prevalence, Marriage Counseling Classes.

A-10-387-1

P66: The Effect of Medicinal Plants on The Treatment of Polycystic Ovary Syndrome (PCOS)

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Abstract
backgournd: PCOS is one of the most common endocrine disorders in women of reproductive age and its prevalence in the world is 5-10%. PCOS is the most common cause of hyperandrogenism, hirsutism and infertility. Chronic lack of ovulation, polycystic ovaries, insulin resistance, obesity and systemic inflammation are its characteristics. PCOS also increases oxidative stress in patients. This condition has led to antioxidant treatments in these patients and it is

said that some medicinal plants contain high levels of antioxidants and their use in improving and treating the symptoms of the syndrome is effective. Therefore, this study was conducted to investigate the effect of medicinal plants on polycystic ovary syndrome.
Methods: This study is a review study. Results: The findings showed that use of vitex agnus-castus for 3 to 4 months improves the symptoms of PCOS. Saw palmetto extract is rich in fatty acids and phytosterols and has anti-androgenic activity and can be effective in the treatment of PCOS. Paeonia wittmanniana has strong antioxidant properties and increases the ability of the body to free radicals, and when used with licorice, it can eliminate the symptoms of PCOS and help fertility. Glycyrrhiza glabra contains special compounds that can dramatically decrease testosterone levels in the bloodstream and thus reduce the symptoms of PCOS such as acne and hair growth.
Conclusion: Regarding the effect of each herb medicine on reducing the symptoms of PCOS, it is advisable to use appropriate herbal medicine according to their predominant clinical sign.

Keywords: Polycystic Ovary Syndrome, Medicinal Plants, PCO

A-10-434-1
P67: Effect of Inhibition of Mu Opioid Receptor in The VMH on Ovarian Cyst Formation By Morphine In The Rat

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Abstract
Backgournd: The main action of the opioid system is the relief of pain.Opium contains at least 20 types of alkaloids among which morphine is the most important alkaloids which make up about % 10-12. Studies have shown that morphine causes ovarian cysts.Morphine disrupts the ovarian cycle and may reduce fertility. The mu receptor plays a special role in various aspects of female reproduction. Removal of mu opioid receptors causes mice to be insensitive to morphine. In this study the aim is to use $MgSO_4$ or naloxone to inhibit the mu receptor engagement at the rat's VMH.
Methods: Female rats (200-250 g) kept under standard conditions. Using a Stereotactic device, they were surgically coordinated. Anterior-posterior: -1/92, venteral: 9, lateral: 0.5. After a week of recovery they were microinjected morphine (0/1-0/4 µg/rat, once intra VMH) and preinjected $MgSO_4$ (1-5 µg/rat) and naloxone hydrochloride (0/1-0/4 µg/rat, once intra VMH) to inhibit mu receptor involvement. The control group received physiological saline (1 µL/rat, intra VMH). Three days after the experiment, uterus, ovary and brain samples were collected and studied histopathologically using hematoxylin.
Results: The ovaries in group in which morphine was injected showed poly cystic features as compared to the control group. With the presence of $MgSO_4$ or naloxone poly cystic ovary was not observed.
Discussion & Conclusions: These results indicate that morphine disrupts fertility. This effect is most probably is resolved by mu opioid signaling blocking.

Keywords: Morphine, Poly Cystic Ovary, Mu Opioid Receptor, Mgso4, Naloxone, VMH, Rat

A-10-636-1
P68: Evaluation of Medical and Traditional Treatments on The Fertility of Women With Polycystic Ovary Syndrome

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Abstract
Background: Polycystic ovarian syndrome (PCOs) is the most common cause of infertility and the most important reason of anovulation in women of reproductive ages which affects about 5-10% of the population of women. The lack of ovulation causes about 40% of women's infertility. Drugs and Assisted reproductive techniques are used to stimulate ovulation in people with PCOs.
Methods: This article is a review article with search on sites such as PubMed, SID, EMBASE, Scopus, Google scholar and Magiran. Articles coordinated with the specified criteria collected from 2013 to 2017 and reported in a paper.
Results: Studies show that the Shilunum (jujube) plant reduces the level of androgen in the PCOs and eliminates ovarian cysts. The use of letrozole to induce PCOs causes large changes in gonadotropins, estrogen and progesterone. The five-finger plant (Vitex Agnus Castus) reduces testosterone secretion and ovarian weight and inhibits the release of LH and improves pregnancy rates. Concomitant use of both metformin and calcium-vitamin D can increase follicle growth and development. Licorice extract decreases testosterone levels and releases radicals and induces ovulation regulation. Heracleum persicum (Golpar) extract reduces estradiol, testosterone and LH, and increases FSH. Hydroalcoholic extract of Grape seed with aromatase inhibitory effect stimulates ovulation and increases the number of different follicular groups. N-acetylcysteine (NAC) has a positive effect on induction of ovulation and pregnancy.
Conclusion: The use of medicinal herbs can be effective as an alternative to or simultaneously with the use of chemical drugs to increase the fertility rate in patients with PCOs.

Keywords: Polycystic Ovary Syndrome, Pcos, Fertility, Medicinal Herbs.

A-10-558-1
P69: Yoga as A Treatment For Infertility

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Abstract
Backgournd: The use of complementary alternative medicine (CAM) is becoming incresinglypopular in the world.The aim of this study was to investigate the effect of yoga on treatment of infertile women or men.
Methods: In a systematic survey of the databases such as Pubmed, Elsevier, Ovid, Clinicalkey, SID, Iranmedex and etc from 2005 to the present, the relevant articles were extracted and analyzed.
Results: The findings of several researches revealed that yoga can provide stress management leading to contrl of pain, anxiety, stress and depression with beneficial effects on infertility and improved fetal outcomes. Also, yoga increased the ART success rate by improving the physiological and psychological indexes of both men and women. By yoga, ovulation occurred after 3 months. A period of 12 weeks of yoga improved BMI, percentage of body fat and lateral abdominal skin fold.
Conclusion: The results showed that yoga can help couples overcome infertility and increase the ART success rate by improving physiological and psychological indexes of both men and women.

Keywords: Complementary Medicine, Infertility, Yoga.

A-10-558-2
P70: Homeopathy as A Treatment For Infertility

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Abstract
Backgournd: Homeopathy has been used in the past for treating a broad aspect of diseases.The aim of this study was to investigate the effect of

homeopathy on treatment of infertile women and men.
Methods: In a systematic survey of the databases such as Pubmed, Elsevier, Ovid, Clinicalkey, SID, Iranmedex and etc from 2005 to the present, the relevant articles were extracted and analyzed.
Results: The findings of researches revealed that five cases of female infertility were treated successfully with the use of homeopathic tratment. Also, using individualized homeopathy on male infertility for an average of 10 months significantly improved the sperm density, the percentage of sperm with good progressive motility and density of sperm with good propulsive motility specially in cases of oligoasthenozoospermia. Homeopathic tratment based on the vannier system has been a successful programme for women with infertility problem. Even using homeopathy for infertile Nelore bull for 3 years decreased total sperm defects, increased sperm motility.
Conclusion: The results showed that indivisualized homeopathic treatment may be a useful therapy for subfertile men and women and given that this method has few complications, it is recommended to use it.

Keywords: Complementary Medicine, Homeopathy, Infertility

A-10-421-1

P71: Effects of Parsley Aqueous Extract on Ovarian Histological Changes in Polycystic Ovary Syndrome Rat Model

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Abstract
Backgournd: Polycystic ovary syndrome (pcos) is one of the most common endocrine disorders in the reproductive age female around the world. Chronic low-grade inflammation has been suggested to play an important role in the pathogenesis and development of this syndrome. Regarding the antioxidant and anti-inflammatory properties of parsley, this study was conducted to determine the effect of parsley on morphology of ovarian tissue in pcos rat model.
Methods: In this study the syndrome induced by muscular injection of 40 mg/kg Estradiol Valerate to 32 female Wistar rats, weighing 170-180 g. After 60 days the animal divided to control, pcos and pcos treated with Parsley (1000 and 2000 mg / kg by gavage for 21 days). At the end of study, the rat ovaries were evaluated histologically.
Results and Discussion: Histological studies showed significant increases in the number of primordial, primary, pre-antral and cystic follicles in comparison with the control group (P < 0.05). Measurement of granulosa, Theca, number and diameter of different cysts and follicles showed significant improvement in polycystic ovary in rats treated with parsley.
Conclusion: These findings indicate that parsly have a protective effects on polycystic ovary syndrome maybe due to its antioxidant and anti-inflammatory properties.

Keywords: Polycystic syndrome ovary, Parsley, Ovary

A-10-470-1

P72: Systematic review of the Effect of Acupuncture on Reproductive and Metabolic Disorders in Women with Polycystic Ovary Syndrome During 2008-2018

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Abstract
Backgournd: Poly cystic ovary syndrome (PCOS), is a common endocrine and metabolic disorder affecting 10% of women of reproductive

age, PCOS Is characterized by ovulatory dysfunction, hyperandrogenism, and polycystic ovaries and it can have serious effects on the general health and quality of life. Present research is a review study aiming to investigate the effect of acupuncture on reproductive and metabolic disorders in women with polycystic ovary syndrome during 2008-2018.METHODS: PubMed, ScienceDirect and Google Scholar were searched for English literature in which clinical trials addressed the effect of acupuncture on reproductive and metabolic disorders in women with polycystic ovary syndrome during 2008-2018.

Results: Among 134 papers found after searching process, finally 11 ones met inclusion criteria were reviewed. These studies showed that acupuncture can increase the ovulation rate, improve endocrine profile by decreasing circulating sex steroids, increase menstrual frequency and decrease weight. Acupuncture appears to improve endometrial receptivity in rats by decreasing the impedance of the uterine artery blood flow and improving the blood flow to the uterus, which might enhance implantation and increase the chances of successful pregnancy and live birth.

Conclusion: Acupuncture may improve the endocrine and metabolic function of patients with However, it seems to have no significant effect on IVF/ICSI outcomes of women with PCOS and more sufficient data are needed to improve the efficacy of acupuncture.

Keywords: Poly Cystic Ovary Syndrome ,Acupuncture ,Randomized Clinical Trial.

A-10-178-1

P73: Effects Of Vitamin D an Activity And Expression Of Superoxide Dismutase and Glutathione Peroxidase in Granulosa Cells of PCOS Patients Compared To Healthy Women

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Abstract

Background: Polycystic ovary syndrome (PCOS) is affected millions of women worldwide and accompanied by oxidative stress (OS) which could be because of antioxidant deficiency. We assessed activities and expression of superoxide dismutase (SOD) and glutathione peroxidase (GPx) in granulosa cells (GCs) of PCOS and healthy women. Regarding to positive influences of vitamin D on female reproduction and gene expression, we tested vitamin D effects on these antioxidant enzymes.

Methods: GCs were obtained from 20 women with PCOS and 20 healthy controls. Ovarian GCs were cultured in presence or absence of vitamin D (100 nM), for 48 hours. The GPx and SOD expression and activities in GCs lysate were assessed by quantitative real-time PCR and photometric methods. The comparison between two groups was done by independent t-test and the effect of vitamin D tested by paired t-test. All statistical analysis performed using GraphPad Prism.

Results: Basal expression and activity of GPx in cystic GCs was lower than normal cells ($P<0.0001$). Treatment with vitamin D significantly increased GPX and SOD expression and activities in both groups. Vitamin D was more effective on GPx gene expression and activity of normal cells than cystic cells.

Conclusion: We showed GPx deficiency in patients GCs that could be partly explaining OS in PCOS. The current research is the first one demonstrated the antioxidant properties of vitamin D by enhancing the expression and activity of SOD and GPx in human GCs. In this way, vitamin D supplementation could be useful to attenuate OS in women with PCOS.

Keywords: Polycystic Ovary Syndrome, Granulosa Cells, Vitamin D, Superoxide Dismutase, Glutathione Peroxidase.

A-10-804-1

P74: The Investigation of Assisted Reproduction Techniques in Patients With Polycystic Ovary Syndrom

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Abstract

Backgournd: Polycystic Ovary Syndrome is among the most common disorders of Endocrine glands in women which will be identified with symptoms like the increase of Androgenic, Hyperinsulinemic hormones, non-ovation, infertility, and obesity. This review article has been designed to investigate assisted reproduction techniques in patients with Polycystic ovary.
Methods: This review article has been conducted by analyzing 50 research articles from 2000 to 2018 through searching in the following websites, PubMed, Google Scholar, SID, Migraine Scopus, Web of Science, and Science Direct, using the following key words: Polycystic ovary syndrome, assisted reproduction techniques, and infertility.
Findings: The first step in treating those with Polycystic ovary syndrome is the stimulation of ovation using Clomiphene Citrate, however 20 to 22 percent of the patients are resistant against stimulation of ovation with Clomiphene there is a risk of over-stimulation of ovation, and multiple pregnancy. Also, Metformin along with the decrease of insulin and Androgen level of the ovary can stimulate the ovation in such individuals. Results reveal that the next step in treating those with Polycystic ovary syndrome who are resistant against Clomiphene and Metformin, is the use of Gonadotropins or the surgery of the ovary. Laparoscopy (LOD) technique which has replace wedge shaped cut today, can bring about ovation with the decrease of Androgen level of serum which will result in gradual improvement of infertility.
Conclusion: based on treatment responses of patients, different treatment techniques should be employed which will increase the chances of successful treatment.

Keywords: Polycystic Ovary Syndrome, Assisted Reproduction Techniques, Infertility.

A-10-808-2

P75: Reviewing The Effects of Metformin on Ovulation of Women Diagnosed With Polycystic Ovary Syndrome (PCOS)

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Abstract

Backgournd: PCOS is the most common endocrinedisorder among women. Some of the symptoms include anincrease in androgenic hormones, hyperinsulinemia, anovulation, infertility, and obesity. One of the effective yetcontroversial drugs used for ovulation and infertility among these patients is metformin. This article aims at providing a thorough review of the effects of metformin on the ovulation of women diagnosed with PCOS.
Methods: This study was conducted reviewinga total number of fifty papers extracted from the following websites: Pubmed,GoogleScholar, Web of Science, Science Direct, Scopus,Magiran,Sid. The papers were chosen searching the keywords PCOS, metformin, and ovulation and were published from 2000 to 2017.
Results: The results indicated that using metformin is proven to be helpful for the women diagnosed with oligomenorrhea and PCOS. It increases theabundance of ovulation and reduces the cardiovascular diseasesrisk factors. Moreover, different studies confirm the fact that among women diagnosed with PCOS whose symptoms were treated with Metformin for more than six months the level of LH, ovarian androgens, and sex hormone binding was reduced. It was also found that ovulation, ovary functioning,and insulin resistance is corrected among these patients. It is worth mentioning that, increasing the dose of metformin can be recommended for those patients whodo not respond to the treatment with metformin at all. .
Discussion and Conclusion: According to the resultsutilizingmetformin increases the effects of insulin and reduces the level of androgen among

women diagnosed with PCOS.Consequently, one could argue that treatment with metformin can result in a regular menstruation and ovulation among these patients.

Keywords: Polycystic Ovary Syndrome (PCOS), Metformin, Ovulation.

A-10-803-1

P76: A Revisal On Scrutiny of Hormons Related to The Quality of The Women Life Who Have The Polycistic Ovary Syndrome

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Abstract

Backgournd: Pcos the most current Andocrine malady in the women who are in fecundity ages. The cause of this disease has not been known perfectly but the cerum level of some Hormon is unnatural. These Hormon alterations can make mental agitation and cause the downfall of life quality.This revisal essay has written with the aim " scrutiny of Hormon " relatedto the quality of the life of the women who have the pcos.

Methods: This revisal essay was written with scrutiny in 50 essays from the sites: Pubmed, Google scholar, Web of Science, Science direct, Scopus, Magiran, Sid; with the key words : the Pcos, the life quality, Hyper Androgenemy, from the year 2000 until the year 2017.

Results: The results show that all of clinical proofs of pcos including the excision of menses, prolonging menses intervals, Hirsotism, fatness, decreases the fecundity potency and acne is effective on decreasing the level of the quality of the sick people life. According to data, testosterone Hormon has the most affection on fecundity problems. Whereas increase the scale of LH on FSH is over than 2 and Stradiol has less effective on fecundity problems.

Discussion and Conclusion: The pcos with most alternation in the level of Testosterone Hormon can make problem for the material and mental health of sickspersons,therefore doctors and sanitarians should pay attention to the mental and social dimesions of these sick persons until these persons could profit high life quality.

Keywords: Pcos, The Life Quality, Hyper Androgenemy.

A-10-793-1

P77: Insulin Resistance Improvement by Cinnamon Powder In Polycystic Ovary Syndrome: A Randomized Double-Blind Placebo Controlled Clinical Trial.

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Abstract

Our aim is to assess the effect of cinnamon powder capsules on insulin resistance, anthropometric measurements, glucose and lipid profiles, and androgens of women with polycystic ovarian syndrome (PCOS). Out of 80 women that were diagnosed as PCOS by Rotterdam Criteria, 66 were enrolled in this randomized double-blind placebo-controlled clinical trial. All of the PCOS women were taking medroxy progesterone acetate 10 mg/day for the last 10 days of their menstrual cycles. The cases were randomly allocated to 2 groups. The women in the first group were treated

by cinnamon powder capsules 1.5 g/day in 3 divided doses for 12 weeks and the second group by similar placebo capsules. Anthropometric measurements, fasting blood sugar, fasting insulin, blood glucose 2 hr after taking 75 g oral glucose, HbA1c, testosterone, dehydroepiandrosterone sulphate, homeostatic model assessment for insulin resistance, triglyceride, and cholesterol (low-density lipoprotein, high-density lipoprotein, and total) before and after the intervention were evaluated and compared as outcome measures. Fasting insulin (p=.024) and homeostatic model assessment for insulin resistance (p = .014) were reduced after 12 weeks in the cinnamon group compared with the placebo. There was also a significant decrease in lowdensity lipoprotein in cinnamon group (p = .004) as compared with baseline that caused significant difference with placebo (p = .049). However, changes in other outcome measurements did not lead to statistically significant difference with placebo. The present results suggest that complementary supplementation of cinnamon significantly reduced fasting insulin and insulin resistance in women with PCOS.

Keywords: cinnamon, fasting insulin, HOMA-IR, insulin resistance, polycystic ovary syndrome.

A-10-308-1

P78: The Effect of Folate and Folate Plus Zinc Supplementation on Endocrine Parameters And Sperm Characteristics in Sub Fertile Men: A Systematic Review And Meta-Analysis

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Abstract

Backgournd: To evaluate the effect of folate and folate plus zinc supplementation on endocrine parameters and sperm characteristics in sub fertile men. We conducted a systematic review and meta-analysis. Electronic databases of Medline, Scopus, Google scholar and Persian databases were searched from 1966 to 2016 using a set of relevant keywords including folate or folic acid AND (infertility, infertile, sterility).All available (RCTs), conducted on a sample of sub fertile men with semen analyses, who took oral folic acid or folate plus zinc, were included. Data collected included endocrine parameters and sperm characteristics. Statistical analyses were done by Comprehensive Meta-analysis Version Results: In total, seven studies were included. Six studies had sufficient data for meta-analysis. Sperm concentration was statistically higher in men supplemented with folate than with placebo ($p<0.001$). However, folate supplementation alone did not seem to be more effective than the placebo on the morphology ($P=0.056$) and motility of the sperms ($P=0.652$). Folate plus zinc supplementation did not show any statistically different effect on serum testosterone ($P=0.86$), inhibin B ($P=0.84$), FSH ($P=0.054$), and sperm motility ($P=0.169$) as compared to the placebo. Yet, folate plus zinc showed statistically higher effect on the sperm concentration ($P<0.001$), morphology ($p<0.001$), and serum folate level ($P<0.001$) as compared to the placebo. Folate plus zinc supplementation had a positive effect on sperm characteristics in sub fertile men. However, these results should be interpreted with caution due to the important heterogeneity of the studies included in this meta-analysis. Further trials are still needed to confirm the current findings.

Keywords: Folate, Folic Acid, Zinc Sulfate, Male Infertility, Sub Fertility, Sperm, Endocrine

A-10-334-1

P79: Assessment of the Leydig Cells Population in Rat Testicular Tissue Following Treatment with Oxaliplatin

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Abstract

Backgournd: Oxaliplatin (L-OHP) is a third-generation of platinum-based chemotherapies. L-OHP binds to DNA and prevents the DNA replication. It is especially effective in the treatment of colorectal cancer and also other solid tumors such as ovarian, testicular, bladder, and lung cancer. Chemotherapy is one of the risk factors which affect the fertility. The aim of this study was to evaluate the population of Leydig cells in L-OHP treated rats.

Methods: Oxaliplatin was administrated to adult rats (2.4 mg/kg i.p.) four consecutive days per week for duration of three weeks. After 21 days from the last administration of L-OHP, the animals were euthanized and formaldehyde fixed testicular tissue samples were stained with hematoxylin and eosin method for quantitative evaluation of Leydig cells number. The mean of counted cells in twenty interstitial tissues per each sample was calculated.

Results: The results showed that, the mean of Leydig cells population was decreased significantly in comparison to control group.

Discussion: Oxaliplatin is a third-generation of platinum-based chemotherapies which binds to DNA and prevents the DNA replication required for mitosis. Leydig cells in testicular tissue are constantly being divided. According to the results it seems that L-OHP through affecting of S phase of cellular cycle may influence some alterations in Leydig cells population which resulted in decreased fertility.

Keywords: Leydig Cells, Oxaliplatin, Rat

A-10-388-1

P80: Effect of Cerium Oxide Nanoparticles on Nrf2-Related Genes in A Rat Model of Experimental Diabetic

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Abstract

Backgournd: The transcription factor Nrf2 is the main regulator of antioxidant defense. It controls and induced expression of an array of defensive genes encoding detoxifying enzymes and antioxidant proteins. CeO2 nanoparticle act as direct antioxidants mediators to restrict the amount of intracellular ROS.The aim of this study was to investigate the effect of CNPs on the expression of Nrf2-dependent antioxidant response (Nrf2, HO-1, NQO1, and GCLC) in the streptozotocin (STZ) induced diabetic rats.

Methods: We included 24 Adult male Wistar rats weighing 250-300 g. After a week of adaptation to the standard diet, the rats were randomly divided into four groups with six rats in each. Control group received only a standard diet. CNPs group received CNPs 30 mg/kg/daily, diabetic rats received STZ (60mg/kg/daily), rats in STZ+ CNPs group received 30mg/kg/2 weeks of CNPs following STZ injection. We assessed Nrf2, HO-1, NQO1 and GCLC expression using quantitative real-time PCR method.

Results: Nrf2, HO-1, NQO1 and GCLC mRNA expression levels in diabetic rats were significantly lower than controls (p=0.01, p=0.0001, p=0.002, p=0.001, respectively).The mRNA transcript levels of Nrf2, HO-1, NQO1, and GCLC were significantly upregulated in the testes of diabetic rats treated with CNPs (all p's=0.0001). Moreover, Nrf2 was significantly associated with NQO-1, GCLC, and HO-1 mRNA expression levels (all p's=0.0001).

Conclusions:

Our results provide convincing experimental evidence that treatments with CNPs upregulates Nrf2 and its downstream antioxidant genes and can be used as a therapeutic strategy for attenuating DM-induced oxidative damage, particularly in the testicular tissue.

Keywords: CeO2 nanoparticle, Diabetes, Nrf2, HO-1, NQO1, GCLC.

A-10-414-2

P81: Testicular Volume and Number of Leydig Cells Alterations in The Diabetic Mice: A Stereological Study

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Abstract

Background: Because of the paucity of studies regarding the impact of diabetes mellitus (DM) on semen quality, this disease is seldom looked for in the infertile patient. However Type one diabetes mellitus (DM) reduces testosterone,and also affects spermatogenesis through modulating testis tissue. The aim of current study was to spermatogenesis and total number of leydig cells in type one diabetic mice.

Methods: 20 male type one diabetic mice were divided randomly into healthy, and diabetic groups: (1) control groups; (2) diabetic groups. Type one DM was induced by injection one time of 200 mg/kg streptozotocin(STZ).After 35 days, the testis were removed and volume of the testis and total number of leydig cells were estimated using stereological methods.

Results: The total volume of the testis and total number of leydig cells were decreased in diabetic mice comparison control groups.

Conclusion: The result indicated that diabetes could induce significant decreases in the total volume of the testis and total number of leydig cells.

Keywords: Type One Diabetes Mellitus, Spermatogenesis, Stereology

A-10-453-1

P82: Effects of Laser Therapy in The Testicular Tissue of Streptozotocin-Induced Diabetic Mice: A Stereological Study

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Abstract

Diabetes mellitus affects the functions of reproductive organs. Spermatogenesis process the evaluation of volume of testis, number of spermatogonia, primary spermatocyte, spermatids, sertoli cells and leydig cells is assessed by carefully observing a stained testis tissue under the microscope. Evaluation of Spermatogenesis process has been considered as one of the most important factors in successful fertilization and determination of testis morphology. In this study, Mice under standard housing conditions were assigned into three experimental groups: (I) control, (II) diabetic , (III) Laser groups (890 nm). The volume of the testis was estimated using the Cavalieri method. The number of spermatogonia, primary spermatocyte, spermatids, sertoli cells and leydig cells was estimated by counting the number of spermatogenic cells in an unbiased counting frame, superimposed on live images of testis tissue using Optical dissector methods. Our results showed a significant difference in the volume of testis and number of spermatogonia, primary spermatocyte, spermatids, sertoli cells and leydig cells in the laser and diabetic groups. This research indicates that the volume of testis and number of spermatogonia, primary spermatocyte, spermatids, sertoli cells and leydig cells is significantly different between diabetic and laser groups. Key word: Stereology, Testis, Diabetic

Keywords: Diabetes Mellitus ,Testise ,Low Level Laser.

A-10-573-1

P83: Role of L-Carnitine on Semen Parameter in Cimetidine Treated Adult Mice

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Abstract

Cimetidine is a drug widely use in the treatment of ulcer. Using of this drug for long period, cause dysfunction in the male reproductive system. Since L-carnitine has antioxidant effects potentially the purpose of this study is to investigate role L-carnitine in semen parameters in cimetidine treated adult mice. Twenty adult male mice NMRI were divided into four groups (n=5); control group received normal saline, we subdivided the test group into, 100 mg/kg cimetidine, 100 mg/kg L- carnitine , 100 mg/kg L- carnitine + 100 mg/kg cimetidine treated by injection peritoneum for 15 days. Sperm parameters were measured in groups. Cimetidine caused a significant ($P \leq 0.05$) decrease in motility, viability and normal morphology, also did not affect on sperm count. L- carnitine caused a significant ($P \leq 0.05$) increase sperm count , motility, viability and normal morphology. It is concluded that L- carnitine administration cause an improvement,gonadotoxic Cimetidine effects on sperm parameters in adult mice.

Keywords: Mice, Cimetidine , L- Carnitine, Sperm.

A-10-388-2

P84: Antioxidative Effects of Cerium Dioxide Nanoparticles Ameliorate Diabetes -Induced Testicular Damages

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Abstract

Backgournd: CeO2 nanoparticles have been shown to act as an anti-oxidant and anti-inflammatory agent in the treatment of several diseases including cancer and diabetes. Oxidative stress may play an important role in the pathophysiology of diabetes-related male reproductive dysfunction and abnormalities. In the present study, we examined the effects of cerium oxide (CeO2) nanoparticles on sperm parameters and spermatogenesis, in diabetic rats.

Methods: We included 24 Adult male Wistar rats weighing 250-300 g. After a week of adaptation to the standard diet, the rats were randomly divided into four groups with six rats in each. Control group received only a standard diet. CNPs group received CNPs 30 mg/kg/daily, diabetic rats received STZ (60mg/kg/daily), rats in STZ+ CNPs group received 30mg/kg/2 weeks of CNPs following STZ injection. We assessed sex hormones, sperm parameters and spermatogenesis, and Sperm DNA Fragmentation.

Results: The almost all of the sperm parameters‏ (count, motility, viability and normal morphology) in the diabetic rat was reversed by CeO2 nanoparticles administration. We showed that after CNPs administration, sperm DNA fragmentation significantly reduced in the STZ treated rats. Leydig cells, Sertoli cells, spermatids, primary spermatocytes and spermatogonia reduced significantly in the diabetic rats and CNPs treatment was effective in the most of the cases.

Conclusions: Our study concluded the CeO2 nanoparticles can attenuate the detrimental effects of diabetes on the sperm potential fertility, sperm parameters, DNA integrity and testicular histology.

Keywords: Diabetes, Ceo2 Nanoparticles, Sperm Parameters, Oxidative Stress.

A-10-436-1

P85: The Effect of Cinnamon Extract on Histological Parameters in Hyperlipidemic Male Rats

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Abstract

Backgournd: One of the major issues in medical sciences is infertility or fertility decline. According to previous studies, obesity and hyperlipidemia are the among of the primary causes of infertility in men. recent studies have shown that cinnamon consumption significantly affects lipid profiles. The aim of this study was to evaluate the effect of cinnamon extract on histological parameters in hyperlipidemic male rats.

Methods: In this experimental study, 24 male Wistar rats were divided into 4 groups, control, sham and cinnamon groups receiving 130 and 260 mg of cinnamon. All groups except control received 20% high fat diet for 8 weeks to induce hyperlipidemia. Then, cinnamon groups received cinnamon extracts for 6 weeks intraperitoneally (IP). In the 14th week, under anesthesia, the animals were underwent testicular surgery. Then, lipid profile and histological tests were evaluated.

Results: The results of this study showed that cinnamon extract improved lipid profile. The histology results in the treatment group indicated an increase in the number of cells in the testicular seminal tubules and an increase in the number of cells and spermatogenesis layers ($P<0.001$).

Conclusion: Given that cinnamon has a positive effect on testicular histology, it is suggested that cinnamon could be added to the diet of people with hyperlipidemia.

Keywords: Cinnamomum zeylanicum – Male infertility - Spermatogenesis - Hyperlipidemia - Cinnamaldehyde.

A-10-145-1

P86: Crab Shell Extract Ameliorates Reproductive Parameters in Diabetic Rats

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Abstract

Backgournd: Crab Shell (CS) has been used as a promising nutritional and medical compound in traditional medicine. Diabetes is a complex oxidative stress dependent disease, and CS showed antioxidant properties. The aim of present study was to investigate the effect of CS extract on sperm parameters and testes histopathology in diabetic rats.

Methods: In this experimental study, forty Wistar male rats (200±15) were used in 5 groups (n=8); including control, diabetic and diabetic treated (100, 200 and 400 mg/kg of CS) rats. Diabetes induced using a single dose (50 mg/kg) of streptozotocin (STZ) interaperitonealy and three days later, blood glucose level greater than 250 mg/dl was considered diabetic. Treatments with CS were started for 14 days. The fasting blood glucose, testosterone level, testes weight, sperm viability, count and motility were assessed. Also, testes were processed for histological studies. Data were analyzed using SPSS software and one way ANOVA methods.

Results: Sperm count, motility and testosterone levels increased significantly (p=0.000) in CS treated diabetic rats in a dose-depended manner, while the number of immotile sperm (p= 0.017) decreased. CS also decreased fasting blood glucose.

Conclusion: CS improves Reproductive parameters and protects testicular tissue against the oxidative stress damage by diabetes in rats.

Keywords: Crab shell, Diabetes, Testes, Sperm, Rats.

A-10-638-1

P87: Combination of Ginseng and Coenzyme Q10 improves Reproductive Activities and Spermatozoon Quality

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Abstract

Nowadays, herbal combinations are commonly used worldwide for treatment of reproductive problems. In the current study, we aimed to evaluate the effect of ginseng in combination with coenzyme Q10 to improve activity of the hypothalamic-pituitary-gonadal (HPG) axis and spermatozoon quality in adult male NMRI mice. For two weeks, adult male NMRI mice were orally treated with mixture of ginseng (400 mg/kg) and coenzyme Q10 (300 mg/kg). After the treatment period, the sexual behaviours of the treated and control mice were evaluated using the anxiety and depression levels of receptive adult female mice, evaluated using the elevated plus maze (EPM) and forced swimming test, respectively. After behavioural evaluations, serum and sperm samples were collected from each mouse. Serum testosterone, luteinising hormone (LH), and follicle-stimulating hormone (FSH) levels were analysed using Elisa kits, and the sperm quality was evaluated with HFT computer-assisted semen analysis (CASA) sperm analysing system. The results showed that treatment with the combination resulted in increased levels of LH and testosterone and reproductive behaviours (sniffing, following, mounting, and coupling) and a higher number of motile sperm in comparison with the water-treated control group. According to our results, the herbal combination affects the reproductive system in distinct levels from the

brain to the testes and improves various aspects of reproduction.

Keywords: Ginseng, Q10, Mice, Reproduction, Sperm.

A-10-683-1

P88: Ghrelin Regulates Bax and PCNA But Not Bcl-2 Expressions Following Scrotal Hyperthermia In The Rat

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Abstract

Thirty adult male Wistar rats were allotted for the experiment and subdivided equally into three groups: control-saline (CS), heat-saline (HS) and heat-ghrelin (HG). The scrota of HS and HG groups were immersed once in water bath at 43º C for 15 min. HG animals received 2 nmol of ghrelin subcutaneously immediately after heating every other day until day 60 and the other groups were given physiological saline using the same method. The testes of all groups were taken after rat killing on days 30 and 60 after heat treatment for immunocytochemical detection of pro-apoptotic factor Bax, anti-apoptotic protein Bcl-2 and proliferation-associated peptide PCNA in the germ cells. Ghrelin could significantly suppress the Bax expression in spermatocytes compared to the HS group at day 30 (P<0.05). Likewise, the mean percentages of spermatogonia containing Bax substance were lower in ghrelin-exposed animals, however the differences were not statistically significant.There were immunoreactive cells against Bcl-2 in each germ cell neither in the control nor in the heated animals of experimental groups. In contrast, the number of PCNA immunolabeling cells were higher in HG group in compared to HS or CS animals on both experimental days (P<0.001). Down-regulation of Bax expression concurrent with overexpression of PCNA in HG group indicates the ability of ghrelin in acceleration of testicular germ cells regeneration following heat stress. These findings indicate that ghrelin may be used as a novel and efficient antioxidant agent to induce resumption of spermatogenesis upon environmental heat exposure.

Keywords: Ghrelin, Bax, Bcl-2, PCNA, Testis

A-10-149-1

P89: Enhanced Viability of Cryopreserved Human Sperm Following Sericin Supplementation Of The Freezing Media

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Abstract

Background: Cryo-injuries in human sperm cryopreservation encouraged researchers to design a suitable protocol for sperm freezing. Supplementation of freezing media with antioxidant could be a suitable strategy to preserve the quality of sperm after cryopreservation. The objective was to determine the effects of various sericin concentrations (0, 0.5, 1, and 2.5 %) during freezing media on Human sperm viability.

Methods: Human ejaculated spermatozoa were obtained by masturbation from either fertile man, capacitated spermatozoa were freezed using freezing media supplemented with 0, 0.5, 1 and 2.5% of sericin. Viability assessment before and after both freezing processing.

Results: Addition of 2.5% of sericin during freezing processing significantly increased viability rates comparted with control (81.50 ± 12.29 and 62.50 ± 10.06, respectively). However, a too low concentration (0.5%) of sericin during freezing processing decreased viability rates compared with high concentrations (P<0.05).

Conclusion: In conclusion, appropriate concentrations (2.5%) of sericin promoted human spermatozoa viability after thawing process in ART center.

Keywords: Sericin, Human Spermatozoa, Sperm Viability, Sperm Freezing.

A-10-684-1

P90: The Preventing Effects of Pentoxiphylin on Testis Histological Changes And Spermatogenesis Indexes In Mice Following Exposure To Sodium-Valproate

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Abstract

Backgournd: Sodium-Valproate (VPA) is commonly prescribed in the treatment of epilepsy and several kinds of seizures, causing oxidative stress. Pentoxiphylin (PX) as an antioxidantis used for treatment of muscle pain inpatient with peripheral artery disease and reduces oxidative stress. The aim of this study was to investigate the effect of pentoxiphylin on histological changes of testis tissue and spermatogenesis indexes in micetreated with sodium-valproate**.**

Method: 24 Adult male NMRI mice (36±2gr) were divided randomly into 4 groups (n=6): control, sodium valproate (500mg/kgi.p), sodium valproate+ pentoxiphylin (500 mg/kg i.p) andPentoxiphylin (100 mg/kgi.p). 14 days after treatment, the histology of the right testes were studied using stereological techniques. Data were analyzed using one way ANOVA and Tukey's test and means were considered significantly different at $P<0.05$.

Result: A significant decrease in the mean volume of testis, volume of seminiferous tubules,mean number of spermatocytes, round and long spermatids,Leydig andspermatogenesis indexes was found in the sodium valproate group compared to the control. The above parameters were increased in the sodium valproate +pentoxiphylingroupto the control level.The mean number of spermatogonia and Sertoli cells did not show a significant difference among all different groups.

Conclusion: Our results indicated that pentoxiphylin, as an antioxidant,could reduce the adverse effects of sodium valproateon the Spermatogenesis indexes andchanges in the components of testis tissue.

Keywords: Stereology, Pentoxiphylin, spermatogenesis indexes, sodium valproate, Mice

A-10-685-1

P91: Continues Treatment with Lepidium Sativum Extract Improves Reproductive Behavior And Sperm Quantity In Adult Male NMRI Mice

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Abstract

The present study was undertaken to investigate effects of aqueous extract of the dried seeds of Lepidium sativum on reproductive behaviour and sperm count in adult male mice. Adult male NMRI mice were orally treated with three different doses of aqueous extract from Lepidium sativum (200, 400 and 600 mg/kg) for two weeks. After the treatment period, the sexual behaviours of the treated and control mice were evaluated using the receptive adult female mice, anxiety and depression levels of control and treated mice were evaluated using elevated plus maze (EPM) and forced swimming test, respectively. Serum and sperm samples were collected from each mouse. Serum testosterone, luteinising hormone (LH), and follicle-stimulating hormone (FSH) levels were analysed using Elisa kits, and the sperm quality was evaluated with HFT computer-

assisted semen analysis (CASA) sperm analysing system. Obtained results reveals that treatment with the Lepidium sativum resulted increased level of testosterone and early phase of reproductive behaviours (sniffing, and following) and a higher number of spermatozoon and motile sperm count in comparison with the water-treated control group. According to results obtained in the current study, Lepidium sativum extrat affects elevates reproductive behaviour and improves sperm production.

Keywords: Lepidium Sativum, Mice, Sperm, Reproduction.

A-10-664-1

P92: Dietary Supplementation of Organic Selenium Enhanced The Reproductive Performance of Aged Ross 308 Broiler Breeder Hens

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Abstract

A 15-week experiment was conducted to determine the proper level of our produced selenium-enriched yeast (SeY) in broiler breeder diet and to compare the effects of this product with sodium selenite (SS) or Selemax on the reproductive performance of broiler breeder hens and their chick quality. After distributing a total of 150 Ross 308 breeders in 30 pens, the hens were fed a basal diet without selenium (CG) or supplemented with different level of SeY [0.15 (SeY0.15), 0.30 (SeY0.30) and 0.45 (SeY0.45) mg/kg], 0.30 mg/kg Selemax, 0.30 mg/kg SS and then evaluated between the period of 49 to 64 weeks old (6 treatments of 5 replicates with 5 hens each). The results showed that fertile eggs hatchability had no differences in SeY0.45 and Selemax treatments (P>0.05), but it was significantly higher in SeY0.45 treatment than other treatments (P<0.05). Also, SeY0.45 treatment led to higher total eggs hatchability and lower embryonic mortality than CG and SS treatments. On the other hand, fertility and chicks quality were not affected by selenium supplementation during this period (P>0.05). In conclusion, the dietary supplementation of produced SeY, as an organic selenium source, can be used to improve the reproductive performance in aged broiler breeder hens at 0.45 mg/kg feed.

Keywords: Selenium, Selenium-enriched yeast, Broiler breeder, Fertility, Hatchability.

A-10-684-2

P93: The Effect of Pentoxifylline on Histological Changes of Testis Tissue and Spermatogenesis Indexes in mice Treaed with Sodium-Valproate

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Abstract

Our previous studies showed that aqueous extract of *Zizyphus jujube* (AEZJ) can significantly reduce blood glucose level by decreasing of apoptosis in β pancreatic cells. This study was conducted to evaluate the effect of AEZJ on Leydig cells and plasma testosterone level (PTL) in streptozotocin induced hyperglycemic male rats.Twenty adult male Wistar rats were divided into control, sham, diabetic and treatment groups. Hyperglycemia was induced by 50mg/kg streptozotocin. Sham and treatment groups received 50mg/kg/day total AEZJ by oral gavage for 30 consecutive days. Blood samples were taken from abdominal aorta and serum analysis by a double antibody radioimmunoassay ELISA kit. The left testes were fixed in 10%neutral buffered formalin. Mean volume of Leydig cells (MV) was estimated by point sampled intercept method and its total number (TN) were estimated by optical dissector and stereo-investigator system using an unbiased counting frame on 20µm sections. Data analyzed by one way ANOVA and Tukey's post

hoc.The results showed that induction of diabetes significantly decreased PTL by decreasing in TN and MV of Leydig cells. In the sham group, no significant difference was observed in these variables compared to control group. In the treatment group, the PTL, MV and TN of Leydig cells were significantly increased compared to the diabetic group ($p<0.001$), but had no significant difference with control group. Based on our results, it can be concluded that AEZJ administration can be considered as a suitable supportive strategy to improve the fertility in diabetic males by protective effect on Leydig cells.

Keywords: Stereology, Pentoxiphylin, Spermatogenesis Indexes, Sodium Valproate, Mice

A-10-190-1

P94: Foeniculum Vulgare Essential Oil (FVEO) Induces DNA Damage And Apoptosis in Testicular Germ Cells

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Abstract

Backgournd: Foeniculum vulgare (FVE; fennel) is an aromatic plant belonging to Umbelliferae family, which contains various chemicals, including flavonoids and coumarins. It has been shown that, the FVE adversely impacts the sperm storage and count. Considering the importance of spermatogenesis regarding the sperm cout and volume, present study was done in order to investigate the effect of FVE on germ cells DNA and RNA contents as well as apoptic phenotypes.
Method: To follow up current study, 24 mature male albino mice were randomly divided into control and FVE received (037 mg/kg, 0.75mg/kg and 1.5 mg/kg) groups. The corresponding animals were orally gavaged for 35 days. Following test termination, the animals were euthanized by CO2. The apoptosis index, germ cells total DNA and mRNA damage were evaluated.
Results: Observations revealed that the FVE, dose dependently, increased the numbers of cells with DNA and RNA damage/mm2 of tissue versus control group. Moreover, an enhancement of the apoptotic cells number/one mm2 of tissue was revealed in FVEO-received groups.
Conclusion: The findings of the current study illustrated that, the FVE, in a dose dependent manner, results in severe germ cells apoptosis as well as DNA and RNA damage, which in turn is able to pathologically affect the spermatogenesis.

Keywords: Foeniculum Vulgare, DNA, RNA, Apoptosis, Testicular Tissue, Mice.

A-10-190-2

P95: Insight To Ameliorative Effects of Insulin Against Apoptosis in Experimentally-Induced Diabetes Mellitus

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Abstract

Background: Diabetes Mellitus (DM) is a common metabolic and endocrine disorder that is characterized by hyperglycemia and insulin producing disability of beta cells. In this line the insulin-therapy is known as routine recommended medication. Accordingly, it has been illustrated that, the DM enhances reactive oxygen species (ROS)-related apoptosis in various tissues. Thus, the current study was designed to analyze the insulin-induced ameliorative effects against experimentally induced DM-related apoptosis at germ cells level.
Method: To follow-up present study, 24 mature Wistar rats were divided into 3; Control, DM-induced (induced by single injection of 50mg/kg sterptozotocin, intraperitonealy) and DM-insulin

treated (DMI) groups. After 56 days, the mRNA and protein levels of Bcl-2, Bax and Caspase-3 were analyzed by using reverse-transcriptase PCR (RT-PCR) and immunohistochemistry (IHC), respectively. To assess the positive reactions intensity, the pixel based frequency analyses and positive cells distribution per mm2 of testicular tissue sections were investigated. Results: Our results revealed that, the mRNA levels of Bcl-2 were significantly (P<0.05) decreased in both DM and DMI groups versus control animals. Whereas, the protein levels of Bcl-2 were remarkably (P<0.05) elevated in both DM and DMI groups compared to control group. Moreover, the Bax and Caspase-3 expressions, in both mRNA and protein level, were significantly increased in DM and DMI groups.
Conclusion: To wrap it up, although the insulin therapy remarkably ameliorates the pathologic effects of diabetes, the apoptosis ratio in DMI group still remains higher versus control animals.

Keywords: Diabetes Mellitus, Insulin, Germ Cell, Apoptosis.

A-10-670-1

P96: N-Acetylcysteine Inhibits the Adverse Effect of Sodium Valproate Ontesticular Tissueand Spermatogenesisindexesin Mice

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Abstract
Purpose: Sodium Valproate (VPA) is used for treatment of epilepsyand cases disturb in the reproductive system through producing free radicals.N-acetylcysteine(NAC) is a potent antioxidant drug that reduces oxidative stress.The aim of this study was to investigate the effect of N-acetylcysteine on preventing adverse effects of sodium valproateon testis tissue and spermatogenesis indexesin mice.
Methods:24 adult male NMRI micewith mean body weight 36±2gr were randomly divided into 4 groups (n = 6), Control, VPA(500 mg/kg/dayi.p), NAC (75 mg/kg/dayi.p) and VPA +NAC.At the end of 14 days treatment,the left testes were used for stereological evaluation and the right testes were used to measure daily sperm production(DSP). The results were analyzed using one-way ANOVA and Tukey's test, and means difference was considered significantly different at p <0.05.
Results: A significant reduction in the mean total volume of testis,volume of seminiferous tubules,and themean number of spermatocytes, round and long spermatids and Leydig cells,spermatogenesis indexes was found in the VPA group compared to the control group; while the interstitial volume increased significantlyIn the VPA group when compared to control ones.The above parameters were compensated inthe VPA+ NAC group to the control level.
Conclusion: The results of this investigation showed that NAC could improve the VPA-induced toxicity by compensating theundesirable its effects on testis tissue and spermatogenesis indexes.

Keywords: Stereology, Sodium Valproate, N-Acetylcysteine,Mice, Spermatogenesis Indexes.

A-10-733-1

P97: Selenium Compensates the Adverse Effects of Sodium Valproateon Testis Tissue And Spermatogenesis Indexes In Mice

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Abstract
Background: Sodium valproate (VPA) isused worldwide as a major drug for treatment of epilepsy andcauses disorder in the reproductive systemthrough producing free radicals. Selenium as an antioxidant drug can inhibit oxidative stress. The present study was aimed to investigate the antioxidant effect of Selenium on testis tissue and

spermatogenesis indexes in mice treated with sodium valproate.
Method: In these experimental study, 24 NMRI male mice with average body weight of 36grams were divided into 4 groups (n= 6): Control, sodium valproate(500 mg/kg/day, I.P), sodium valproate +Selenium (0.2 mg/kg/day, I.P) and Selenium.The mice were treated for 14 days then right testis was fixed and used for morphological changes of testis using stereological techniques.The data was statically analyzedby one-way ANOVA and Tukey’s test, and means difference was considered significant differenceat p<0.05
Results: A significant reduction in the mean totalvolume of testis, volumeof seminiferous tubules, mean number of spermatocytes, spermatids, Leydig, spermatogenesis indexes and daily sperm production in the sodium valproate group when compared to control group. The mentioned parameters were increased in thesodium valproate +Selenium group to the control level. Also, spermatogonia and Sertoli cells did not show a significant differencebetween all of different groups.
Conclusion: The results of present study showed that selenium as anantioxidant could compensatethe harmful effects of sodium valproate on the spermatogenesis indexes, and testis morphology in mice.

Keywords: Sodium Valproate, Selenium,Stereology, Testis, Daily Sperm Production, Mice.

A-10-730-1

P98: Effect of Fenugreek (Trigonella Foenum- Graecium) Seed Hydroalcoholic Extract on Sperm Count

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Abstract
Backgournd: fenugreek has been recognized as one of the most important medicinal plants, because it has the effective biochemical active ingredients in human health. fenugreek has potential therapeutic effects on the treatment of diabetes, baldness, digestive diseases, and so on. Background and purpose: The aim of this study was to assess the effectiveness of fenugreek hydroalcoholic extract on number of sperm. **Methods:** In this study, 10 mice (30gr) were divided into two groups (5 mice in each). The first group received hydroalcoholic extract of fenugreek seed at dose of 0.25 g/kg of body weight (treated) and the second group (control) received distilled water (solvent) by oral gavage every other day for 10 days. Then, the tails of epididymis were removed and the sperms were collected and counted. Findings: The results showed that the number of the sperms in the treated group increased significantly compared to the control group (P<0.05).
Conclusion: In general, the results of this study showed that the hydroalcoholic extract of fenugreek seeds in dose of 0.25 g/kg of body weight could increase the number of sperms in mice. Therefore, it is recommended that these extracts be proposed as an effective factor in male fertility.

Keywords: Fenugreek Seed, Mice, Sperm Count, Hydroalcoholic Extract, Epididymis.

A-10-406-2

P99: Abuse of Anabolic Steroids and Male Infertility

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Abstract
Backgournd: Illegal use of anabolic androgenic steroids (AAS) has recently appeared as a major form of substance abuse worldwide. The administration AAS by negative feedback leads to

repression of the hypothalamus-pituitary-testis (HPT) in men and consequently hypogonadism. **Research method:** In this review study, the databases including Sid, Magiran, Google Scholar, Pubmed were searched. The criteria for entering the study, the timeframe for publication of the article, was proportional to the purpose of the study.
Results: men who misuse AAS for athletic purposes or for personal appearance are at risk for developing AAS-induced hypogonadism, especially if they have ingested AAS for prolonged periods. Symptoms of hypogonadism include loss of or lack of libido, erectile dysfunction and, sometimes depressive symptoms. Recent studies have shown that hypogonadism is gradually resolved after discontinuation of AAS by stabilizing normal HPT in a few weeks to several months. Incomplete recovery of gonadotropins seems to result in hypogonadotropic hypogonadism. In this case, the administration triptorelin, clomiphene citrate or HCG, may be able to improve HPT performance. Although recent study found that loss of libido and erectile dysfunction may even be seen even if testosterone levels are normalTo prevent dependence of AAS, patients with hypogonadism need treatment for endrhogrenic endocrine disorders. It may also be necessary to treat antidepressants or drug dependence treatment to reduce the risk of re-use. **Conclusion:** Informing people about the adverse effects of these drugs and their prohibition on long-term use and the clinical support of urological and endodontic specialists is necessary.

Keywords: Anabolic androgenic steroids, Male infertility, Hypogonadism.

A-10-749-1

P100: The Effects of Dietary Fatty Acids on The Expression of 17βhsd Isoforms Genes in Mouse Adipose Tissue and Sperm Parameters

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Abstract
Background: Adipose tissue (AT) constitutes an important site for steroid hormone metabolism, but little information exists on the effective use of dietary fatty acids on AT metabolism and gene expression. Our research objective was to investigate changes in the expression of 17βHSD isoforms genes in mice AT which consumed tallow (trans and saturated fatty acid source) in comparison to mice which fed with control diet.
Methods: Mature male mice (8 weeks) were divided into fat diet (FD) (n=15) and control (n=14) groups. FD fed tallow for 2 months. Abdominal AT samples were collected and performed quantitative RT-PCR. Also, the parameters of sperm were measured by CASA. Data were analyzed by SPSS (version20).
Results : The sperm concentration (5.9 vs. 10.6 M/ml), total motility (29.3 vs. 61.5 %), and progressive motility (23 vs. 52 %) were significantly lower in FD than control ($p < 0.05$). 17βHSD12 and 17βHSD7 transcript levels significantly increased in FD than control ($p < 0.05$). The expression of 17βHSD5 and 17βHSD3 did not change significantly. Negative significant correlations were found in the 17βHSD12 ($r = -0.452$) and 17βHSD7 ($r = -0.585$) with sperm concentration, 17βHSD12 ($r = -0.404$) and 17βHSD7 ($r = -0.454$) with sperm motility ($p<0.05$).

Conclusions: Significant increases of 17βHSD12 and 17βHSD7 (estrogenic), no change in 17βHSD5 and 17βHSD3 (androgenic) showed that dietary trans and saturated fatty acid have effects on AT gene expression via estrogenic pathways.

Keywords: Mice, Adipose Tissue, 17βhsd Isoforms, Dietary Fatty Acids

A-10-190-3

P101: Insight to Collateral Testicular DNA Damage And/Or Apoptosis in Experimentally-Induced Left Side Varicocele

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Abstract

Background: Varicocele (VCL) is the most common multi factorial disorder in infertile men population. The VCL is characterized mainly by blood flow-down in spermatic and cremasteric veins in the left side testicles. Although various previous studies have focused on VCL-induced derangements in left side, the collateral effect of VCL especially apoptosis of germ cells has been remained unclear. Thus, the current study tried to illustrate the VCL-induced germ cells apoptosis as well as the cross-link between Proliferating-Cell-Nuclear-Antigen (PCNA) and DNA fragmentation in collateral testicular tissue **Method and Material:** To follow-up present study, 16 mature Wistar rats were divided into control-sham and left hadn side VCL-induced groups (NO=8 rats in each group). After 4 months, the collateral testicles were dissected out and the tubular differentiation (TDI), spermiogenesis indices (SPI) and histological alterations were investigated.Moreover, the Bcl-2+, Caspase-3+ and PCNA+ cells distribution was analyzed by using immunohistochemistry (IHC) to assess the role and alterations of mentioned proteins during VCL-induced apoptosis.   **Results:** Our results revealed that, the VCL diminished tubular TDI and SPI ratio versus same side control testicles. Moreover, the collateral testicles exhibited up-regulated Bcl-2+, caspase-3+ and PCNA+ cells number per mm2 of tissue compared to sections of the control group. **Conclusion:** Our data showed that, a- the VCL bilaterally affects the spermatogenesis at least partially by inducing mitochondria-dependent apoptosis and b- the collateral testicle, in contrast to ipsilateral one, exhibits significantly higher anti-apoptotic Bcl-2 and PCNA as well as pro-apototic caspase-3.

Keywords: Varicocele, Right testis, Bcl-2, Caspase-3, PCNA.

A-10-69-2

P102: Berberine Ameliorates the Germ Cells Cycle Arrest During Spermatogenesis Following Experimental Varicocele Induction; Evidences for Cyclin D1, CDK-4 and P21 Proteins Involvement

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Abstract

Background: The present study was done to analyze the protective effect of berberine (BBR), an antioxidant chemical, on experimental varicocele (VCL)-induced pathogenesis on germ cells cycle machinery during early mitosis. **Methods:** For this purpose, 30 mature male Wistar rats (180-20 gr) were divided into control-sham (undergone simple laparotomy), VCL-sole induced, 50 mg kg−1 and 100 mg kg−1 BBR-treated VCL groups. Following

60 days, the histological characteristics, including tubular differentiation (TDI), repopulation (RI) and spermiogenesis (SPI) were investigated. Moreover, the cyclin D1+, cyclin-dependent kinase-4 (cdk4+) and p21+ cells number per mm2 of tissue were assessed by using Immunohistochemical staining. Finally, the DNA fragmentation was analyzed using DNA ladder test.

Results: The BBR significantly ($p<0.05$) enhanced the percentages of tubules with positive TDI, RI and SPI versus VCL-sole group. Moreover, the mean distributions of cyclin D1+ and cdk+ were decreased in VCL-sole animals. However, the animals in BBR-treated groups (especially in 100 mg kg-1) exhibited enhanced cyclin D1+ and cdk+ cells per mm2. Finally, the BBR-treated groups exhibited diminished p21+ cells per mm2 and represented a remarkable DNA recovery versus VCL-sole groups. No histopathological changes were revealed in the control-sham animals.

Conclusion: The BBR is potentially able to promote germ cells cycle through protecting cellular DNA content, down-regulating p21 expression and ameliorating the cyclin-D1 and cdk4 expressions. However, more studies are needed to completely confirm the protective effect of BBR against VCL-suppressed cell cycle machinery.

Keywords: Varicocele, Berberine, Germ Cells, Cell Cycle Machinery, DNA Fragmentation.

A-10-661-1

P103: Antioxidant Therapy of Asthenozoospermia

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Abstract

Backgournd: Infertility has involved around 12 % of all men around the world. The prognosis of male infertility is predicated in large part on conventional semen evaluation. Asthenozoospermia is one of the most important causes of male infertility. Oxidative stress is one of the important mediators in numerous etiologies of male infertility. Oxidative stress occurs while reactive oxygen species (ROS) and the ranges of other free radicals are substantially expanded or antioxidant levels are appreciably decreased.

Aim of study: Many urologists prescribe oral antioxidant therapy for men. The rationale for recommending oral antioxidant therapy is based on the assumption that seminal oxidative stress is due in constituent to an insufficiency in seminal antioxidants and the lack of serious side effects related to antioxidant therapy. Therefore, we used an antioxidant supplement for treating infertility for Iranian men.

Material & Methods: We used antioxidant supplementation of Vitamin E, Folic acid and Selenium for 20 men with asthenozoospermia for a three months period. This research project was approved by the Ethics Committee of Avicenna Research Institute. Patients entered the study with written consent.

Results: After 3 months of receiving complementary pills, the sperm motility slightly increased in these individuals. There was even a positive effect on other parameters of sperm. However, the Progressive motility of sperm in this group of patients was not statistically significant.

Conclusion: The use of antioxidants is effective in treating asthenozoospermia disease, but different antioxidant supplements should be evaluated with different doses to achieve the best results.

Keywords: Male Infertility, Antioxidant Therapy, Asthenozoospermia.

A-10-140-1

P104: Effects of Oxidative Stress on Reproductive Potential in Nicotine-Induced Testicular Toxicity in Mice

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Abstract
Smoking is associated with declining quality of semen. The aim of this study was to investigate the role of oxidative stress induced by nicotine (NIC) in the male mice reproductive system. For this experimental study, 24 adult male BALB/c mice were randomly divided into three groups (N=8). Group 1 received normal saline, groups 2 and 3 received NIC at doses of 0.50 mg/kgBW/day and 1.00 mg/kgBW/day, respectively. All treatments were orally. After 35 days, testosterone levels, oxidative stress, histopathological studies, sperm parameter, in vitro fertilization (IVF) potential and expressions of p53, caspase-3, and Bcl-2 with RT-PCR were analyzed. Administration of NIC induced significantly ($p<0.05$) diminished TDI and SPI rates, epididymal sperm motility reduction, sperm count and quality decrease, sperm lipid peroxidation, sperm DNA damage, testosterone levels reduction and elevation oxidative stress in testicular tissue, and led to germ cells apoptosis increase, up-regulation of the expressions of p53 and caspase-3, diminish expressions of Bcl-2 and PCNA, fertilization rate and embryo quality reduction versus the control group. We can determine that NIC can induce oxidative stress in the mice testis and epididymal sperms, which may cause epididymal sperm quality altering, thereby impairing fertilization rate and leading to a decline in preimplantation embryo development.

Keywords: In vitro fertilization, Nicotine, Oxidative stress, Sperm, Testis.

A-10-815-1

P105: The Effect of Methanolic Extract of Iranian Oak Fruit on Apoptotic Index and Caspase 3 Expression in Epididymis in Male Adult Diabetic Rats

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Abstract
Our previous studies indicated that methanolic extract of Iranian oak (MEIO) possess many biological activities and can decrease blood glucose level and improve quality indices of sperm in diabetic male rats. This study was conducted to evaluate the effect of MEIO on diabetes induced apoptosis in epididymis.Twenty adult male Wistar rats were divided into 4 groups include control, sham, diabetic and treatment groups. Hyperglycemia was induced by high fat diet and 35 mg/kg streptozotocin. Sham and treatment groups received 100mg/kg/day total MEIO by oral gavage for 40 consecutive days. Finally, animals were euthanized and right epididymis was removed and tissue samples were frozen in liquid nitrogen and stored at -80ºC until the evaluation of Caspase3 expression by real-time PCR. Other parts of tissues were fixed in 10%neutral buffered formalin and after standard paraffin embedding processes apoptotic index (AI) was determined by nonradioactive in situ end labeling method using TUNEL technique in tissue sections. Data analyzed by one way ANOVA and Tukey's post hoc.The results showed that induction of diabetes significantly increased the AI and Caspase3 expression than the control group. In the sham group, no significant difference was observed in these variables compared to control group. In the treatment group, the AI and Caspase3 expression significantly were decreased compared to the diabetic group ($p<0.01$), but had no significant difference with control group. It can be concluded that MEIO can improve the fertility in diabetic males by adjusting the programmed cell death and establishing proper tissue homeostasis in epididymis.

Keywords: Apoptosis, Caspase 3, Diabetes, Epididymis, Oak.

A-10-815-2

P106: The Effect of Aqueous Extract of Zizyphus Jujube Fruit on Mean Volume And Total Number of Leydig Cells And Plasma Testosterone Level in Type I Diabetic Male Rats

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Abstract

Our previous studies showed that aqueous extract of *Zizyphus jujube* (AEZJ) can significantly reduce blood glucose level by decreasing of apoptosis in β pancreatic cells. This study was conducted to evaluate the effect of AEZJ on Leydig cells and plasma testosterone level (PTL) in streptozotocin induced hyperglycemic male rats.Twenty adult male Wistar rats were divided into control, sham, diabetic and treatment groups. Hyperglycemia was induced by 50mg/kg streptozotocin. Sham and treatment groups received 50mg/kg/day total AEZJ by oral gavage for 30 consecutive days. Blood samples were taken from abdominal aorta and serum analysis by a double antibody radioimmunoassay ELISA kit. The left testes were fixed in 10%neutral buffered formalin. Mean volume of Leydig cells (MV) was estimated by point sampled intercept method and its total number (TN) were estimated by optical dissector and stereo-investigator system using an unbiased counting frame on 20µm sections. Data analyzed by one way ANOVA and Tukey's post hoc.The results showed that induction of diabetes significantly decreased PTL by decreasing in TN and MV of Leydig cells. In the sham group, no significant difference was observed in these variables compared to control group. In the treatment group, the PTL, MV and TN of Leydig cells were significantly increased compared to the diabetic group ($p<0.001$), but had no significant difference with control group. Based on our results, it can be concluded that AEZJ administration can be considered as a suitable supportive strategy to improve the fertility in diabetic males by protective effect on Leydig cells.

Keywords: Diabetes, Leydig Cells, Testis, Testosterone, Zizyphus Jujube

A-10-821-1

P107: The Effect of Royal Jelly on Some Reproductive Parameters in Female Rats

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Abstract

Objectives: Royal jelly (RJ) is a complementary medicine widely used by traditional healers for the treatment of infertility. The aim of present study was to evaluate the effect of RJ on some reproductive parameters in adult female rats.
Methods: Twenty-eight adult female rats (180-200 gr) were divided into four groups (n=7 /group). Control group received 0.5 ml distilled water intraperitoneally (i.p), experimental groups received: 100, 200 and 400 mg/kg/body weight doses of RJ daily for 14 days respectively. Animals were sacrificed and ovaries were dissected for histopathologic examination; the serum levels of ovarian hormones were evaluated. The ratio of the ovarian and uterine weight to body weight was calculated. One-way ANOVA was used for data analysis.
Results: The body weight was significantly increased ($p=0.004$) in 100, 200 and 400 mg/kg RJ treated animals. The serum levels of progesterone ($p=0.013$) and estradiol ($p=0.004$) were increased in experimental groups significantly. In addition, histopathological data of ovaries showed a significant increase in the number of mature follicles and the number of corpora lutea ($p=0.007$).
Conclusion: The overall results of the present study provide evidence on the ovarian folliculogenesis effect of RJ in female rat.

Keywords: Royal jelly, Fertility, Ovary, Uterus, Rat

A-10-53-1
P108: Review of New Methods for Treatment Of Immunologic Recurrent Abortion

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Abstract

Introduction: recurrent abortions are defined as the loss of three consecutive or more pregnancies in the first trimester,which may be due to the false expression of immunological factors during pregnancy. Therefore,immunodeficiency is one of the main causes of recurrent abortion,so far no known standard treatment strategy exists.Therefore in this study we can help to reduce the inconvenient side by studying and recognizing treatment methods.

Methods: This study is a comprehensive literary review that has been searched for in databases such as ISI,PubMed,Science Direct,Scopus and Google Scholar.

Results: According to research the use of vitamin D3 as a therapeutic drug or in combination with classical immunotherapy is effective by reducing the transcription of genes.also studies have shown that treatment with high doses of intravenous immunoglobulin is effective and leukocyte immunotherapy using paternal leukocytes is a successful treatment in patients with recurrent abortion with the causes of alloimmune disorder. The granulocyte-colony stimulating agent is considered as an appropriate treatment option in patients with abortion.It seems that treatment with autologous blood with an effect on the immune system in the treatment of recurrent abortions is thought to be promising. reproductive stem cells have been found to be effective in the success of pregnancy and can be used to provide new therapeutic solutions in the future.

Conclusion: The use of the mentioned treatment methods can improve pregnancy outcomes and control factors related to the immunological factors involved in recurrent abortions and the proper use of these therapies can help to reduce the adverse effects.

Keywords: Recurrent abortion, Treatment, Immunological abortion , Alloimmune disorders.

A-10-271-1
P109: GCSF May Improve Pregnancy Outcome in Blastocyst Embryo Transfer Patients With History of Unexplained Implantation Failure And Normal Endometrium. A Randomized Control Trial

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Abstract

Background: family of colony-stimulating factors (CSF) plays a pivotal role in the early dialogue between mother and embryo. Objective: the aim of this study was to evaluate the effects of the single dose G-CSF injection in unexplained group of patients with repeated implantation failures with normal endometrium in whom embryo transfer has been done in blastocyst stage.

Materials and Methods: This randomized control trial study was performed on 52 infertile women who referred to the clinic with the history of more than three previous IVF/ICSI-ET failures. All patients were stimulated with standard long protocol. All embryos were transferred on day five in blastocyst stage in both groups. The treated group received 300 µg (0.5ml) recombinant

human GCSF subcutaneously injected 30 minutes before blastocyst embryo transfer. Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 16.0
Results: G-CSF treated group showed higher clinical pregnancy rate (56.2%) in comparison with control group (40.0%) but it was not statistically significant (P=0.09, chi-square). Although the rate of live birth rate in G-CSF group was higher than control group (53.1% vs 35.0%) but there was positive but not statistically significant difference in the overall live birth rate between the two groups (P=0.10, t-test). **Conclusions:** Our result demonstrates that pregnancy outcome was better in women with repeated IVF failure who are treated with G-CSF

Keywords: Granulocyte Colony-Stimulating Factor, Embryo Implantation, pregnancy rates, randomized controlled trial.

A-10-416-1

P110: Investigating Factors Affecting the Failure of IVF in Women

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Abstract
Introduction: Laboratory fertilization is a selective treatment of infertility in women. Several factors contributing to the success of this method. The aim of this study is to investigate the factors affecting the failure of IVF in women. **Materials and Method:** This study is an overview article with review and compilation of numerous articles from databases and websites of Pubmed, Medline, Google scholar with key words of infertility, results of laboratory fertilization, sperm analysis, years 1990 through 2017. Became **Results:** A total of 18 descriptive studies showed that out of 744 infertile women who underwent IVF, it was found that factors affecting IVF deficiency include age of women, lack of previous pregnancy, tubal problems, lack of healthy eggs and male addiction. Following this, the weakness of sperm has been mentioned as the failure factors of this method. Among the factors mentioned above, the most important causes in these studies were the increase in age and duration of infertility. **Conclusion:** The results of the studies showed that the most important factor affecting the chances of success of IVF is age factor and duration of infertility. It is suggested that patients at an early age should do this.

Keywords: Key words: Infertility, Laboratory fertilization, Women.

A-10-598-1

P111: Prevalence of the prothrombin G20210A polymorphism in the Iranian population: use of a reverse hybridization technique

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Abstract
Background: Maternal thrombophilia is the main risk factor for recurrent pregnancy loss (RPL). In these conditions, fetal death may happen due to low placental perfusion caused by maternal thrombophilia. The aim of this study was to evaluate the Prothrombin G20210A mutation in cases with history of RPL.
Material and methods: A total of 366 cases, 250 with diagnosis of RPl and 116 control cases, were included in this controlled study. In all cases, Prothrombin 20210A mutation analysis was carried out by means of Polymerase Chain Reaction (PCR) -Reverse hybridization technique.
Results: The frequencies of heterozygous mutation prothrombin G20210A were 6% and 0.9%, respectively (P = 0.025), in cases compared to the control group. The frequencies of homozygous mutation prothrombin G20210A were 0.4% and 0%, respectively, in cases compared to controls (P = 0.02). The prothrombin mutation was significantly higher in cases compared to the control group (odds ratio 8.81; 95% confidence interval: 1.16–66.62).

Conclusion: Our study found a significant higher frequency of prothrombin G20210A in women with RPL in comparison with controls. This study suggest that the prothrombin G20210A mutation, may be an unrecognized cause of RPL in our population.

A-10-695-1

P112: Destructive Effect of Atmospheric O2 Concentration on Blastocyst Quality Parameters During Implantation Time

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Abstract

IT is generally accepted that quality of embryo which can be largely attributed to its ICM cells and there is a strong link between number of ICM and success of implantation. Previous studies by differential staining method have proven atmospheric O2 concentration during embryo culture due to increasing the free O2 radical's levels has a destructive effect on ICM cell number, while this parameter is improved when the embryos are cultured in low Oxygen tension. Some transcription factors interaction such as OCT4 and NANOG responsible for early lineage segregation and ICM formation during embryo development. However there are no reports of the low O2 concentration effect on these factors expression in embryo during implantation step. Therefore, in this study effect of hypoxia condition on the expression level of OCT4 and NANOG genes in blastocysts were examined. In this regard, 2-cell embryos from NMRI mice were distributed into hypoxia (5% O2) and atmospheric (20%O2) groups and were cultured into blastocyst stage.Then, the effect of O2 concentration on the genes expression as well as blastocyst formation, hatching and implantation rate were studied. According to our results, blastocyst formation, hatching and implantation rates are improved when the embryos are cultured in hypoxic condition. Furthermore, real-time RT-PCR analysis data showed an increase in the expression level of OCT4 and NANOG in 5% O2 group. In conclusion, it seems that hypoxic condition through increased level of OCT4 and NANOG could improve ICM cell number and implantation rate and highlight this condition support better embryo development.

Keywords: OCT4, NANOG, implantation, ICM, hypoxia, blastocyst.

A-10-772-1

P113: Hydrocortisone Modulates Junctional Molecules of Human Endometrial Epithelial Cells

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Abstract

The embryo implantation process in mammals is considered a remarkable evolutionary strategy for pregnancy success and endometrial receptivity should be established for successful implantation. Breakdown of the endometrial epithelial cell barrier is a key event during embryo implantation. Recently it has been shown that corticosteroids such as hydrocortisone (HC) increase the tight junction molecules expression in epithelial barriers. In our study, we investigated whether HC increase the tight junction molecules expression in human endometrial epithelial cells. The candidate genes were Zona occludin-1(ZO-1), Claudin4, Claudin3, Desmogelin and E-cadherin. Human endometrial epithelial cells were cultured in four concentration of hydrocortisone (0, 50, 100 and 200nM) by three durations (24, 48 and 72h). The expression of tight junction molecules were investigated by QRT-PCR and compared to control. Our findings indicated that HC significantly enhances the expression of tight junction molecules in 100nM concentration after

48h treatment but decrease in 200nM concentration after 72h. Taken together, it seems HC by increasing the expression of tight junction molecules and enhancement of tight junction integrity can influence embryo implantation.

Keywords: Ectopic Pregnancy, Human Fallopian Tube, Hydrocortisone, Tight Junction

A-10-774-2

P114: Endometrial Receptivity Array for Repeated Implantation Failure

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Abstract

Background: Diagnosis of endometrial receptivity (ER) has posed a challenge. Microarray technology has allowed identification of the transcriptomic signature of receptivity window of implantation (WOI). Use of this test in patients with recurrent implantation failure (RIF) has shown that the WOI is displaced in a quarter of these patients and use of a personalized embryo transfer (pET) on the day designated by ERA improves reproductive performance

Method: Observational studies on the Endometrial Receptivity Array for repeated implantation failure were identified within the PUBMED and EMBASE electronic database.

Results: in all of studies there is an increased percentage of WOI displacement in RIF patients. A significant proportion of patients with a history of implantation failure of a euploid embryo have a displaced WOI as detected by the ERA. For these patients, pET using a modified progesterone protocol may improve the outcomes of subsequent euploid FET. By transferring euploid embryos in a personal WOI, much better pregnancy rates are expected. prevalence of nucleolar channel system(NCS) identifies the window of endometrial receptivity previously identified by their transcriptomic signature using the ERA. the ERA is more accurate than histologic dating and is a completely reproducible method for the diagnosis of endometrial dating and receptivity status.

Conclusion: ERA in patients with RIF, for guiding their pET as a novel therapeutic strategy.

Keywords: Endometrial Receptivity Array, Repeated Implantation Failure, Endometrial, Receptivity ,FET

A-10-776-1

P115: Adaptive Immunity Play More Important Role Than Innate Immunity in Recurrent Implantation Failure

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Abstract

Introduction: The immune system is required for maternal immune tolerance, protecting the fetus, and regulating the placentation process. In RIF patients, Many factors may contribute to implantation failure as inappropriate immune responses at the time of embryo introduction is one of the reason for unsuccesful implantation. So, evaluation of innate and addaptive immune syatem in RIF patients seems valued.

Methods: Total mRNA were extracted from endometrial tissues of women with repeated implantation failure (n =10) and healthy fertile individuals (n =6) on day 3-5 after ovulation, during luteal phase. The expression profile of 84 genes related to innate and adaptive immunity was investigated using qRT-PCR array.

Results: Our data clearly showed that cytokines expressions like IL6, IL-2, IFN gamma, IL17, IL23 and IL13 are higher in RIF group than

normal. The innate immunity pathways as, pattern recognition receptors and their pathways like TICAM1, TICAM2, IRAK1, TRAF, MYD88 expression are lower or not significant in RIF than normal group, also the expression of NFKBIA (IκBα, MAD3) as an inhibitor of NFKB1 are higher in RIF group. The adaptive immunity markers like T cell activation,Thelper1 and Thelper17 like CD86, ICAM1, CXCR3, TBX21 and FASLG (TNFSF6) expressions are higher in RIF than normal.

Conclusion: our data showed more proinflammatory environment in RIF patients than anti-inflammatory. In addition to, apparently, the source of inflammatory cytokines production are Tcells not PRR signaling pathways. So, it seems adaptive immunity is more contributing factor than innate immunity in pathophysiology of RIF patient.

Keywords: Keywords: Recurrent Implantation Failure, innate immunity, Addaptive immunity, Thelper

A-10-648-1

P116: Investigation of Malondialdehyde serum concentration and Antioxidant enzymes activity of patients with recurrent spontaneous abortion in Iranian women

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Abstract

Introduction: Malondialdehyde (MDA) is considered as an end product of lipid peroxidation and as an oxidative stress (OS) marker that is involved in various diseases such as recurrent spontaneous abortion (RSA). Paraoxonase and arylesterase are also known as anti-oxidant enzymes with different protective effects. The goal of the present study was to evaluate the association of the serum levels of MDA and activity of enzymes Paraoxonase and arylesterase with risk of RSA.

Material and method: In this case- control study, 53 no pregnant women with RSA and 47 age, body mass index (BMI) and non- pregnant matched women as control group were enrolled. Level of MDA were determined in serum sample by using a calorimetrically method with thiobarbituric acid (TBA). The activity of enzymes paraoxonase and arylesterase were measured by spectrophotometry.

Results: The mean serum level of MDA was significantly increased in RSA patients compared to a healthy control group (5.85 ± 1.00 vs. 5.47 ± 0.77, P <0.05). We did not observe any significant difference between two groups in mean activity of enzymes Paraoxonase and arylesterase (P>0.05, P>0.05). We found a positive statistical correlation between the serum levels of MDA and Anti paternal cytotoxic antibody (APCA) (r=+ 0.20, P= 0.04).

Conclusion: Our study is the first study that showed, OS may have an elevation and subsequently play role in non- pregnant women with RSA. So, the enhancement of the OS in RSA women is not solely during pregnancy. However, more comprehensive studies are required to confirm our data

Keywords: Recurrent abortion, Oxidative stress Malondialdehyde, Paraoxonase, Arylesterase.

A-10-778-1

P117: A case- control study of association of Q472H variant in the KDR gene with recurrent pregnancy loss in the Southern Iran

Abstract

Background: Recurrent spontaneous abortion (RSA) is a reproductive problem often remains undetected and frustrating for the patient and clinician. Possible causes of recurrent spontaneous abortion are genetic and non-genetic factors. Quality of placental circulation is critical for implantation and embryo development during pregnancy. “Kinase insert domain containing receptor” (KDR) or VEGFR-2 has been reported to be associated with RSA because of angiogenic effects on placenta via the VEGF-KDR pathway. Objective: The aim of this study was to investigate the relationship between Gln472His

(A/T) polymorphism of the KDR gene with recurrent spontaneous abortions in southern Iran. **Methods:** In this case-control study, 50 aborted embryonic tissue obtained from fetuses whose mothers have experienced at least two consecutive miscarriages before as case group and 50 umbilical cord blood of newborn babies whose mothers have at least one full term infants born as a control group. Genomic DNA was extracted using PureLink genomic DNA kit (Life Technologies, CA). Genotype determination was done by Real-Time PCR by High-resolution melting curve analysis (HRM). Results: According to the AA genotype as reference, it became clear that the T allele (OR=2.447, 95%CI=1.095-5.468, P=0.029) as well as AT heterozygote genotype was significantly associated with an increased risk of miscarriage (OR=2.824, 95%CI=1.210-6.673, P=0.016). **Conclusion:** A direct correlation between G472H polymorphism of the KDR gene and recurrent spontaneous abortion in southern Iran was observed.

A-10-649-1

P118: Ethical Issues About Sperm Donation

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Abstract

Ethical issues about sperm donation Elham Ebrahimi School of nursing and midwifery, Tehran University of medical sciences. Beyond the scientific progress in assisted reproductive technologies (ART), it is necessary to discuss the ethical considerations behind these advances. Ethical issues concerning sperm donation have been considered and discussed by government and non-governmental agencies, the public, media and academic institutions in many countries. This article aims to discuss about ethical consideration that discussed about sperm donation around the world. This article is about: - Ethical issues about the number of donor offspring - Risk of infection and genetics from sperm donors - Age requirements for sperm donors - Anonymous versus non-anonymous sperm donation -The rights of donor offspring

Keywords: Sperm Donation,Ethical Consideration, Right, ART

A-10-735-1

P119: Ethical Considerations on The Methods of Assisted Fertility of Rennet Uterus, Donating Gamete and Ovum.

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Abstract

Introduction: The methods of assisted fertility have created a tremendous transformation on the survival of generations. But this technology brings with it some questions about its ethical correctness and falsehood. This study aims at investigating ethics and morality of assisted methods of fertility by donating gamete and fetus and rennet uterus.

Methods: In this study 40 articles have been chosen using Science Direct, Google Scholars, and PubMed bases and also these keywords: ethical considerations, infertility, methods of assisted fertility, fetus donating, gamete donating, and rennet uterus. According to overlapping the articles and using complete screening form of them 20 articles were study.

Founding: Ethical considerations are include: 1- Informed Consent: presenting sufficient and independent information to propose all the information on parties. Investigating couple's decision-making capacity, and their voluntarily perform especially in the case of donor couple. 2- Evaluation and screen donators, fetus receptors and rental mothers. 3- Secrecy 4- Financial affairs 5- other considerations regarding embryos (respect and safety). We can also count the alternative mother as a moral act from the perspective of the four principles of medical ethics – respect to individual independence, profitability, no harmless, and the

principle of justice- providing that is limited to infertile couples

Conclusion: Proponents of these methods believe that this method will lead to strengthening the family foundations. Approved laws in different countries have fixed many ambiguities. However opponents believe that this method has harmed family foundation

Keywords: Ethical Considerations, Infertility, Methods of Assisted Fertility, Fetus Donating, Gamete Donating, Rennet Uterus.

A-10-59-1

P120: Ameliorative Effect of Omega-3 On Spermatogenesis, Testicular Antioxidant Status And Preimplantation Embryo Development in Streptozotocin-Induced Diabetes in Rats

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Abstract

Purpose: The present study was done to determine the ameliorative effect of polyunsaturated fatty acid omega-3 against experimental diabetes-induced damages on testicular tissue, sperm parameters and preimplantation embryo development in rat model. Methods Thirty-two mature male rats were divided into two control and test groups. The experimental diabetes (50 mg kg−1 streptozotocin, ip) was induced in test group and subdivided into non-treated diabetic, 300 and 600 mg kg−1 omega-3-treated (orally by gavage) groups. The rats in control group received 0.5 ml saline using intra gastric gavage. Following 45 days, general histopathological changes, serum level of testosterone, inhibin B, glucose, and sperm parameters, testicular total antioxidant capacity (TAC) and malondialdehyde (MDA) content were analyzed. The mitochondria-dependent apoptosis was investigated by assessing the Bcl-2 and caspase-3 expression as well as DNA fragmentation. Finally, the in vitro fertilization (IVF) potential was examined by evaluating preimplantation embryo developing. **Results**: The omega-3 signifcantly ameliorated the diabetes-induced histological damages, diminished serum level of glucose, testicular MDA content, and enhanced the serum testosterone, inhibin B and testicular TAC. The animals in omega-3-treated groups exhibited a significant ($p < 0.05$) up-regulation in Bcl-2, as well as remarkable ($p < 0.05$) down-regulation in caspase-3 expression compared to non-treated diabetic rats.

Conclusion: Our data showed that the omega-3 (especially at 600 mg kg−1dose level) effectively ameliorates the experimental diabetes-induced infertility in rats by up regulating the testicular endocrine and antioxidant statuses, preventing mitochondria-dependent apoptosis pathway and potentially improving the sperm quality.

Keywords: Diabetes, Omega-3, Apoptosis, Oxidative Stress ,In Vitro Fertilization

A-10-389-3

P121: Investigation of The Effect Of Trolox, Q10, Inhibitor of NOX5 And ATP On Human Sperm Quality After 24, 48 and 72 Hours In 4°C And Room Temperature

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Abstrcat:

Introduction: Several days in vitro sperm storage increases mortality and reduces motility. Some studies on animal semen showed that the sperm cooling led to a longer sperm survival. However, other studies have emphasized the impact of cold damage on sperm quality. Some studies showed

the effect of antioxidants, extracellular ATP and NOX5 inhibitor (DPI) on the quality of mammalian sperms. The purpose of this study was to investigate the motility and survival of human sperm at room temperature and 4°C during 72 hours.

Methods: The human samples were divided into two groups; one group at room temperature and other at 4°C. Extender medium was Ham's F10 containing 5% BSA and 1% Penstrep. Each of these two groups was divided into 9 subgroups which contained: Ham's F10, DMSO, Q10 (40µM), Trolox (200µM), DPI (1µM), ATP (10mM). The sperm medium was replaced every 24 hours. The parameters of motility, were evaluated using VT Sperm analyzer. Sperm survival was studied using eosin staining.

Results: The percent of motile sperm and survival rates decreased with time. After 48 hours in the cooled group, non-progressive motility and survival rate were lower than those stored at room temperature. Antioxidants, DPI and ATP did not significant changes in motility and survival.

Discussion: Sperm quality was similar in both groups after 24 hours. using these methods was prevented from cold shock. With respect to motility parameters, sperm cooling was recommended for in vitro sperm preservation during 24 hours. The antioxidants have no effect on un-stimulated sperm.

Keywords: Cooling, Trolox, Q10 , Inhibitor Of NOX5, ATP.

A-10-478-1

P122: Reducing Endogenous Estrogen in Aging Broiler Breeder Male Does Not Affect Fertility And Libido

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Abstract

Libido and sperm fertilizing ability are main criteria for fertility and treatments to increase sperm production capacity should be compromised with either libido or sperm quality. Manipulations to increase fertility in domestic animals will only be useful if libido and sperm fertilizing capacity are not adversely affected. The present experiment was designed to evaluate the effects of reducing endogenous estrogen on libido and in vivo fertility in aging male broiler breeder. Twenty roosters divided into two groups (control and treated with an aromatase inhibitor, letrozole (0.03mg/kg/day)) and they were raised under the same management conditions in an environmentally controlled facility (22°C and a 16L: 8D photoschedule) and fed a corn-soybean based diet (NRC, 1994). Roosters were orally treated daily for 14 consecutive weeks, to reduce testicular estrogen production. Least-square means were computed and tested for differences by the Duncan test (considering $P < 0.05$ as significant). Letrozole treatment significantly decreased in vivo fertility and libido compared to control group ($P>0.05$). In conclusion, reduction of endogenous estrogen had deleterious effects on roosters libido and in vivo sperm fertilizing ability. Although 14 weeks treatment with letrozole showed a deleterious effects on fertility, but its effect for short-term or interval treatment is required to be evaluated within the testes. The relationship between reprogrammed aromatase activity and maintenance of increased fertility needs to be examined in future experiments.

Keywords: Fertility, Aromatase, Rooster, Libido, Aging

A-10-486-1

P123: An Attitude to The Role of Progesterone on Influenza Virus Infection and Improving Women's Health

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Abstract
Sex hormones can interfere with the production of inflammatory and anti-inflammatory factors, antibodies and immune responses, and create favorable changes. The progesterone is known to increase the production of one of the growth factors called Amfiregulin in the lining of the lungs as a protective hormone; this article focuses on the issue**.**Research has shown that treatment with progesterone changes the inflammatory environment of the lungs, but has no effect on viral load. Progesterone increases TGF-β, IL-6, IL-22, the number of CD39-expressing Th17 regulating cells and cell proliferation, decreases protein leakage in the airway, improves pulmonary function, and enhances the growth factor of the epidermal Amphiregulin (AREG) in the lungs. Administration of rAREG to progesterone-deficient women improves lung function and improves the Influenza A Virus (IAV) infection.In patients with AREG deficiency, progesterone is not protective factor, suggesting that induction of AREG by progesterone leads to healing in the lungs and a rapid recovery from IAV infection.AREG production increased by damaged respiratory epithelial cells by progesterone in the laboratory.The results indicate that progesterone is a vital host that mediates the production of AREG in epithelial cells and repair the lung tissue after an infection, which has important implications for the health of women. This paper opens up an approach to new research.

Keywords: Progesterone, Influenza A virus, Amphiregulin, Treatment.

A-10-568-1

P124: The Effect Of Pheromone (Z)-9-Tricosene On Histological Parameters And The Spermatogenesis in Male Wistar Rat (Rattus Norvegicus)

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Abstract
The pheromones in urine, stool or skin glands have important roles in mammalian behavior especially reproductive-related ones that can be perceived through olfactory system and cause incitation of endocrine reaction and consequently behavioral responses. The purpose of present study was to evaluate the effect of different concentrations of pheromone (Z)-9-Tricosene on sexual hormones and parameters in male rat. The rats were maintained under natural conditions and were allocated into four groups, the three treatment and one control groups. The order of the 1ml injections in four defined groups was 100, 200 and 300 µg/kg of pheromone (Z)-9-Tricosene to each treatment groups, respectively besides distilled water for the control group. The statistical comparison of results between the four groups showed significant differences in the mean number of spermatocytes and Leydig cells after treatment with pheromone (Z)-9-Tricosene ($P<0.05$). Also, the used different concentrations of pheromone (Z)-9-Tricosene affected the testosterone concentration significantly ($P<0.05$). The used pheromone did not affect the FSH and LH significantly, but there were significant changes in testosterone concentration ($P<0.05$). Therefore, (Z)-9-Tricosene can be a new candidate therapeutic compound in male fertility.

Keywords: Pheromone (Z)-9-Tricosene, Spermatogenesis, Sperm, Sexual Hormones.

A-10-577-3

P125: Comparing The Outcomes of in Vitro Fertilization With or Without Prescription of Buserelin

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Abstract
Background: Infertility,defined as lack of pregnancy despite one-year of uncontrolled

coitus, is found in 10 to 15 percent of couples in fertile ages. Today assisted reproductive technology (ART) is accessible worldwide, and the procedure is mainly different from that used during the early days. More recent data suggest that FET, results in significantly higher ongoing pregnancy rates compared to fresh embryo transfer. Several randomized controlled trials have been published examining the effects of different methods of endometrial preparation for cryopreserved embryo transfer, but evidence of a single best endometrium priming protocol is still lacking.

Methods: from 2013 to 2015, A retrospective analysis was conducted of 146 consecutive patients attending infertility treatment center, who were candidates for transfer cycle of frozen-thawed embryo. They were randomly assigned to receive either the protocol with GnRH agonist or the one without it. Then the outcomes including laboratory pregnancy rate was compared across the groups.

Results: in this study,no significant difference between results of two groups was found (P > 0.05) by Chi-Square, Fisher's Exact, McNemar, Lambda, Goodman and Kruskal, Uncertainty Coefficient, Phi, Cramer's V, Mantel-Haenszel, Cochran's, and Kendall's Tau-b tests.

Conclusion:

Our results indicate it may be interpreted that outcomes of IVF procedures will be same regardless of GnRH-agonists prescription for endometrial preparation. Finally, it may also be concluded that endometrial preparation by estrogen utilization without using GnRH agonist would be as effective as those with GnRH agonist with same pregnancy rate.

Keywords: IVF procedure, GnRH-agonist, Endometrial preparation.

A-10-478-2

P126: Effects of Reducing Endogenous Estrogen on Semen Quality in Aged Male Broiler Breeder

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Abstract

The semen quality of the roosters is affected by different factors. One of this factors is aging that it has an adverse effects on the reproductive performance. Manipulations to increase semen quality in aged birds will only be useful if sperm fertilizing capacity is not adversely affected. Therefore, this study was conducted to investigate the effect of reduced endogenous estrogen using aromatase inhibitor in a farm of commercial broiler breeder roosters. Letrozole (Ltz) orally fed to aged ROSS 308 breeder roosters (n= 18) that were 55 weeks of age. The birds were randomly classified into three groups (n = 6 birds per group) that received different doses of aromatase inhibitor, Ltz: 0(Ltz-0), 0.03(Ltz-0.03), 0.015(Ltz-0.015) mg Ltz/kg body weight for short-time (3 weeks). At the end of the trial, date collected and seminal traits were evaluated. The results indicated that all of parameters except semen volume including total and forward motility, plasma membrane integrity, live sperm, sperm abnormality, MDA production and sperm concentration in collected volume were significantly affected by Ltz treatment and in the Ltz-0.03 group were greater compared control group (<.0001). Overall, these data suggest that reducing endogenous estrogens could improve several reproductive performance in aged commercial broiler breeder roosters.

Keywords: Aromatase Inhibition, Aged Roosters, Semen Traits, Fertility

A-10-59-2

P127: Purpose the Present Study Was Done to Determine the Ameliorative Effect Of Polyunsaturated Fatty Acid Omega-3

Against Experimental Diabetes-Induced Damages on Testicular Tissue, Sperm Parameters and Preimplantation Embryo Development in Rat Model

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Abstract
Methods Thirty-two mature male rats were divided into two control and test groups. The experimental diabetes (50 mg kg−1 streptozotocin, ip) was induced in test group and subdivided into non-treated diabetic, 300 and 600 mg kg−1 omega-3-treated (orally by gavage) groups. The rats in control group received 0.5 ml saline using intra gastric gavage. Following 45 days, general histopathological changes, serum level of testosterone, inhibin B, glucose, and sperm parameters, testicular total antioxidant capacity (TAC) and malondialdehyde (MDA) content were analyzed. The mitochondria-dependent apoptosis was investigated by assessing the Bcl-2 and caspase-3 expression as well as DNA fragmentation. Finally, the in vitro fertilization (IVF) potential was examined by evaluating preimplantation embryo developing.Results: The omega-3 signifcantly ameliorated the diabetes-induced histological damages, diminished serum level of glucose, testicular MDA content, and enhanced the serum testosterone, inhibin B and testicular TAC. The animals in omega-3-treated groups exhibited a significant ($p < 0.05$) up-regulation in Bcl-2, as well as remarkable ($p < 0.05$) down-regulation in caspase-3 expression compared to non-treated diabetic rats.Conclusion Our data showed that the omega-3 (especially at 600 mg kg−1dose level) effectively ameliorates the experimental diabetes-induced infertility in rats by up regulating the testicular endocrine and antioxidant statuses, preventing mitochondria-dependent apoptosis pathway and potentially improving the sperm quality.

Keywords: Diabetes • Omega-3 ,Apoptosis , Oxidative stress , In vitro fertilization.

A-10-639-1

P128: A Study on The Effectiveness of the Hydroalcoholic Extract of Artemisia Herba Alba on Blood Glucose, Body Weight, Testis Weight And Testicular Volume Variations of Type I Diabetic Rats Using Streptozotocin

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Abstract
Introduction: Artemisia Herba Alba has always been given attention in traditional medicine due to its therapeutic properties. It has been used to cure diseases such as diabetes. Diabetes causesdysfunction in spermatogenesis, damages testicular tissue and causes infertility.
Goal: studying the therapeutic properties of the hydroalcoholic extract of Artemisia Herba Alba on blood glucose, body weight, testis weight and testicular volume variations of type I diabetic rats using streptozotocinStudy
Method: forty male Wistar rats with the approximate weight of 180-250 gr were randomly selected. Then they were distributed into 5 groups including a control group and 4 groups of 8 diabetic rats who received 55 mg/kg streptozotocin. Therapeutic groups received 200 and 300 mg/kg and streptozotocin group received water and animal feed using gavage. The level of blood glucose, testis weight and testicular volume were analyzed 56 days after developing diabetes in the groups under treatment.Research
Findings: oral treatment of the extract of Artemisia Herba Alba (300 mg/kg of body weight) for 56 days, significantly decreased the glucose level and significantly increased body

weight and improved testicular volume in the groups under treatment.
Conclusion: the results of the present research showed
that Artemisia Herba Alba has ahypoglycemic eff ect on diabetic animals, reduces the side effects of spermatogenesis caused by diabetes and is effective in preventing the destruction of testicular tissue in rats. So it should be considered for therapeutic purposes. Alba, hypoglycemic, spermatogenesis, rat

Keywords: Artemisia Herba Alba, Hypoglycemic, Spermatogenesis, Rat.

A-10-668-1

P129: The Preventing Effects of Selenium on the Testis Histological Changes, Spermatogenesis Indexes and Daily Sperm Production in Mice Exposed to Dexamethasone

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Abstract
Background & Objective: Dexamethasone is a common medicine used for treatment of sever allergies and induces disturbance in the male reproductive system through inducing oxidative stress. Selenium as an antioxidant drug can suppress oxidative stress. The aim of this study was to evaluate the protective effects of selenium on the testis histological changes, spermatogenesis and daily sperm production in mice after treatment with dexamethasone.
Material and Method: 24 Adult male NMRI mice (35±5gr) were divided randomly into 4 groups (n=6): control, Dexamethasone (i.p injection of 7mg/kg/day), Dexamethasone+ Selenium (i.p injection of 0.4mg /kg/day) and selenium), selenium. One day after the last injection, Body and testes weight were recorded and the left testis was fixed and used to estimate the daily production of sperm (DSP). In addition, Serum and tissue malondialdehyde (MDA) and serum testosterone levels were also analyzed.Data were analyzed using one way ANOVA and the means were considered significantly different at $P<0.05$.
Result: A significant decrease in the mean total volume of testis and mean volume of interstitial tissue, mean volume of seminiferous tubules ($P<0.001$), mean number of spermatocytes ($p<0.002$), round and long spermatids ($p<0.001$) and Leydig cells ($P<0.017$) were found in the dexamethasone group compared to the control group. The above parameters were increased in the Dexamethasone + Selenium group to the control level.
Conclusion: These findings suggest that Selenium can have a protective role in the testes of mice against oxidative stress induced by dexamethasone

Keywords: Stereology, Selenium, Mice, Dexamethasone, Daily Sperm Production, Spermatogenesis Indexes.

A-10-521-1

P130: The Effect of Pentoxiphyllin on Spermatogenesis Indexes and Daily Sperm Production in Mice Following Treatment with Dexamethasone

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Abstract
Background: Dexamethasone is a common medicine used for treatment of sever allergies in human and able to induce disturbance in male reproductive system by inducing oxidative stress. Pentoxiphyllin as a potent antioxidant is able to reduce oxidative stress. The aim of this study was to evaluate the preventing effect of pentoxiphyllin on undesirable morphological changes in mice testis tissue treated with dexamethasone.
Method: 24 Adult male NMRI mice (36±2 gr.) were divide randomly into 4 groups (n=6):

control, Dexamethasone (7mg/kg/day), Dexamethasone + pentoxiphylin (200mg/kg/day) and pentoxiphylin. After 7 days of intraperitoneal injection, testes weighted and fixed for stereological evaluation of testis morphological changes, daily sperm production and spermatogenesis indexes. Data was statistically analyzed using one-way ANOVA and tukey's test, and the means were consider significant different at P<0/05.

Results: A significant reduction in the mean total volume of testis, volume of seminiferous tubules, mean number of spermatocytes, round and long spermatids and Leydig cells, spermatogenesis indexes, daily sperm production was found in the Dexamethasone group compared to the control group (P>0/05). The mentioned parameters were compensated to the control level in the Dexamethasone + pentoxiphylin group.

Conclusion: This study showed that simultaneous treatment of pentoxiphyllin and dexamethasone can prevent the adverse effects of dexamethasone on mice testicular histological changes, spermatogenesis indexes. Therefore its application in the therapeutic regimens including Dexamethasone is suggested

Keywords: Pentoxiphyllin, Dexamethasone, Stereology, Daily Sperm Production, Spermatogenesis Indexes, Testis, Mice.

A-10-430-2

P131: Comparion Effects of Atorvastatin and Garlic powder on the Ovary in Hypercholesterolaemia Rats

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Abstract

Background and purpose: Hypercholesterolemia is associated with high levels of cholesterol in the blood. Studies have shown that statins have a potent effect on blood cholesterol but still have side effects. The compounds in the garlic have antibiotic properties and prevent the formation of cholesterol. The aim of this study was to evaluate the effect of garlic powder and atorvastatin on reproductive system of hypercholesterolemic female rats.

Materials and Methods: In this experimental study, 48 adult female rats were randomly divided into 8 groups of 6, including control, atorvastatin (10 mg/kg.bw), atorvastatin (20 mg/kg.bw), garlic (100 mg/kg.bw), Cholesterol (1/5 mg/kg.bw), Cholesterol + atorvastatin (10 mg/kg.bw), Cholesterol + atorvastatin (20 mg/kg.bw) and Cholesterol + garlic. After 30 days, ovaries all groups, were weighed separately and were placed in a 10% formalin solution for histological analyses.

Results: The results of this study showed that in the hypercholesterolemia group, there was a significant decrease in the number of primordial, primary, secondary and adult healthy follicles, as well as a significant increase in the number of primordial, secondary and adult follicle atresia.

Conclusion: Hypercholesterolemia can lead to significant ovary damages in rats. However, Garlic powder, however, was better than atorvastatins in improving the factors in hypercholesterolemic groups with garlic powder and atorvastatin 10 mg/kg.bw and 20 mg/kg.bw respectively.

Keywords: Atorvastatin, Garlic,Hypercholesterolemia, Ovary, Rat

A-10-726-2

P132: Protective Effects of the Hydroalcoholic Extract of Fumaria Parviflora on Testicular Injury Induced By Torsion/Detorsion In Adult Rats

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Abstract

This study was designed to determine the effects of daily oral administration (250 mg/kg) of the hydroalcoholic extract of *Fumaria parviflora* (FP) for 14 days on the sperm parameters, oxidative stress parameters, serum testosterone levels, expression of Bax and Bcl-2 genes, and apoptosis index of germ cells after testicular torsion-detorsion (ischemia-reperfusion, IR) injury model in rats. Twenty-eight adult Wistar rats were divided randomly into four groups of 7 each: sham operation, torsion-detorsion (TD), TD plus the hydroalcoholic extract FP (TDFP), only FP without TD application (FP). Testicular torsion was created by rotating the left testis 720° in a counterclockwise direction, then, after 4 hours, detorsion was performed. The Johnson's score, mean seminiferous tubule diameter (MSTD) and height (thickness) of seminiferous tubule epithelium (HST) were significantly increased in TDFP and FP groups as compared with TD group. The gene expression of Bcl-2, level of serum testosterone hormone, and antioxidant parameters—GPx and SOD—were significantly higher in TDFP and FP groups than TD group. The index of apoptosis, the gene expression of Bax, and the level of MDA were significantly higher in TD group than TDFP and FP groups. Therefore, *Fumaria parviflora* could decrease oxidative stress induced by testicular torsion-detorsion.

Keywords: Testicular Torsion-Detorsion, Fumaria Parviflora, Sperm Parameters, Oxidative Stress Markers, Apoptosis.

A-10-741-1

P133: Use of Fertility Drugs and Risk of Cancer in Women

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Abstract

Background & Objective: The use of assisted reproductive techniques is increasing,but the possible link between fertility drugs and ovarian cancer remains controversial. The objective of the present study is to overview studies in the field of the incidence of cancer in women treated with ovary-stimulating drugs for infertility.

Methods: This study is a review of all articles published during the years 2000 and 2016 through databases SID, magiran, Medlib,pub med, Scopus, Google Scholar and Science Direct. Comprehensive search was done with the keywords of infertility, ovulation induction,the risk of cancer, gynecological cancer, clomiphene citrate,human chorionic gonadotropin,uterine cancer, ovarian cancer and breast cancer for Persian articles and their English equivalents for English articles.After reviewing,a total of 64 articles were included in the study.

Results: There are two theories that indicate ovulation stimulants drugs increase the risk of cancer: first,frequent ovulation is the cause of damage to the ovary epithelium and leads to malignant changes. Second, these drugs increase both estrogen and progesterone levels,hormones that are known to be effective factors in breast cancer and other cancers in women.Various studies revealed the possibility of an increased risk of uterine, ovarian and breast cancer associated with ovulation stimulation and hormonal changes associated with ovulation stimulation. But these results are not conclusive because of short follow-up periods,small sample size and vague information about the type and the way drug is consumed.

Conclusion: No certain association was found between use of fertility drugs and risk of cancer, and given the importance of the subject and the Controversy of the results of studies, further investigation is needed.

Keywords: Fertility Drugs, Cancer, Women, Infertility

A-10-119-2

P134: (Review Study) Comparison of The Efficacy of Letrozole Versus Clomiphene Citrate in Iranian Infertile Women

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Abstract

Introduction: This study aimed to systematically compare the efficacy of letrozole with clomiphene citrate in infertile women.

Method: All Iranian papers on comparison of the efficacy of letrozole versus clomiphene citrate indexed in databases during 2008- January 2018 were explored.

Findings: Sixteen eligible RCTs involving 2252 patients were included in the review. Eight studies (50%) reported equal total success for letrozole and clomiphene. In one study (6.3%) letrozole was not highly successful compared to clomiphene and in 7 studies (43.8%) letrozole was more effective than clomiphene. Average age for letrozole group was 27.92 ± 3.38 and it was 28.23 ± 4.1 for clomiphene group. Average infertility period for letrozole and clomiphene citrate were respectively 3.95 ± 1.69 and 3.85 ± 1.81 years. Letrozole dosage was 5 mg in 68.8%, 5.2 mg in 25% and 5.2 - 7 mg in 6.3% of the reviewed studies. Clomiphene citrate dosages were calculated as 100 mg, 5.87 mg and 5.12 mg. In 73.3% of cases drugs were administered on days 3 to 7, in 18.8% of cases they were administered on days 3 to 5 and only in one study (6.3%) they were administered on day 3. Information on pregnancy success and complications were not reported in all studies.

Discussion and Conclusions: Although present study has several limitations, it suggests that letrozole may be as effective as clomiphene citrate for ovulation induction in patients with PCOS and it can be introduced as a first-line treatment for PCOS.

Keywords: Infertility Drugs, Letrozole, Clomiphene Citrate, Iran

A-10-806-1

P 135: Stimulation of Ovulation and The Risk of Cancer in Women

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Abstract

Background: The use of fertility treatment has increased considerably in recent decades.It is estimated that 10 percent of couples are seeking fertility treatment in advanced countries. Infertility treatment in any woman requires a large amount of different hormones that, based on studies, exposure to hormones, can lead to hormonal-sensitive cancers, especially endometrium, breast And ovary cancers. Therefore, this study aimed to Stimulation of ovulation and the risk of cancer in women.

Materials and Methods: This review study was conducted with collect of information about the subject in resources and scientific sites.

Results: The results showed that the two groups of evidence increase the concern about the effects of ovulation stimulants as risk factors for cancer. First, clomiphene citrate and gonadotropins are the most common used drugs to stimulation ovulation and incidence of breast and ovarian cancers. secondly, These drugs increase the levels of estrogen (E2) and progesterone (P) hormones that these hormones are known as affective factors in development of breast cancer and the other cancers in Women.

Conclusion: According to epidemiological studies, there is a relationship between the use of fertility drugs and the increased risk of cancer in women, but no causal relationship has not been proved between fertility treatment and cancer and the results of various studies are contradictory. To investigate this subject, it is necessary to conduct of prospective cohort studies with a larger population, and a better adjustment of the confounding factors.

Keywords: Infertility, Ovulation stimulation, Female cancer, Infertility drugs

A-11-285-1

P 136: Media-Based Strategies in Improving Male Participation in Reproductive Health From The Healthcare Provider's Point Of View: A Qualitative Study

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Abstract

Methods: This qualitative study was a conventional content analysis. Semi-structured individual interview was conducted using social networks such as Email and Telegrams. Initially, the research question titled What media-based strategies do you suggest to improve male participation in reproductive health was sent via social network and Email to healthcare providers. The findings were analyzed qualitatively using the conventional content analysis method.Results: The findings were organized in the three main categories 1.media-based counseling strategies such as the experience of participation in reproductive health programs to explain the concept of reproductive health, its dimensions and issues, inviting specialized counselors in the field of sexual and reproductive health and also informed men with having successful experiences in this area in the national media. 2. media-based educational strategies such as raising awareness of men through the production and distribution of programs and educational films in public media and diverse social networks with content of the importance of men's role in the family health. 3. advertising strategies in the national media and virtual networks.

Conclusion: According to the presented strategies to increase male participation in the sexual and reproductive health programs, media can be considered as one of the important sources of family information and through this, it is possible to promote male participation in family planning programs, reproductive and sexual health and increased family health.

Keywords: Male Participation, Reproductive Health, Sexual Health, Mass Media, Education, Counseling

A-11-112-1

P 137: Contributing Factors to the Total Fertility Rate Declining Trend in the Middle East and North Africa: A Systemic Review

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Abstract

Background: The Total Fertility Rate (TFR) in the Middle East and North Africa has experienced a declining trend in recent years. Accordingly, the present study was conducted to provide a clear picture of the most critical factors affecting the TFR decline in this region.

Methods: This study was a systematic review between the years 2000 and 2016. The different databases like Cochrane, Pub Med, Scopus and Science Direct and the Google Scholar search engine were used.At first, 290 articles and then, 18 articles were selected for the final analysis.

Results: The results indicated a declining trend in the TFR in the Middle East and North Africa, as in other parts of the world, but with a different slope. Regarding the causes of this declining trend, several factors were identified and categorized into five groups of health care-related, cultural, economic, social and political.

Conclusions: While taking advantage of the

experiences, it is necessary to identify the five factors and their subsets and consider them in the population policy making.

Keywords: Total Fertility Rate, Systematic Review, Middle East And North Africa, Determinant Factors

A-11-182-1

P 138: Relationship Between Prenatal Stress With Maternal-Fetal Attachment And Spiritual Health in Pregnant Women Attending Health Centers In The City Of Qazvin In 2015

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Abstract

Background and Objective: Spiritual health and maternal-fetal attachment behaviors are considered as beneficial coping strategies for improving mental health and adaptation to prenatal stresses. The present study was conducted to determine the relationship of prenatal stresses with maternal-fetal attachment and spiritual health in pregnant women attending health centers in the city of Qazvin in 2015.
Materials and Methods: The present descriptive study recruited 200 pregnant women attending health centers in Qazvin, selected by multistage sampling method. Data were collected using Palutzin & Ellison's spiritual well-being scale, Cranley's maternal-fetal attachment scale, and demographic, obstetrics and prenatal stress questionnaire, and analyzed in SPSS-20.
Results: Positive and significant relationships were observed between attachment and total score of stress and its dimensions including other people's ideas, religion, and health, and also between stress and self-sacrifice (an attachment dimension) ($P<0.05$). There were also significant relationships between religious health and stress, and between spiritual health and financial/personal/family dimensions of stress ($P<0.05$).
Conclusion: Most study subjects had moderate levels of stress, and stress had a significant relationship with attachment behaviors and religious health. This relationship can be considered a guide for providing appropriate midwifery cares and preventing prenatal mental disorders.

Keywords: Keyword: stress, Health, Attachment, Pregnancy

A-10-466-1

P 139: The Attachment Styles of Infertile Couples Referred to Infertility Center of Imam Khomeini Hospital, Sari 2016-2017

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Abstract

Background: Attachment is a relatively stable emotional bonding that is created between the child and the mother and affects the type of individual's psychological adjustment with infertility. The aim of this study was to determine the attachment styles of infertile couples referred to Imam Khomeini hospital in 2016-2017.
Materials and Methods: This cross-sectional study was conducted on 240 individuals referred to infertility clinics with available sampling method. Inclusion criteria was desire to participate in the study, having primary infertility, being able to reading and writing. Couples who took immunosuppressive drugs, addicted to drugs or alcohol or had a remarriage history were excluded from the study. Socio-demographic questionnaire and Collins and Read Revised Adult Attachment Scale (RAAS) were completed by participants. Data were analyzed using Chi Square and SPSS-20. The significance level was considered as p-value <0.05.

Results: The mean standard deviation of participant's age were 33.3±6.8 years. 37.9% of the participants had secure, 29.6% had anxious, 22.1% had avoidant and 10.4% preoccupied attachment styles. Overall most of the participants had insecure attachment styles. 62.1% of women and 63.3% of men had insecure attachment styles. Chi-Square test results showed that the distribution of two types of secure and insecure attachment styles were similar between males and females (P = 0.690).
Conclusion: Given the high prevalence of insecure attachment styles in infertile couples, the development of preventive and therapeutic strategies in the framework of attachment and coping theories is recommended.

Keywords: Attachment Styles, Infertility, Infertile Couples

A-10-680-3

P140: Comparing Three Success Rates of Infertility Treatment and Providing More Real Rate

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Abstract
Background: Treatment of infertility has progressed remarkably in recent years, with different rates for the success of treatment. Calculation of the rate of treatment success is done in a number of ways. The purpose of this article is to compare the treatment success rate of male infertility with three different methods and propose a rate closer to reality. Material and method: In a historical cohort, data of 323 couples were gathered. Given the live birth for treatment success, the success rate was calculated and interpreted by determining the ratio, conditional probability, and life table.

Results: In a five-year period and considering repeated treatment for couples, the ratio was 45.2%. The calculation of success rate in the conditional probability method rate was 75% and the lifetime of the success rate was 78%.
Conclusion: The reason for the change in the rate of success is the numbers included in the numerator and the denominator of fraction. In calculating the success rate, treatment repeat and the presence of unsuccessful couples should be applied. Also, their data of who leave the treatment should be entered into the calculation. These are the main reasons for changing the success rate that is calculated in the survival analysis. Other researchers also use the Survival Analysis to calculate the success rate and it seems calculated rate by this method is close to reality.

Keywords: Success Rate, Infertility Treatment, Male Infertility, Survival Analysis

A-10-756-1

P141: The Effect of Allogeneic Mouse Serum, Fetal Bovine Serum and Bovine Serum Albumin on Sperm Capacitation

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Abstract
Background: To keep spermatozoa mobility for a long time and to evaluate the migration and fertilization, it is necessary to use a basic medium with nutrient factors. For this purpose, FBS is often used to maintain cell growth. The aim of this study is to find out more about the effect of allogeneic mouse serum(AMS) as compared with FBS and BSA on sperm capacitation.
Methods: Caudal epididymis of mice was extracted and transferred to MHRM medium with 0, 5, 10, 15, 20 percentages of AMS, FBS and BSA. After treatment, MTT assay was performed to evaluate sperm viability. Also, the rate of

progression and sperm motility was counted and analyzed by light microscope.
Results: The MTT assay showed that sperm had the highest viability in 15% BSA. Also, the rate of progression in the medium containing 10% BSA and 10% FBS showed the highest percentage of progression and the highest percentage of motility was observed in medium containing 10% FBS and 5% AMS. In addition, there was a significant difference ($p<0.05$) between these groups and the control group.
Discussion and Conclusion: Different types of serum are added to the medium as a supplement to enhance the quality of culture. The results indicate that albumin in the serum reduces cholesterol in the sperm membrane. The presence of serum and serum type are generally important for sperm capacitation in vitro. Moreover, low serum percentages show better results rather than other percentages in sperm capacitation

Keywords: Capacitation, Allogeneic Mouse Serum, Fetal Bovine Serum, Bovine Serum Albumin, MTT.

A-10-466-2

P142: The Coping Styles of The Infertile Couples Referred To Infertility Center Of Imam Khomeini Hospital, Sari 2016-2017

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Abstract
Backgournd: Infertile women use more inefficient coping strategies due to their inability to control their life events, low self-esteem and increased psychological stress. The aim of this study was to determine the coping styles of the infertile couples referred to Imam Khomeini hospital.
Material and Methods: In this cross-sectional study 240 infertile individuals (120 couples) were recruited with available sampling method. Questionnaires such as demographic data and Lazarus-Folkman Coping Strategy questionnaire were completed by participants. Data analysis was performed using statistical tests such as independent t-test, Mann-Whitney test and SPSS 20.
Results: Results showed that the problem-oriented (P=0.248) and emotional focused coping style scores (P=0.886) were similar in men and women. The results on the subscales of emotional-focused coping style showed that there was no significant difference between men and women in terms of direct coping score (P=0.066), the abstinence score (P=0.098), avoidance score (P=0.114) and self-control score (P=0.305). Problem-oriented coping style subscales indicated that the average score of social support seeking in women was significantly higher than males (P=0.007). However, the mean of the planned problem-solving in males and females was similar (P= 0.906). Also, there was no significant difference between women and men in terms of accountability scores (P=0.886) and positive re-evaluation score (P=0.892).
Conclusion: Due to the importance of using effective coping styles in stressful conditions such as infertility assessing these styles in the psychological compromise of couples with infertility is an important therapeutic action.

Keywords: Coping Styles, Infertile Couples, Infertility

A-10-179-1

P143: Obstacles and Challenges Against Infertility Treatment in Terms of Total Quality Management: A Review Study

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Abstract
Backgournd: The infertility treatment process and to provide health services to couples are encountered with several challenges. The aim of

this study was to evaluate the status and explore the obstacles.
Methods: In a systematic survey of the databases Pubmed, Elsevier, Ovid, Clinicalkey, SID, Iranmedex and etc from 2005 to the present, the relevant articles were extracted and analyzed.
Results: The findings show that the public and private sector participation and investment for treating infertility in advanced and developing countries is very low and inadequate. The first challenge for the stipulation of the barriers to access to care and services for infertility is lack of accurate data on the prevalence of infertility. So that current estimates are merely based on the applicants' visits to medical centers. Moreover, lack of insurance coverage for the diagnosis and treatment of infertility is one of the major obstacles. Education, economy, cultural norms, religious beliefs, geography and the availability of expert urologists are also important factors.
Conclusion: According to results of this study, providing accurate database of patients, reducing the cost of diagnosis and treatment approaches through public-private partnerships, and benefit from insurance coverage, suitable enough space, facilities and equipment can lead to better quality of care and increased satisfaction of infertile couples.

Keywords: Infertility, Total Quality Management, Health Care, Satisfaction, Obstacles

A-10-179-2

P144: A Review of Strategies to Manage Stress, Depression and Anxiety in Infertile Couples

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Abstract
Backgournd: Infertility is a crisis that leads to anxiety disorders, stress and depression in infertile couples. The aim of this study was to evaluate the effect of various stress and depression management methods in infertile women and men.
Methods: In a systematic survey of the databases Pubmed, Elsevier, Ovid, Clinicalkey, SID, Iranmedex and etc from 2005 to the present, the relevant articles were extracted and analyzed.
Results: The findings show that stress management based on cognitive behavior method reduce depression and anxiety in infertile women after the final session and even after twelve-month follow-up period. Problem-focused and emotion-focused coping techniques greatly enhance the social activities of infertile couples. Group counseling interventions increase adaptation level of infertile women undergoing IVF or ICSI. Collaborative counseling by a team of midwives, gynecologists and clinical psychologist reduce perceived stress of infertility in infertile women.
Conclusion: The results indicate the effectiveness of stress management techniques based on cognitive behavioral theory, problem-focused coping and emotion-driven and participatory consultation. So, using such techniques are recommended to reduce stress and depression of infertile couples.

Keywords: Infertility, Stress, Depression, Counseling

A-10-546-1

P145: Can Yoga Exercises Improve in Vitro Fertilization Outcomes in Women With Polycystic Ovary Syndrome?

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Abstract
Background: Polycystic ovary syndrome is one of the most common causes of Infertility. Yoga as a meditation method is recommended for some of disease. This study aimed to determine the effect of Yoga on in vitro fertilization outcomes in

women with polycystic ovary syndrome undergoing Infertility Treatment.
Method: This clinical trial was carried out on 61 infertile women with PCOS undergoing infertility treatment referred to the Sarem Hospital in Tehran. The subjects completed the demographic and fertility questionnaires .The intervention group was done six weeks yoga. The collected data were analyzed using SPSS 16 software. Independent t-test and paired t-test, Mann-Whitney U test. Chi-square, McNemar or Wilcoxon tests were used for statistical analyzing.
Results: The mean age of women was 30.77 ±6.01 years in intervention group and 30.35 ± 5.53 years in the control group. The in vitro fertilization outcomes including number of total follicles in both ovaries after induction ovulation, number of embryos, and positive βHCG were not different between two groups after intervention.
Conclusion: Six weeks yoga exercises didn't show any significant effect on in vitro fertilization outcomes. It seems the effects of a longer yoga program on fertility outcomes of women with polycystic ovary syndrome needs to more studies

Keywords: Keywords: Infertility, Polycystic Ovary Syndrome, Yoga, Hormones

A-10-699-1

P146: Reproductive Health Policy Reforms in Iran and Infertility Programs

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Abstract
Iran's health system has undergone several reproductive health policy reforms in the past six decades with many challenges and successes. The first programs that created in this section were the Family Planning Program in 1958 and establishment maternity wards in 1965. The most important reform was the establishment of the National Health Network in 1983, which aimed to reduce inequities and expand coverage and access to reproductive health care in deprived areas and following this, most reproductive health indicators, such as MMR and NMR, have improved. Infertility is a part of reproductive health, but until recently it has not been addressed in the health system of Iran.Currently, changing fertility policies has caused that Infertility is the priority of the agenda in health reform plan. Nevertheless, the presence of some challenges could have a negative effect on the reform in future most planning is not evidence-based, heavy financial burden on government for free IVF and inefficient payment in treatment, neglect of preventive education and screening in couple, scarce financial sources, unequal distribution of specialists and infertility clinic. Overall, these reforms should include sustainable and purposeful changes to improve efficiency, equity, and effectiveness. Moreover, public policies strategies, educational strategies and social supportive care, must be designed to prevent infertility and support for infertile couples. A comprehensive plan for infertility is needed to avoid different or even opposing reforms that have little benefit, high costs, and are beyond the control of the government.

Keywords: Reproductive Health, Infertility, Policy

A-10-747-1

P147: Comparison of Sexual Depression in Fertile And Infertile Women And Its Related Factors

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Abstract

Backgournd: Infertility can lead to psychological problems and sexual dysfunction. Since sexual health is the basis of family health, this study was designed to compare sexual depression in fertile and infertile women.

Methods: This descriptive-comparative study was performed on 500 infertile and fertile women who referred to Royan Infertility Center and Tehran Health Centers in a randomized and accessible manner respectively. The research instruments were: demographic, reproductive and sexual characteristics and Snell's self-concept questionnaire. Data were analyzed by SPSS-16 and t-test, multiple regression, ANOVA and Post Hoc tests.

Results: The mean age of fertile and infertile women were 34 ± 62.5 and 29.44 ± 5.29 respectively. The Mean score of depression was 2.95 ± 4.55 in fertile and 3.05 ± 3.8 in infertile women, which was not statistically significant (P> 0.05). in fertile women; low education of a spouse, being employed by a woman, poor economic status, low number of intercourse, living another person with family and history of abortion, and infertile women; unwanted marriage, lack of spouses in infertility treatment and low number of intercourse were associated with high sexual depression (P <0.05).

Conclusion: Since sexual health plays a significant role in the health of the family, and considering the impact of various factors on female depression, the need for counseling in order to increase the sexual health of fertile and infertile women is necessary.

Keywords: Sexual Depression, Fertility, Infertility

A-10-609-1

P148: A Review of The Role Of Vitamin D on Ovarian Reserve Markers

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Abstract

Backgournd: Vitamin D has an active role in fertility research. The aim of this study was to investigate the relationship between vitamin D and ovarian reserve markers in women.

Method: cross sectional and cohort English language studies in the last 10 years(2008-2018) has been searched from valid databases Pubmed, proquest, sincedirect, scopus and web of science . Finally, 22 studies was reviewed.

Results: Among the studies, most studies indicate a positive Association between vitamin D and AMH and inverse Association with FSH and LH, However, the results are controversial about the association of this vitamin with the number of antral follicles.

Conclusion: Overall, the results of this review showed that vitamin D could affect on ovarian reserve and its important markers.

Keywords: Anti-MullerianHormone, Follicle Stimulating Hormone, Luteinizing Hormone, Ovarian Follicle, ovarian reserve and vitamin D.

A-10-680-2

P149: A Model For Predicting The Success f Male Infertility Treatment

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Abstract

Backgournd: In spite of the technological and therapeutic advances, the chance of success in the treatment of infertility is still ambiguous and is depended on couple characteristics. Doctors and infertile couples are eager to estimate chance of success. Models based on European and American population data have been developed. These models provide the treatment success of infertile couple in different conditions. The purpose of this study is to develop a model for predicting the success of male infertility treatment based on Iranian population data.

Material and method: In a historical cohort, 323 couples were examined. Success was defined as live birth and data of 31 variables were analyzed with univariate logistic regression. 15 variables were analyzed by multiple logistics regression. Co-linear variables were omitted and finally 8 variables were analyzed as effective factors with Cox regression and their effect was determined.

Results: Body mass index, duration of infertility, previous treatment of infertility and type of infertility in man and the percentage of sperm with normal head, the percentage of live sperm, familial marriage and type of treatment were considered as effective factors.

Conclusion: The variables affecting the success of treatment of male infertility have not been independently studied. The eight variables that are presented in this study are the factors for the calculation of the success rate of treatment. This model can propose the chance of live birth according to the circumstances of each couple.

Keywords: Infertility Treatment, Male Infertility, Survival Analysis, Multiple Logistics regression.

A-10-739-1

P150: Mother's Hardship in Therapeutic Abortion: Subjective or Objective?

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Abstract

The Single Article of the Therapeutic Abortion Act specifies hardship of the mother as one of the necessary conditions for issuing abortion permission. The first question that strikes mind relates to the criterion of determining the hardship. In this regard, two approaches may be discerned: (1) hardship according to such objective criteria that are generally used to pinpoint hardship. This approach does not take into consideration bodily and mental differences of mothers in bearing severe situations. (2) hardship in accordance with subjective judgement of every individual depending on her personal conditions. Despite recognising particular and different situations of individuals, this approach turns hardship into a subjective matter. The question now is which of the two mentioned approaches is, practically and theoretically, defendable? It should be noted that different situations of mothers have to be taken into account in the instantiation process of hardship. Accordingly, it seems, in line with most jurisprudential opinions, hardship is of a subjective nature. Although provisions of a list of illnesses of mother and foetus, that usually and objectively give rise to hardship and suffering, is helpful for physicians in justifying their decisions to this effect, it should not stand in the way of taking into consideration subjective criteria by individuals in discerning the hardship. It appears that adoption of such an approach in the implementation of the Single Article of the Therapeutic Abortion Act is more in line with real needs of mothers and the society.

Keywords: Hardship, Subjective Criterion, Objective Criterion, Therapeutic Abortion

A-10-755-1

P151: The effect of Iranian traditional medicine based dietary intervention on incidence of pregnancy in women undergoing ovulation stimulation

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Abstract

Background: Success in ovulation stimulation is one of the most important goals in treatment of infertility. Adjustment of diet's quality and quantity through a dietary intervention may be a good alternative for medication in mild to moderate cases [1,2]. The aim of current study is to determine efficacy of Persian Medicine (PM) based diet [3] on fertility of women subjected to ovulation stimulation.

Method: Sixty women participated in this semi-experimental study. Cases randomly assigned to intervention and control groups. Demographic and fertility health questionnaire, reminded feed questionnaire, temperament questionnaire, sonography and ELISA instruments were considered as assessment tools. Intervention group applied PM based diet whereas control group had their ordinary diet. Ovulation stimulation was done for both groups and they were evaluated through 3 months. Data were analyzed by descriptive statistics (mean, standard deviation, and relative abundance), independent T test, Fisher's exact test and Khi 2 test.

Results: The mean frequency of pregnancy was statistically different from sonographic criteria including fetal heart rate (P = 0.017) in both groups, and 76.7% in the heart rate control group and 53.3% in the heart rate test group The embryo was seen.

Conclusion: As the results of current study have shown, PM based diet was efficient for follicle growth and occurrence of pregnancy; so it may be recommended a complementary treatment for infertile patients.

Keywords: Infertility, Dietary intervention, Persian Medicine, Ovulation Stimulation

A-10-811-1

P152: Ranking of Female Factors in Implantation Using Data Mining Techniques

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Abstract

Backgournd: In spite of improvements in infertility treatment, pregnancy rates have not increased significantly. Assisted reproductive technologies (ART) include costly and complexity processes. The aim of this study is determine the attributes and their particular values affecting the outcome in ART.

Method: In this cross-sectional study, the data of 367 patients were collected using census method. The dataset contains 24 variables along with an identifier for each patient that is either negative or positive. To determine the significance of the female features, ranking-based algorithms such as Gain ratio and Gini Index run in Orange data mining software.

Results: The results revealed the endometriosis is the importance factor among female pathologies. Our findings also demonstrate that the Infertility duration has highest score in Implantation outcomes.

Conclusion: Elicited decision rules of ranking algorithms determine useful predictive features of Implantation. Out of 24 factors, the Infertility duration Thrombophilic disorders, and the status of period (Means) are the three best features for such prediction.

Keywords: Clinical Decision Support, Data Mining, ranking algorithms, Assisted reproductive technologies (ART),Predictive factors

A-10-469-1

P153: Natural Effective Sex Selection Methods and the Ethical Considerations: A Narrative Review

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Abstract

Background: Since ancient times, couples have been trying to choose the sex of their future offspring. Although some of these methods derived from superstitious beliefs and had no scientific basis, but there is now scientific documented evidence that demonstrates the impact of some of them on sex selection. Sex selection methods classified into two general categories, means preconception (technological and natural) and post conception.The aim of this narrative study was to determine the Natural Effective Sex Selection Methods and the related ethical considerations.

Methods: In this narrative review study, a comprehensive review of databases including Pubmed،Science Direct ،Google Scholar and SID from 1940 to 2015 was conducted and only Persian and English articles were evaluated. Keywords were consisting of Sex Preselection, Sex Ratio and Sex Selection.

Results: The findings of the present study shows that natural sex selection methods are based on timing of insemination, vaginal PH and douching, position and penetration, orgasm, frequency of intercourse and abstinence and maternal diet. Although there are some other influencing factors. Bioethicists, religions, and professional medical organizations opinions of sex selection vary enormously.

Conclusion: As inexpensive and simple approach, the natural sex Preselection methods can influence the sex of the fetus. Integrating these methods can certainly raise the probability of conceiving babies of the desired sex. Nevertheless, large randomised clinical trials could provide more definitive evidence.

Keywords: Keywords: Sex Preselection, Sex Ratio, Sex Selection.

A-10-291-1

P154: Prevalence of Endometriosis Risk Factors Among Women in Premarital Counseling Classes in Shahid Beheshti University in 1396

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Abstract

Backgournd: Endometriosis is one of the most common diseases of reproductive age that affects women's fertility. For this reason, identification and timely treatment are of particular importance. The aim of this study was to evaluate the prevalence of endometriosis risk factors among women in premarital counseling classes.

Method: This descriptive cross-sectional study was conducted on 652women who participated in marriage counseling classes in 16 marriage educational centers of Shahid Beheshti University of Medical Sciences in December 2017. Data was collected using a self-researcher-made questionnaire and data analysis was performed using SPSS 20software.

Findings: The results showed that 652 women participated in the study in the age group of 14 to 51 and with a mean age of 26.11 years. 1.38% of participants had a history of endometriosis and 1.23% had endometriosis. The mean age of endometriosis was 27.11 years and the probability was 28.5 years. Dysmenorrhea was the most common complaint in endometriosis patients with 22.14% and then 21.77%.

Conclusion: The study provided an opportunity for researchers to identify and prioritize the disease in the target group prior to the beginning of their joint life, and in addition to raising the awareness of women before marriage and collecting data on risk factors in endometriosis. Due to the prevalence of the disease and its impact on infertility, it is possible to educate and

plan for doctors, midwives to take appropriate steps to reduce complications from the disease.

Keywords: Endometriosis,Dysmenorrhea,Premarital Counseling

A-10-548-2

P155: Survey of Fertility Motivations and Some Related Factors in Women of Reproductive Age Who Referred to Health Centers in Sabzevar In 1395

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Abstract

Introduction: Considering the severe decline in fertility rates in Iran and disassemble the balance of the Sunni Pyramid, which could cause irreparable economic and social damage to the country, it is necessary to survey of the effective factors on the reduction of fertility rates. The purpose of this study was to investigate the Fertility motivations and some related factors in women of reproductive age who referred to health centers in Sabzevar in 1395.

Materials and Methods: This cross-sectional study was performed on 450 women(in age 18-35) referring to health centers of Sabzevar city in 2016 with method of clustered. Data collection tools included demographic questionnaire, Miller's Childbearing Questionnaire. Data were analyzed using descriptive statistics, Pearson correlation tests, Spearman, and Kruskal Wallis tests. The significance level was less than 0.05.

Results: The average score of positive fertility motivation was 22.64& plusmn; 0.33 and the negative motives was 17.1±3.85. There was a significant and reverse correlation between positive fertility motivation with Education level(p=0.01) and between the negative fertility motivation with income level(p=0.001). There was a significant and direct correlation between the positive fertility motivation with Age(p=0.01), number of pregnancies, childbirth and children(p=0.001). There was a significant relationship between Child gender, lodging and spouse's occupation (p=0.01).

Conclusion: The results of this study showed that age, education level, number of children and pregnancies and delivery, income level, spouse's occupation,plase of lodging, having both of child sex, duration of marriage and female employment of factors related to fertility motives.

Keywords: Fertility Motivations, Women, Fertility, Related Factors

A-10-440-1

P156: Effectiveness of Web-Based Education on Students' Attitudes About Reproductive Health

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Abstract

Background: Nowadays, young people are at greater risk of infestation of false information, especially in the field of reproductive health due to the rapid advancement of technology and easy access to resources and databases. Web-based education is considered as one of the educational methods. This study was carried out aimed to determine the effect of web-based education on youth attitudes in the field of reproductive health.

Methods: This controlled clinical trial was conducted on 316 students in different disciplines of Qazvin University of Medical Sciences in 2016. They were randomly divided into two groups using Layered randomized block design method: control and intervention. For educational intervention, educational text in the fields of reproductive health was written using valid sources and a researcher-made questionnaire was extracted from the text. Educational website was

designed. The attitude of participants before and after the intervention was evaluated and compared.
Results: The average age of participants was 20.9 ± 1.3 years. The intervention and control groups were matched in terms of gender distribution, college, marital status and age (P <0.05). Also, the attitude score in the subjects in the intervention group was significantly increased than the control group (P <0.001).
Conclusion: According to the results of the study, Web-based education had a significant effect on the attitudes of medical students towards reproductive health. It is recommended that similar research to be done on the youth of other centers, including garrison, universities and prisons.

Keywords: Keywords: Education, Web, Reproductive Health, Attitude

A-10-370-2

P157: Epidemiological Investigation of Causes and Factors Related To Infertility in Infertile Couples Referred to Health Clinics in Birjand

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Abstract
Backgournd: Infertility is one of the major problems of present society. Infertility is not only a medical problem, but also it hurts the life of infertile couples in many aspects. The frequency of infertility at different regions of the world is estimated about 10 to 15%.
Methods: This descriptive study was done by the questionnaire designed according to demographic information: age, infertility period, menstrual cycle Etc. The questionnaire was asked from 224infertile couple that referred to infertility centers in Birjand in years 1394-1396. The mean and standards deviation of quantitative variables and the frequency percentage of qualitative variables were calculated and the Chi2 test was used and P<0.05 was considered significant.
Results: The average age of women 27.56± 5.7 and their spouses was 35.47± 2.7 years-old. The average period of infertility was 58.5±32.7 month, and 91.7% of couples became infertile in their first marriage. 46.6% of men and 12.4% of women were addicted to smoking and 59.8% of women had an irregular menstrual cycle and 61.3% were with hirsutism.12.1% of the women had a familial history of PCO. In 88.3% of males semen analysis was reported normal. 74.8% of women had a normal uterus and 25.2% of them had endometriosis.
Conclusion: The majority of women had some degree of obesity with hirsutism, most of them had irregular menstrual cycles. Therefore, it's usual that most of the diagnosis of the causes of infertility was endometriosis and the presence of PCO. The probability of infection can be considered as a factor in this region.

Keywords: Infertility, Epidemiology, Birjand

A-10-370-3

P158: The Sexual Satisfaction and Infertility in Patients Referred to Treatment Centers in Semnan at 1395

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Abstract
Backgournd: Sexual relationship is a sexual need for every alive and mature creature which increases the love and affection among couples. Tension, depression, low self-confidence and sexual dissatisfaction are the psychological consequences of infertility.

Methods and materials: In this cross-sectional study, 200infertile couples and 200fertile couples who referred to health centers in Semnan and were entered into the study. Data were collected by the use of Larson sexual satisfaction and demographic information questionnaire. Inclusion criteria for fertile women were the absence of chronic diseases, history of depression, history of first marriage; and for infertile women were gynecologist confirmation about infertility, absence of chronic disease, depression, history of first marriage. Data were analyzed by Pearson correlation, independent T-test and Chi2 test by SPSS software (version 16).
Results: In fertile couples, the average age of women was 28.56±5.7 years-old and their spouses was36.47±2.7 years-old. In the infertile couples, the average age of women was26.63±4.7 years-old and their spouses was34.47±4.9 years-old. Sexual satisfaction of infertile couples were41.6% and in fertile couples were73.4%. In infertile couples, there was a significant relationship between infertility period, monthly salary and occupation with sexual satisfactio (P<0.001). In fertile couples, there was a direct significant relationship between education, monthly salary and education with sexual satisfaction(P<0.002), but there was no significant relationship between marriage period and the number of children with sexual satisfaction(P>04).
Conclusion: Since the sexual dissatisfaction leads to physical and psychological problems and even family breakdown, attention and effort are needed to solve this issue and it needs extensive planning and supportive actions.

Keywords: Sexual Satisfaction, Infertile Couples, Semnan

A-10-636-2
P159: Factors Affecting Sexual and Reproductive Health in Adolescents

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Abstract
Background: In Iran, approximately 40% of the total population is in the age range of 24 to 15 years. Sexual health is a combination of all social, rational, emotional and physical aspects of individuals. Correct knowledge of puberty and reproductive health and sexual health prevents many risky issues. Undoubtedly, many of the unhealthy habits and lifestyles that develop in adolescence, Short-term and long-term consequences affect adolescents, their families and society.
Methods: This article is a review article with search on sites such as PubMed, SID, EMBASE, Scopus, Google scholar and Magiran.
Results: Studies show that sexual intercourse among high school students is 21%. The existence of cultural taboos, political barriers, and inappropriate structure of the health system are seen as the most important barriers to accessing reproductive health services for Iranian teenage girls. The greatest need expressed in adolescent girls is sexual relationship. The results show warmth and acceptance in parenting and adolescent relationships, adolescent control in convincing ways, and having a healthy family in preventing risky sexual behaviors in adolescents. Lack of proper knowledge and attitude, lack of education and the existence of inappropriate sources of sexual awareness, social-cultural changes, increasing sexual health problems in adolescents, and the positive perspectives of religion are the most important reasons for the need for sexual health education for adolescent girls.
Conclusion: Given the need for adolescents to receive information on sexual health and the role of parents as the most important source of information transmission to adolescents, educational approaches can be helpful.

Keywords: Sexual Health, Reproductive Health, Adolescence

A-10-654-1

P160: Social Constructivism: A Theoretical Framework for Developing The Theory of The Process of Exposure to Infertility in Infertile Women in Iran

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Abstract

Background: Social Constructivism can show the different dimensions of the phenomenon of infertility. Therefore, this study aimed to develop a theory of the process of dealing with infertility in infertile women based on the theory of social constructionism.

Materials and Methods: This qualitative study is based on the Constructivist Grounded Theory. The Purposive sampling was initiated at the Valiasr and Avicenna Fertility Centers both in Tehran and continued theoretically. The Data was collected using semi-structured interviews with 30 infertile women, but also observation and field notes. The data were analyzed by the Method developed by Charmaz in 2006, using MAXQDA10 software.

Results: Based on the principles of Social Constructivism by the changes in each of the elements of social construction of infertility, changes happen in other factors and their effects on each other that create various experiences of infertility. The Theory of Social Constructivism of infertility which is based on our data shows infertility has a complex interaction with social relationships, expectations and social needs, therefore social feedback is important for infertile women. According to the Social Constructivism, the most important decisions about infertility such as treatment and its type, ending the treatment, adoption and other relevant issues of this kind, are reflecting the ideology and social structure of the society in which infertile women live.

Conclusion: From the perspective of the theory of Social Constructivism, infertility is not a static situation with predictable psychosocial outcomes, but rather a dynamic process socially.

Keywords: Social Constructivism, Infertility, Grounded Theory.

A-10-437-1

P161: Reperfusion Reverses the Torsion-Induced DNA Damage By Initiating DNA Repairmen in Experimental Modals; Evidence For PCNA Up-Regulation

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Abstract

Background: It has been shown that, the testicular torsion is one of the most important urological emergencies, which negatively impacts testicular tissue, in a duration and degree manner and consequently leads to complete infertility. Moreover, it has been reporeted that, reperfusion is the only emergency intervention to treat this syndrome. Therefore, the present tried to illustrate the effects of reperfusion on torsion-induced pathogenesis by evaluating testicular tissue damage, DNA fragmentation ratio and PCNA gene expression.

Methods: To follow-up current study, 30 mature male Wistar rats (NO=6 rats in each group) were used. Following 4 hours from torsion induction, the reperfusion was induced. Then, the animals were subdivided into; 4 hours torsion-induced (T1), (b) 1hour post-reperfusion (T2), 2 hours post-reperfusion (T3), 4 hours post reperfusion (T4) and 8 hours post-reperfusion (T5) groups. The seminiferous tubules differentiation (TDI) and spermiogenesis (SPI) indices were

investigated and compared between groups. The PCNA mRNA level was analyzed using Reverse Transcriptase-PCR (RT-PCR). Moreover, the PCNA+ cell numbers per mm2 of tissue was assessed using immunohistochemical staining. Finally, the testicular DNA fragmentation was analyzed using DNA ladder test.
Results: Observations demonstrated that, the reperfusion (albeit after 8 hours in T5 group) significantly (P<0.05) enhanced tubular TDI and SPI ratio and up-regulated the PCNA expressions versus T1 group. Moreover, the animals in T5 group showed diminished DNA fragmentation ratio versus T1 group.
Conclusion: Minimum 8 hours, post reperfusion is needed to re-initiate necessary expressions of PCNA to restore cell cycling machinery and ameliorate torsion-induced DNA damage.

Keywords: Torsion, Reperfusion, DNA Damage, PCNA, Rat

A-10-350-2
P163: The Sources and Consequences of Variation in Ovarian Hormonal Function

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Abstract
Backgrand: Female ovarian function is highly variable. Understanding the sources and consequences of this variation are two principle question which helps to determine the women&'s reproductive functioning and diversity of the fertility pattern. The purpose of this review is to describe variation in ovarian hormonal function and evaluate its effect on fertility pattern.
Methods: The articles related to the hormonal function of human ovaries and developmental diversity of reproductive performance of women were collected using English keywords including ovarian hormonal function, biological anthropology and reproductive ecology. The literature review was done using MEDLINE and Google Scholar database without time limitations. Data analysis was carried out qualitatively. Discussion &
Conclusion: In this review article, variation in ovarian function in response to ecological factors and its potential effect on fertility pattern were examined. Modulation of ovarian steroids is associated with age, energy accessibility, physical activity, psychosocial stress. Fertility as a successful reproductive outcome is highly associated with the concentration of ovarian steroid. But the evidence ascertaining the link between ovarian hormonal function and fertility is inconsistent. It seems that detection of variability in women's fertility is possible by considering life history of individual and other biological and ecological contexts using field research. In this regard, only clinical studies do not meet the health needs of communities, and anthropological strategy is fundamental to study the variability in individual's fertility and pathology of infertility in populations.

Keywords: Ovarian Hormonal Function, Fertility, Biological Anthropology, Reproductive Ecology

A-10-417-1
P164: Ultraviolet Radiation and Its Effects on Pregnancy: A Review Study

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Abstract
Background: Seasons and vitamin D are factors that are directly and indirectly related to ultraviolet radiations and can affect pregnancy. Therefore, the present study aims at investigating the effects of being exposed to direct ultraviolet radiation during pregnancy period and its effects on fetal growth, premature birth, and high blood pressure.
Methods: This study was conducted by searching different websites such as Medline, EMbase, ProQuest, Global Health, GoogleScholar, and Scoupus. From the 430 articles we found that

were published from 1985 to 2017, 7 highly relevant articles were used.
Results: the results showed that being exposed to ultraviolet radiation during the first three months of pregnancy is associated with improved fetal growth and causes high blood pressure during pregnancy.
Discussion and conclusions: The literature shows that being women exposure to ultraviolet radiation had beneficial effects on fetal growth and blood pressure during pregnancy period. However, since this issue has not been extensively studied in the past, the results from previous studies should be generalized with extreme care and caution. Therefore, it is suggested that further studies be carried out in this area.

Keywords: Ultraviolet Radiation, Pregnancy, Gynecology, Fetal Growth

A-10-179-3

P165: Abortion: What is Perspective of Ethical Approaches?

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Abstract
Backgournd: Abortion is one of the complex medical, moral and legal issues. The purpose of this study is to study ethical approaches on abortion.
Meyhod: Through extensive study of authoritative and authoritative sources of Internet resources related to the issue of abortion, results were explored and represented as follows.
Results: Evidence suggests that there are four ethical approaches to abortion. A. Conservative method that considers abortion as self-immolation and immoral. B. The libertarian approach that emphasizes women's freedom and her right to choose abortion as an individual and in the mother's discretion C-Median approach which, with regard to fetal development, considers an abortion to be a person's choice and then an unethical practice. D-feminist approach that differs in some cases with a huge point and the outcomes of three other approaches. But Islam forbids abortion in any case, except in certain cases such as the certainty of the death of a fetus, the probability of a mother's death, the possibility of harming the mother's health in case of carriage, delivery or delivery.
Conclusion: From the viewpoint of the religion of Islam, except for the exceptions, abortion is absolutely forbidden. Knowing these standards can reduce the confusion of parents and guide them to do the right thing.

Keywords: Abortion, Moral approaches, Ethics

A-10-551-1

P166: Progesterone Consumption in The Treatment of Threatened Abortion and Hypospadias in Male Infants

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Abstract
Hypospadias is one of the most common malformation defects in the male genital tract; it occur almost 1 in every 125 live births. Usually hypospadias occur individually but is reported as part of a syndrome or with other urinary anomalies. The exact etiology is unknown, but endocrine disorders are considered as one of the reasons. In the studies that took place over the past three decades, progesterone consumption by the mother at the time of fertilization and the beginning of pregnancy was considered as one of the risk factors for the occurrence of hypospadias. Progesterone and its derivatives are used by mothers for various reasons, for example, in cases of luteal phase defect or in combination with ovulation-stimulating drugs. In recent years the progesterone widely used for the treatment of threatened abortion in pregnancy, while progesterone is contraindicated in pregnancy in pharmacologic texts. The texts of Obstetrics and

Gynecology, the use of progesterone in the treatment of threatened abortion are not supported. The mentioned issues challenge the use of progesterone in pregnancy. In this article, the use of progesterone in pregnancy and its relation with hypospadias in male infants are discussed.

Keywords: Hypospadias, Progesterone, Threatened Abortion

A-10-677-2

P167: The Effect of Cognitive Behavioral Counseling on Quality of Life in Women with Polycystic Ovarian Syndrome

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Abstract

This research was aimed to investigate The Effect of Cognitive Behavioral Counseling on Quality of Life components in Women with Polycystic Ovarian Syndrome attending Shahid Akbarabadi Hospital in Tehran city. For this purpose, 44 women with Polycystic Ovarian Syndrome were selected and assigned randomly to two groups (experimental and control). All subjects filled out whole items of Health-related quality of life questionnaire for polycystic ovary syndrome (PCOSQ)prior to and three weeks after the intervention. In addition to the routine treatment techniques, the intervention group received ten weekly individual sessions of cognitive-behavioral counseling. No significant difference was found between intervention and control groups in any of the demographic and reproductive details. Pretests showed no significant difference between the two groups in mean scores of quality of life and its dimensions. However, in the posttest and after the cognitive-behavioral intervention, mean scores of quality of life and all its dimensions (except for menstruation problems) increased in the intervention group. This increase was significant compared to pretest and also compared to scores obtained by the control group ($P<0.05$). Cognitive-behavioral counseling improved psychological and physical components of quality of life in women with polycystic ovary syndrome.

Keywords: Poly cystic Ovary Syndrome, Quality of Life, Cognitive-Behavioral Counseling

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P168: Effects f Maternal And Neonatal Factors on The Volume of Umbilical Cord Blood And The Number of Hematopoietic Stem Cells in Frozen Samples of Yakhteh Cord Blood Bank

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Abstract

Background: Umbilical cord blood (UCB) is a useful stem cell source for patients without matched family donors. It is very important to analyze the effects of maternal and neonatal factors on the volume of UCB and its hematopoietic stem cells count. The most underlying maternal-neonatal factors are gestational age, delivery type, number of deliveries, etc.

Methods: In this study, relevant records of UCB samples stored in Yakhteh Cord Blood Bank have been investigated. 413 samples of UCB frozen in Yakhteh Cord Blood Bank from October 2012 to March 2016 were investigated. The samples were collected after birth in the hospital by midwives. All required information relevant to mother, infant and placenta was recorded in files of samples and information was entered in Excel. Then, the correlation between different maternal-neonatal parameters and their effects on blood volume and cell count was calculated.

Results: Mother's age showed a significant negative correlation with viability ($r=-0.109$, $p=0.040$) and positive correlation with volume of

cord blood (r=0.180, p=0.00) and cell count (r=0.138, p=0.006). However, the number of previous deliveries showed significant positive correlation with volume (r=0.106, p=0.049) but no significant relationship with viability or cell count. Variables showed no significant differences among ABO and RH blood groups. Also, cesarean section showed significantly higher mean in cord blood volume versus natural delivery.

Conclusion: As hematopoietic stem cells are recently considered as a vital treatment for severe diseases, analysis of these factors is important to improve the storage conditions of hematopoietic stem cells.

Keywords: Umbilical Cord Blood, Maternal Factors, Neonatal Factors, Hematopoietic Stem Cells

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P169: Evaluation of the relationship between maternal lifestyle and adipokine profiles in mother and neonate

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Absrtact

Background: Past studies showed that mother's lifestyle during pregnancy have influenced neonatal outcomes, but the exact mechanism of this effect is unclear. Given that there has not been enough research about this relationship so far, our aim is to evaluate the relationship between maternal lifestyle and maternal and neonatal adipokine profiles in a review.

Methods: 15 articles were obtained with searching PubMed, Springer, Elsevier, Scopus and Google Scholar databases, of which 7 articles were reviewed.

Results: The findings show that weight gaining during pregnancy and its speed affect the serum levels of glucose and adipokine in the neonates, and overweight during pregnancy can have a metabolic effect on both mother and neonate, but studies on the relationship between maternal lifestyle and maternal and neonatal adipokine levels are very limited.

Conclusions: The results of the review show that higher adipokine levels in mothers are associated with an increase in fat mass in newborns, and there is a significant relationship between maternal adiponectin deficiency and neonate's weight loss at birth. The maternal adipokine profile also correlates maternal nutritional status and lipid metabolism to fetal-placental function. Transferring of the nutrients to the fetus is regulated through the complex interaction of insulin signaling, cytokine function and insulin response modulated by adipokines. Finally, maternal metabolic status and lifestyle can have an important effect on the neonate adipokine profile regulating

Keywourds: Adipokine profile, Maternal Life Style, Adiponectin, Neonate, Adipose Tissue.

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