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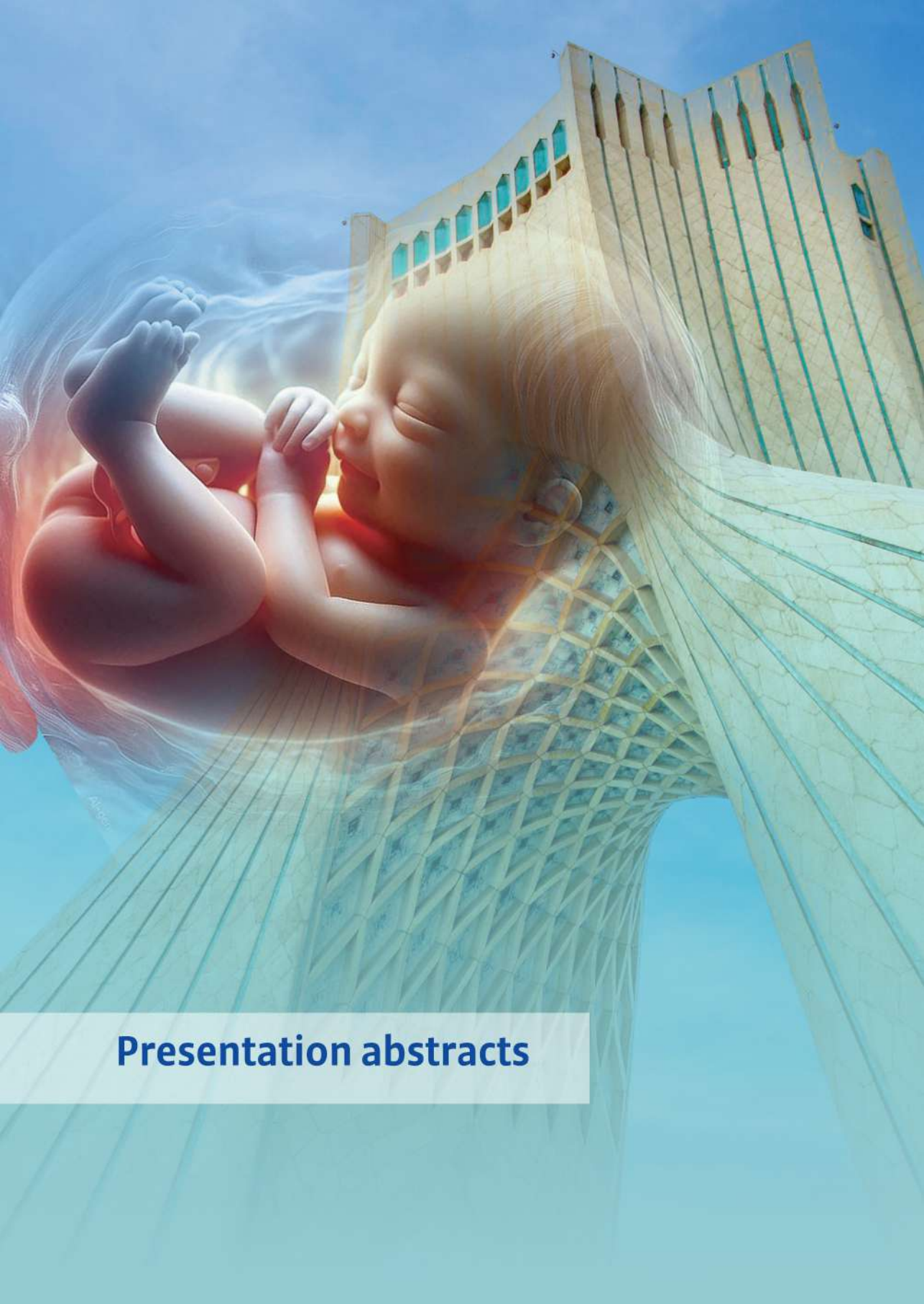
In the name of GOD



Presentation abstracts

Presentation abstracts

Paper abstracts

Endometriosis

Dr. Abbas Aflatoonian

a chronic inflammatory condition affecting up to 50% of infertile women, poses challenges in assisted reproduction. It impacts ovarian reserve, stimulation response, oocyte retrieval, and endometrial receptivity.

Management strategies are tailored to disease severity, symptomatology, and ART goals. Surgical intervention may improve spontaneous pregnancy rates, especially in moderate to severe cases, but its role before ART remains controversial due to potential harm to ovarian reserve. ART Protocols should be individualized, with attention to ovarian response and endometrial receptivity.

The European Society of Human Reproduction and Embryology (ESHRE) guidelines emphasize shared decision-making, balancing surgical risks, ART timing, and patient preferences. Despite advances, gaps remain in optimal management pathways, especially for asymptomatic or recurrent disease.

The most prevalent indications of egg donations are

Dr. Fariba Almasi

1- The women more than 42 years old
2- Low AMH
3- Poor quality of eggs in IVF cycles
4- Before chemotherapy or radiotherapy
5- Male homosexual couples
6- Genetic disorders of couples

The application of in vitro gametogenesis for modeling metabolites effect on oocyte maturation in human

Dr.Behrouz Aflatounian

maturation in human. Behrouz Aflatoonian (Ph.D.)1,*, Saeedeh Hajihosseini (Ph.D.)2, Fatemeh Akyash (Ph.D.)1, Somayyeh Sadat Tahajjodi (Ph.D.)1, Fatemeh Hajizadeh-Tafti (M.Sc.)1, Reza Aflatoonian (M.D.;
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Abstract:
Recent reports in different species have indicated that secreted factors by reproductive nursing cells from both male (testicular cells) and female (cumulus cells and granulosa cells) in culture medium have supportive effect on in vitro maturation and in vitro gametogenesis using different sources of stem cells. Moreover, it has been suggested that metabolic co-dependence of the oocyte and cumulus cells has an essential role in determining oocyte developmental competence. We have applied the conditioned medium from testicular cells and cumulus cells to investigate their effect on oocyte in vitro maturation in mice and in vitro gametogenesis in human. Our results confirmed previous studies using different cells source in different species. Moreover, we have assessed the shift of metabolites' concentrations during days of differentiation of human embryonic stem cells to germ cells. This new finding can pave novel insights on role of metabolites on gamete development and help infertility treatments in the future.

Understanding concepts of gender, sexual identity, sexual orientation, and key terminology across the LGBTQ+ spectrum—and the impact of AI's emergence on human sexual life

Dr.Shahryar Cohanzad

This lecture provides a two-part exploration into the evolution of human sexuality and gender, first by defining foundational concepts and then by examining the transformative impact of artificial intelligence. Part one serves as a comprehensive primer on the core tenets of identity. It meticulously defines sexuality, a complex interplay of biological and social factors; gender, as a lived, socially constructed identity distinct from biological sex; and sexual orientation, as the pattern of romantic or sexual attraction. The lecture clarifies other essential terminology, including cisgender, transgender, non-binary, and intersex. It delves into historical and crosscultural perspectives, revealing how non-Western societies often held more fluid views of gender, and explores the role of intersectionality in shaping unique experiences of privilege and oppression. The discussion emphasizes that these concepts exist on continuums, not as binaries, and highlights the importance of inclusive language and advocacy. The second part of the lecture shifts focus to the emerging role of AI as a mirror and a catalyst for personal and collective transformation. It details how AI is already reshaping identity exploration through therapy chatbots and virtual reality avatars, while simultaneously introducing new ethical complexities. The lecture examines the datafication of intimacy via dating algorithms and their inherent biases, and presents a case study on AI›s application in gender-affirming care, where algorithmic recommendations challenge traditional notions of patient autonomy. The talk further explores how AI is redefining family structures through reproductive technologies like artificial wombs and the emergence of AI co-parents. It concludes by mapping out speculative futures, including AI-human romantic partnerships and digitallymediated sexual identities, underscoring the urgent need for medical professionals to adapt their curricula and advocate for inclusive policies that navigate these complex and evolving frontiers of human identity.

Pelvic Organ Prolapse in Women: Recognition, Risk Factors, and the Role of Levator Avulsion in Recurrence

Dr.Nasrin Changizi
Urogynecologist | OB/GYN | Research Associate Professor

Background:
Pelvic organ prolapse (POP) is a prevalent pelvic floor disorder characterized by descent of the pelvic organs into or beyond the vaginal canal. It affects quality of life through symptoms such as bulge, pressure, urinary and bowel dysfunction, and sexual impairment. With aging populations, the number of women requiring treatment is expected to increase substantially.

Methods:
Recognition of POP relies on careful history taking and standardized examination, most commonly using the Pelvic Organ Prolapse Quantification (POP-Q) system. Imaging modalities, such as translabial ultrasound and magnetic resonance imaging, allow detection of underlying structural injuries, particularly levator ani avulsion. Management is guided by symptom severity and patient preference. Conservative measures include pelvic floor muscle training, pessary use, and lifestyle modification. Surgical options include vaginal, laparoscopic, and robotic procedures with or without graft reinforcement.

Results:
Established risk factors for POP include parity, advancing age, obesity, hysterectomy, and connective tissue weakness. Levator ani avulsion, often related to vaginal birth, has emerged as an independent predictor of both primary prolapse and recurrence following repair. Women with avulsion injuries are more likely to present with advanced anterior or apical defects and demonstrate higher reoperation rates despite technically adequate surgery. Identifying levator avulsion preoperatively informs surgical planning, patient counseling, and long-term follow-up.

Conclusion:
POP is a multifactorial condition in which both connective tissue and muscular injuries play a role. Levator ani avulsion is central to the mechanism of recurrence and should be incorporated into risk stratification and management algorithms. Improved recognition and individualized care are key to achieving durable outcomes.

Challenges of Painless Delivery

Dr. Mohammad Hossein Delshad

Labor pain is among the most intense physiological pains experienced by women during their lifetime, and its control plays an important role in improving maternal and neonatal outcomes. Studies have shown that effective reduction of labor pain can decrease the risk of postpartum depression and increase maternal satisfaction. According to the American College of Obstetricians and Gynecologists (ACOG), severe labor pain is a normal phenomenon, and a mother›s request for analgesia at any stage of labor constitutes a legitimate and evidence-based indication for therapeutic intervention.

Multiple pharmacologic methods are available for labor analgesia. Regional techniques such as epidural and spinal analgesia are recognized as the most effective methods. The combined spinal–epidural (CSE) technique provides rapid onset and sustained analgesia, whereas systemic analgesics (opioids such as pethidine [meperidine] and fentanyl) or inhaled nitrous oxide are used in specific circumstances or in centers with limited access to epidural services. Evidence indicates that regional methods, particularly epidural analgesia, offer the greatest efficacy in pain relief. The World Health Organization (WHO) has introduced epidural analgesia as the gold standard for labor pain control. In the United States, epidural use has been reported in approximately %80–70 of deliveries, while rates are lower in some other countries.

Benefits of epidural analgesia include marked reduction of severe pain, ncreased maternal satisfaction, improvement in uteroplacental blood flow, and attenuation of the stress response. Potential drawbacks include alterations in blood pressure, headache, and a possible prolongation of the second stage of labor; however, contrary to common belief, epidural analgesia is not associated with an increased cesarean delivery rate. Safe implementation of epidural analgesia requires standard equipment and the presence of a trained multidisciplinary team.

Despite the supporting evidence, the rate of epidural use in Iran has been reported to be very low (less than %2 in some studies). Major barriers include shortages of anesthesiologists, limited resources, absence of standardized protocols, and cultural beliefs valuing endurance of labor pain. Surveys in the Middle East have also shown that only about %18 of women express willingness to use epidural analgesia. These challenges underscore the need for enhanced education of expectant mothers and healthcare personnel and for improvement of infrastructure.

Endometriosis in Adolescence

Dr. Sedighe Esmaeilzadeh
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Abstract
Endometriosis is a chronic gynecological condition characterized by the presence of endometrial-like tissue outside the uterus, leading to inflammation, pain, and potential infertility. Although commonly diagnosed in adult women, endometriosis frequently begins during adolescence, often resulting in delayed diagnosis due to nonspecific symptoms and lack of awareness. This presentation focuses on the challenges and advances in diagnosing and treating endometriosis in adolescents. We review the typical clinical presentation, including dysmenorrhea, chronic pelvic pain, and gastrointestinal or urinary symptoms, which frequently overlap with other conditions, complicating early identification. Diagnostic approaches emphasize a combination of detailed clinical evaluation, imaging techniques such as ultrasound and MRI, and laparoscopic confirmation when necessary. Early diagnosis is critical to prevent disease progression and preserve fertility. Treatment strategies are tailored to adolescents, balancing efficacy with the need to minimize side effects and impact on growth and development. Hormonal therapies are frontline options, alongside nonsteroidal antiinflammatory drugs for pain management. In severe cases, surgical intervention aiming for lesion excision can improve symptoms and quality of life. Emerging therapies and multidisciplinary management approaches incorporating psychological support are also discussed. Understanding endometriosis in adolescence is essential for improving long-term outcomes, reducing morbidity, and enhancing life quality. This overview presents the importance of increased awareness, early intervention, and individualized treatment plans in adolescent endometriosis care.
Keywords: Endometriosis, Pelvic Pain, Dysmenorrhea, Quality of Life, Infertility

Diagnostic Laparoscopy in Infertility

Dr.Fatemeh Ghasemzadeh

Gynecologist ,Fellowship Of Infertility, Assistant professor of Mazandaran University of Medical Sciences

Today, we explore the pivotal role of diagnostic laparoscopy in the management of infertility, as illustrated by a case of a -36year-old woman with three years of primary infertility and normal basic investigations, including a reassuring HSG. This scenario underscores a fundamental principle: a normal non-invasive workup does not definitively exclude pelvic pathology. Diagnostic laparoscopy remains our goldstandard surgical tool for the direct visualization of the pelvic organs.

The key indications are clear: unexplained infertility, ambiguous or abnormal HSG results, pelvic pain, a history of pelvic infection or surgery, and notably, the failure of previous fertility treatments like IUI or IVF. During the procedure, we systematically search for occult causes. Common findings that would otherwise be missed include endometriosis—often asymptomatic—peritoneal inflammation, subtle adhesions, and tubal disease beyond the resolution of an HSG.

The intraoperative findings directly dictate management. For instance, the stage of endometriosis, as classified by ASRM, guides our counsel. Stages I and II may allow for expectant management or IUI, while advanced Stages III and IV typically necessitate operative laparoscopy or a direct referral for ART. Similarly, the decision for adhesiolysis hinges on the severity and location of adhesions, with the goal of restoring anatomy to facilitate spontaneous conception or improve the efficacy of ART.

When tubal pathology is encountered, a critical decision between reconstructive tubal surgery versus proceeding directly to ART is made. This hinges on the patient›s age, ovarian reserve, the extent of tubal damage, and the presence of other infertility factors. For example, a salpingectomy is often recommended before IVF in the case of a hydrosalpinx to improve

implantation rates.Ultimately, the success of any intervention post-laparoscopy is predicted by a combination of factors, most importantly the woman›s age, ovarian reserve, and the quality of sperm. Diagnostic laparoscopy thus provides an invaluable final layer of assessment, allowing for both definitive diagnosis and concurrent therapeutic intervention, thereby personalizing and optimizing the patient›s journey toward conception.

Female Athlete Triad, necessary supplements, and special hazards of steroid use in women

Dr. Laleh Hakemi

Internal Medicine Specialist
Vice president of Sports Medicine Federation of Iran
Chair of Medical Center of National Olympic Academy

Sport has desirable effects on various bodily systems. Particularly weight bearing physical activity has effective and long-lasting effects on bone mass. Literature indicates that teenage physical activity reduces post-menopausal bone fracture by nearly 20 percent.

If the balance between exercise, nutrition, and personal situation is not addressed, relative energy deficiency syndrome (female athlete triad) ensues. The main three aspects of the triad are oligomenorrhea/ amenorrhea, relative energy deficiency, and osteopenia/ osteoporosis. Finally, scientists found out that the syndrome is by far more than the three mentioned aspects and the
changes will also occur in boys, albeit due to lack of menstruation, hidden. Hormonal changes will cause undesired effects on bone mass, cardiovascular, musculoskeletal, immunological, metabolic, and psychological systems. Strong suspicion and early diagnosis and interdisciplinary management are necessary. The affected individuals usually suffer from nutritional deficiencies
which should be managed by an appropriate diet and required supplementation.

In case of supplementation, it should be prescribed individually. The aim of supplementation, type of sport, age, sex, micro and macro nutrient deficiencies, and hepatorenal diseases, … should be considered. The risk of unwanted doping in supplement use should not be ignored.Sometimes adverse effects of doping medications will persist in female population even after discontinuation of the medicine

Hypertensive disorders in pregnancy

Dr.Ashraf Jamal

Perinatologist, professor of OB/GYN, Tehran University of Medical Sciences President of Iranian society of Perinatology, Tehran, Iran

HDP in spectrum of disorders ranging from chronic hypertension to preeclampsia and eclampsia.

These are a major contributor to maternal and perinatal mortality.

In the first stage inadequate remodeling of spiral arteries by placental invasive trophoblast results in reduced placental perfusion. In the second stage increased maternal systemic vascular dysfunction leads multigrain involvement.

Preeclampsia is a Multisystem Diseases

Vascular and cardiac changes: Systemic vasospasm leading to hypertension, hemoconcentration, predisposition to fluid overload, exaggerated capillary permeability, and decreased plasma colloid osmotic pressure predisposing to pulmonary edema, left ventricular dysfunction resulting in a low output- high resistance state.

Kidneys: Glomerular endotheliosis heading to proteinuria, decrease in glomerular filtration rate (GFR) by almost 25% due to vasospasm of intrarenal vessels leading to oliguria, increased reabsorption of uric acid resulting in an increase in serum uric acid levels which servers as a marker for diseases severity.

Liver: Intense vasospasms leading to ischemia, infarction, and hemorrhages in the liver results in swelling of the Glisson's capsule and the characteristic right upper quadrant/ epigastric pain. Raised liver enzymes and serum lactate dehydrogenase (LDH) levels, and impaired coagulation may be seen in severe disease.

Hematology: Thrombocytopenia and hemolysis (LDH levels> 600 IU/L).

Platelets, a marker of disease severity, are decreased due to activation, aggregation, and consumption.

Brain: Hypertension and vasospasm leading to reduced cerebral perfusion, cytotoxic edema, ischemia, and infarction

- Posterior reversible leukoencephalopathy syndrome (PRES): acute onset of headache, seizures, vision problems, transient cortical blindness due to failure of autoregulatory mechanism of cerebral vasculature which results in vasogenic edema, hyper perfusion, and extravasation of erythrocytes and plasma.
- Intracranial hemorrhage.

Placenta: Changes of acute atherosis, small placenta, and areas of ischemia and infarction.

Management of Hypertension disorders of pregnancy vary according to severity of disease and gestational age. We discus screening, prevention, sign, symptoms, lab tests, outpatient management and pharmacological management of hypertension. Antenatal steroids, hypertensive emergencies, HELLP syndrome, fetal assessment, eclampsia and intrapartum care have an important role in reducing maternal and perinatal mortality.

Timing of delivery is a challenging issue, postpartum care and management of chronic hypertension will be discussed in detail.

Post Operative Management of Endometriosis and Adenomyosis

Dr. Shabnam Jafari-Zare
Obstetrician and Gynecologist Postoperative care in endometriosis aims to prevent recurrence of pain and infertility while preserving fertility. Recurrence occurs in up to %50 within 5 years, requiring individualized

strategies.
The 2022 ESHRE guidelines strongly discourage preoperative hormonal therapy for pain outcomes. Postoperative hormonal suppression is weakly recommended for pain relief in women not seeking immediate pregnancy but contraindicated for fertility enhancement. Ovarian suppression should not be prescribed to improve fertility. For women delaying conception, hormonal therapy may reduce pain without impairing fertility. Counseling should include the Endometriosis Fertility Index (EFI) and semen analysis to guide assisted reproductive technology (ART).
Secondary prevention includes LNG-IUS (52 mg) or combined hormonal contraceptives for 24 –18 months to manage dysmenorrhea (strong recommendation). Long-term hormonal therapy is strongly advised after ovarian endometrioma surgery in non-conceiving women. After deep endometriosis surgery, hormones may be considered (weak recommendation). ART does not increase recurrence risk. In adolescents, excision may relieve symptoms, with postoperative hormonal suppression strongly recommended.

ESHRE updates: restrict laparoscopy to negative imaging or failed empirical therapy; add GnRH antagonists as second-line; support postoperative hormonal therapy for pain; discontinue ultralong GnRH agonist protocols before ART; and recommend EFI for pregnancy planning.

In adenomyosis, postoperative care after uterus-sparing surgery targets reducing pain, bleeding, lesion regrowth, and rupture risk. LNG-IUS and dienogest are effective for pain, though dienogest may increase bleeding in enlarged uteri. GnRH agonist ± LNG-IUS lowers recurrence; GnRH agonists improve IVF pregnancy rates but show inconsistent live birth outcomes. A ≥-3month wait before conception is advisable. Uterine rupture risk is ~%1, depending on myometrial excision. For deferred fertility, 6–3 months of GnRH agonist followed by LNG-IUS is recommended, with imaging at 6 ,3, and 12 months.

Assisted reproductive technologies (ART)

Dr. Mojgan Javedani Masroor

IVF/ICSI and Fetal Growth Restriction :
particularly in vitro fertilization (IVF) and ICSI , have revolutionized the management of infertility worldwide. However , growing evidence suggests that pregnancies achieved through these methods are at **higher risk** of obstetric complications , including
fetal growth restriction **(FGR)** . The etiology is multifactorial , involving maternal , embryonic, placental, and iatrogenic factors.

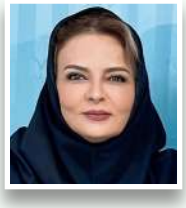
Maternal factors such as advanced maternal age, endometriosis , pcos , and uterine abnormalities have been independently linked to impaired placental development and subsequent growth restriction.

Male factor infertility , particularly when ICSI is used many contribute through epigenetic alterations transmitted by sperm. Moreover , embryo culture conditions and laboratory manipulations may influence early trophoblastic differentiation , potentially affecting placentation.

The choice of ART protocol also appears significant. Fresh embryo transfers are associated with higher risks of FGR compared to frozen transfers, likely due to supraphysiologic hormonal environments in stimulated cycles. Oocyte donation is another strong risk factor , possibly mediated by immune maladaptation.

Preventive strategies include optimizing maternal health befor ART tailoring ovarian stimulation to minimize supraphysiologic hormone exposure , and considering frozen embryo transfer in selected patients .

In conclusion , while IVF/ ICSI remain invaluable tools in reproductive medicine , clinicians should recognize their potential association with FGR. Individualized ART protocols , close antenatal monitoring, and interdisciplinary collaboration are essential to improve perinatal outcomes in this growing patient population.



Dr.Naereh Khodashenas firuzabadi

Pain fellowship
Head of interdisciplinary pain center at Khatam hospital

Nowadays, exercise and movement are considered one of the main pillars in the prevention and treatment of pain in multi-specialty clinics around the world. In fact, an exercise prescription for each individual is tailored by pain specialists, physical medicine physicians, and occupational therapists based on cardiovascular status, pathology, age, and personal limitations.

Studies show that endurance, stretching, and balance exercises, while effective in improving quality of life, do not play a major role in pain treatment when used alone. On the contrary, strength and isometric exercises, alongside other methods, are considered essential components in pain management programs.

The best exercise prescription includes endurance movements as needed, strength and elastic exercises within one's capacity, and should consist of at least 10 minutes of warm-up, main exercises, and at least 10 minutes of cool-down.

Each stretching movement should last more than 30 seconds, and ideally up to 2 minutes Maintaining optimal muscle length is a key factor in both the prevention and management of various musculoskeletal pain conditions

Round Table: Challenges and Perspectives in Managing Persistent Endometriosis Pain

Dr.Mania Kaveh

Persistent pain remains one of the most complex challenges in endometriosis management, even after optimal surgery or medical therapy. This round table brings together experts from gynecologic surgery, interventional pain medicine, radiology, nutrition, and psychiatry for an interactive case-based discussion.

Key themes will include: interventional pain approaches such as nerve blocks, neuromodulation, and multimodal opioid-sparing strategies; the psychological dimension, covering cognitive-behavioral therapy, mindfulness, and pharmacological treatment of anxiety and depression; and the nutritional perspective, reviewing evidence for anti-inflammatory and low FODMAP diets, micronutrients, and gut microbiome modulation.

From a surgical standpoint, the discussion will address risk factors and surgical strategies for recurrence, and the critical question of when to operate in patients with persistent pain after medical therapy or recurrent pain after surgery. The radiology contribution will focus on post-surgical imaging, differentiating fibrosis from recurrence with advanced MRI/TVUS techniques. Finally, attention will be given to post-surgical medical prevention and the importance of identifying hidden diagnoses such as adenomyosis, extra-pelvic endometriosis, and adhesions.

Rather than formal presentations, the round table will use clinical scenarios to stimulate multidisciplinary dialogue. This format emphasizes that persistent pain is multifactorial and best addressed through collaboration across specialties. Attendees will gain practical insights into tailoring individualized and integrated care to achieve the best long-term outcomes for patients with endometriosis.

Ultrasound-guided embryo transfer in IVF

Dr.Mohammad Ali Karimzadeh Meybodi

International research since 1978 showed gynecologist and IVF specialist try in different
fields to find the best strategy for improving their result and have more take baby to home.
For this purpose, they try in the first step that is selection of patient accurately
We have observed many different ovarian stimulation protocols and different medications
for COH to improve the results.
Finally, the most important and the last step in IVF cycle will be Embryo transfer (ET).
Embryo transfer (ET) is the final and one of the most critical steps in in vitro fertilization (IVF).
Traditionally, ET was performed using a clinical touch technique (blind), guided:
by anatomical landmarks and physician experience.
During many decades this technic based on gynecologist knowledge about anatomical
landmarks and physician experience
In recent decades, the adoption of transabdominal ultrasound-guided embryo transfer (UGET) has become increasingly common to improve placement accuracy and clinical outcomes.
Ultrasound-guided embryo transfer is a method which:
A transabdominal ultrasound is used during embryo transfer.
It allows real-time visualization of catheter placement in the uterine cavity.
The embryo is placed 1.5–1 cm from the fundus, which is considered optimal.
Meta-analyses (2024–2021): UG-ET improved:
Clinical pregnancy rates by %15–10
Ongoing pregnancy rates by %12–8
Live birth rates by %10 or more

Sport and Exercise Medicine Specialist

Dr. Sanaz Kabiri

The Role of Exercise in Urinary Incontinence Urinary incontinence (UI) is a common condition among women that negatively affects quality of life and physical activity. International guidelines recommend exercise-based interventions and lifestyle modifications as the first-line management strategies for this condition. Exercise not only reduces the frequencyof urinary leakage but also improves the overall quality of life in affected women across all age groups.

Evidence suggests that pelvic floor muscle training (PFMT), performed for at least 12 weeks, significantly improves UI symptoms. A typical PFMT protocol includes 12–8 strong contractions per set, performed three times daily, with gradual progression from supine to standing and eventually to functional positions.

In addition to PFMT, bladder training—by progressively increasing the interval between voiding episodes—enhances bladder capacity and self-control. Another useful technique is the Knack maneuver, which involves the voluntary contraction of pelvic floor muscles immediately before and during activities that increase intraabdominal pressure, such as coughing or sneezing. Both bladder training and the Knack maneuver have been shown to play an important role in symptom reduction when combined with PFMT.

Pregnancy outcomes in freeze- all versus fresh embryo transfer cycles of women with adenomyosis and endometriosis

Dr.Ashraf Moini

Endometriosis (EMS) and adenomyosis are interrelated chronic diseases, both originating from ectopically located intracavitary endometrium. EMS is characterized by the presence of endometrial stroma and glands outside the uterine cavity, while adenomyosis is defined by the infiltration of endometrial tissue within the myometrium. Women with EMS and adenomyosis often suffer from subfertility and infertility. Up to 35–50% of infertile women are affected by EMS, while the prevalence of adenomyosis in infertile women is reported to be approximately 7.5-24.4%. The pathological processes may involve inflammation and fibrosis, immune modulation, altered steroid hormone metabolism, increased oxidative stress, and intrauterine abnormalities. These factors potentially interfere with folliculogenesis, sperm function, embryo transport, and endometrial receptivity.

In vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI) and embryo transfer is a valid option for infertile women with EMS and adenomyosis. The current clinical policy of transferring includes both fresh embryo transfer (ET) and freeze-all embryo transfer (FET). The FET strategy, initially designed to mitigate ovarian hyper-stimulation syndrome, facilitates embryo cryopreservation for subsequent suitable cycles. In IVF/ICSI, the key factors to conception are embryo quality, embryo-endometrium interaction, and endometrial receptivity. Recently, heightened attention has been drawn to the elevated sex steroid levels resulting from hyper-stimulation during controlled ovarian hyperstimulation (COS). It may exacerbate endometrial receptivity issues, reducing the likelihood of successful conception. As a results, there has been a proposal that FET approach can separate the COS process from the embryo transfer, thereby serving to circumvent the potential adverse impacts of COS on the endometrium. One randomized Controlled Trials (RCTs) involving patients with ovulatory women demonstrated favorable outcomes in either pregnancy outcomes or the incidence of ovarian hyper-stimulation syndrome for the FET group. With the advancement of vitrification techniques, FET approach has been applied to patients with EMS and adenomyosis. Bourdon et al. investigated 270 infertile women with EMS undergoing IVF/ICSI.

Their results indicated that the FET strategy yielded higher cumulative clinical pregnancy and live birth rates compared to the fresh ET strategy. Similarly, a retrospective cohort analysis found that the FET strategy in women with adenomyosis was associated with significantly higher odds of live birth compared to fresh ET. However, other studies reported comparable pregnancy outcomes among women with EMS or adenomyosis, regardless of whether FET or fresh ET was used. Additionally, Roque et al. conducted a systematic review and meta-analysis, demonstrating that FET significantly improved live birth rates compared to fresh ET, particularly in hyper-responders and preimplantation genetic testing for aneuploidy cycles. However, the lack of distinction between study populations limited its clinical applicability.

Cesarean section(CS)

Dr. Shahrzad moeinaddini

Cesarean section (CS) is one of the most frequently performed surgical procedures worldwide. In recent decades, its prevalence has risen significantly in many developed countries, raising concerns about its increasing use. According to the World Health Organization (WHO), the optimal CS rate is around 15%. While cesarean incisions typically heal without major complications, some cases result in a cesarean scar defect—also known as isthmocele, niche, diverticulum, or pouch—which was first identified by Poidevin in 1961 as a wedge-shaped defect in the uterine wall.

Isthmocele is characterized as a hypoechoic area within the myometrium of the lower uterine segment, at least 1 mm deep, indicating an interruption in the myometrial continuity at the site of a previous CS scar. Its prevalence is difficult to determine, ranging from 24% to 70% with transvaginal ultrasound and from 56% to 84% with sonohysterography (SHG). While some cesarean scar defects may be asymptomatic, they can also cause various gynecological symptoms, including abnormal uterine bleeding, dysmenorrhea, chronic pelvic pain, dyspareunia, and infertility. Additionally, they pose potential obstetrical risks, such as ectopic pregnancy, uterine rupture, and placental complications like placenta accreta.Management of isthmocele could be surgical treatment including hysteroscopic resection laparoscopic,abdominal,robotic,vaginal repair or Hormonal treatment in those who do not wish to become pregnant .

A Comparative Systematic Review and Meta-Analysis of Uterine Artery Resistance in Pregnant Women with and without Previous Cesarean Section

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7- Endometriosis Research Center, Iran University of Medical Sciences, Tehran, Iran

Background:
Cesarean section rates are rising worldwide, raising concerns about their long-term impact on maternal and fetal health. Uterine artery resistance, measurable by Doppler ultrasonography, may be altered in women with a previous cesarean section and contribute to complications such as preeclampsia or fetal growth restriction. However, existing studies report conflicting results.

Methods:
We conducted a systematic review and meta-analysis of studies assessing uterine artery resistance indices—Pulsatility Index (PI) and Resistance Index (RI)—in pregnant women with and without a history of cesarean section. Searches of PubMed, Scopus, Web of Science, and Embase up to April 2024 identified eligible studies. Data were pooled using random-effects models.

Risk of bias was assessed with the Newcastle–Ottawa Scale, and certainty of evidence was graded using GRADE.

Results:
Six studies involving 1,656 pregnant women met the inclusion criteria. The pooled analysis demonstrated a modest but statistically significant increase in PI among women with a prior cesarean section (Hedges's g = 0.15, 95% CI: 0.03–0.26, p = 0.01), with low heterogeneity (I^2 = 26.6%). No evidence of publication bias was found. Analysis of RI, based on two studies, revealed a non-significant trend toward higher resistance (Hedges's g = 0.19, 95% CI: –0.06–0.43, p = 0.13). Certainty of evidence was rated moderate for PI and very low for RI.

Conclusions:
A history of cesarean delivery may be associated with increased uterine artery resistance, particularly in terms of PI. These findings support the potential value of Doppler monitoring in subsequent pregnancies to anticipate risks such as preeclampsia and intrauterine growth restriction. Further large-scale, high-quality studies are needed to confirm these associations and establish their clinical implications.

Keywords: Cesarean section, uterine artery, Doppler ultrasonography, pulsatility index, resistance index, meta-analysis.

Placenta accreta spectrum (PAS)

Dr.Maryam Moshfeghi

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Placenta accreta spectrum (PAS) is a general term comprising placenta accreta, increta, and percreta. Women with PAS are at high risk of life threatening hemorrhage at delivery. In placenta accreta, the anchoring villi attach to the myometrium; in placenta increta, the villi invade into the myometrium; and in placenta percreta, the villi penetrate to or through the uterine serosa and may invade surrounding organs. PAS is generally a consequence of defective decidualization in an area of scarring caused by previous uterine surgery. The most important risk factor for PAS is placenta previa after a prior cesarean delivery. sonographic evaluation of the interface between the placenta and myometrium between approximately 18 and 24 weeks of gestation. At this gestational age, the prenatal diagnosis of PAS can be made or ruled out with close to 90 percent accuracy. The first clinical manifestation of PAS is either antenatal bleeding or profuse, life-threatening hemorrhage that occurs at the time of attempted manual placental separation. Prenatal diagnosis of PAS is based upon the presence of characteristic findings on ultrasound examination, particularly in patients with placenta previa or a low lying placenta after one or more previous cesarean deliveries. We have found that placental lacunae (which appear as intraplacental sonolucent spaces and disruption of the interface between the bladder wall-uterine serosa (“bladder line”) are the most reliable sonographic diagnostic findings. In addition, the normal hypoechoic area behind the placenta (termed the “clear space” or “clear zone”) may be missing or irregular, and the retroplacental myometrium may be thin.

Color flow Doppler demonstrating turbulent (“chaotic”) flow and/or bridging vessels are valuable confirmatory findings of PAS.

Uterine fibroids

Dr. Maryam Mazloomi

Uterine fibroids are benign smooth muscle tumors that can cause various complications during pregnancy. Approximately 10% to 30% of pregnant women with fibroids experience related complications.

• The most important complications of fibroids in pregnancy include: 1. Pelvic and Abdominal Pain: This is particularly common in the second and third trimesters, often due to rapid fibroid growth or degeneration (red degeneration) caused by inadequate blood supply. 2. Increased Risk of Miscarriage: The risk of first-trimester miscarriage is about two times higher in women with fibroids compared to women without them. 3. Preterm Birth: Large fibroids can cause premature contractions and reduce space in the uterus, increasing the risk of delivery before term. 4. Fetal Growth Restriction: Large fibroids may limit the space available for the fetus, potentially leading to impaired fetal growth. 5. Placental Abruption: If the placenta implants near a fibroid, the risk of it separating

What is Endometriosis

Dr.Abolfazl Mehdizadehkashi

• Endometriosis is a chronic, estrogen-dependent disease, defined as the presence of endometrial glands and stroma outside the uterine cavity .

• Approximately 5% to 15% of women of reproductive age develop endometriosis

• The overall true prevalence of endometriosis is unknown.

• The prevalence of asymptomatic in TL cases is 5% and in pelvic pain is 20%-50% &in infertility is 20%-70% .

• The mean age is 25 to 30 years.In women younger than 17 mostly are associated with mullerian anomalies, 5% of cases are in postmenopausal women who have received ERT.

• Risk of endometriosis is inversely related to number of term pregnancy

• Alcohol & caffeine can increase and exercise & smoking decrease risk for endometriosis

• Clinical diagnosis of endometriosis(cpp, dysmenorrhea, blue-colored spot,

septum nodularity, fixed retroverted uterus, fixed adenexal mass) ,High level Ca-125 ,Imaging: Us (TV ,color doppler, TR) MRI,and diagnosis by therapeutic trial or surgical diagnosis (laparoscopy)

• Dysmenorrhea, a highly prevalent gynecologic complaint, affects 70%-91% of adolescent and young adult females.

• Early after menarche, the anovulatory characteristics of menstrual cycles make dysmenorrhea a common feature during the adolescent years.

• In women with surgically diagnosed endometriosis, 3 personal parameters best predicted the later finding of DIE:

• (1) family history of endometriosis

• (2) absenteeism from school during menstruation at adolescence

• (3) prolonged use of OCs for treating primary dysmenorrhea

• Deep infiltrative endometriosis of the rectovaginal septum can be one of the most severe forms of endometriosis.

• It is characterized by spherically shaped lesions situated deep in the rectovaginal septum and often only visible as a small typical lesion at laparoscopy or not visible at all.

• According to anatomic, surgical, and pathologic findings, deep endometriotic lesions seem to originate intraperitoneally rather than extraperitoneally.

• Also the lateral asymmetry in the occurrence of ureteral endometriosis is compatible with the menstrual reflux theory and with the anatomic differences of the left and right hemipelvis.

Ref: Telind operative gynecology

Journal of Minimally Invasive Gynecology

INFERTILITY FELLOWSHIP ASSOCIATE PROFESSOR OF TEHRAN MEDICAL UNIVERSITY

Dr.AIDA NAJAFIAN

History Of Donation

Gamete donation refers to the process of providing sperm or oocytes (eggs) to assist infertile couples in achieving pregnancy, which involves ethical and legal considerations regarding informed consent, donor health risks, and the rights of all parties involved.

The first child born from egg donation was reported in Australia in 1983. Just weeks before the press release in Los Angeles, the first birth from an egg fertilized in vitro and transferred to a recipient was reported by the Melbourne group at the Queen Victoria Hospital, and this occurred shortly before the baby reported by Buster et al. was born. Also, importantly, and for the first time, the 25-year old Australian recipient suffered from ovarian failure and was prescribed exogenous hormone replacement therapy to prepare her uterus for embryo implantation . The eggs were harvested from a 29-year old infertile "donor" undergoing IVF treatment who altruistically provided four of her eggs to the recipient after laparoscopic retrieval. However, it should be remembered that although the recipient was successful in achieving pregnancy the donor, sadly, was not. In the procedure, which is no longer used today, a fertilized egg that was just beginning to develop was transferred from one woman in whom it had been conceived by artificial insemination to another woman who gave birth to the infant 38 weeks later. The sperm used in the artificial insemination came from the husband of the woman who bore the baby. The donation of human oocytes and embryos has since become a common practice similar to other donations such as blood and major organ donations. The practice of egg donation has sparked media attention and public debate, and has had a substantial impact on the field of reproductive medicine.

Endometriosis a chronic gynecological disorder

Dr. Roya Padmehr

Endometriosis is a chronic gynecological disorder characterized by ectopic endometrial-like tissue. While many cases respond to standard therapy, complicated presentations involving deep infiltrating disease, pelvic adhesions, and multi-organ involvement present unique challenges. These patients often suffer from severe pain, infertility, and frequent recurrence.

Challenges:

Management is complicated by diagnostic delays, overlapping symptoms with other pelvic conditions, and high surgical complexity. Involvement of the bowel, bladder, or ureters often necessitates multidisciplinary care. Patient-centered considerations, including fertility preservation and risk of surgical morbidity, add to the complexity.

Management Strategies:

Effective care requires an individualized, team-based approach.

• Diagnosis: Advanced imaging (transvaginal ultrasound, MRI) aids surgical planning, while laparoscopy remains the gold standard.

• Medical therapy: Hormonal suppression with combined contraceptives, progestins, or GnRH analogs may alleviate symptoms but is often insufficient for extensive disease.

• Surgical management: Excision of deep lesions can improve pain and fertility but carries risk of complications. Conservative excision combined with assisted reproduction offers alternatives for patients prioritizing fertility.

• Adjunctive care: Pain management, psychological support, and lifestyle modification enhance long-term outcomes.

Future Directions:

Novel hormonal agents, non-hormonal therapies, and biomarkers for earlier diagnosis are under investigation. Advances in minimally invasive and robotic surgery may improve safety in complex resections.

Conclusion:Complicated endometriosis requires tailored, multidisciplinary management. Combining accurate diagnosis, judicious use of medical therapy, advanced surgical expertise, and supportive care is essential. Emerging diagnostics and therapies hold promise for improving prognosis and quality of life in this challenging population.

Salpingectomy for treatment of infertility in embryo transfer failures

Dr. Jalil Pakravesh

Hydosalpinx is an indication for A.R.T infertility. Repeated embryo transfer failures and incordination endometrial growth with hydrosalpinx is one of the challenges in patients . Surgerical treatment of hydrosalpinx is sapingostomy, salpingectomy, tubal ligation. An investigation from 1393 to 1403 in 142 patients with at least 3 times E.T failures with hydrosalpinx. 61 patients with endometriosis ,41 patients with P.I.D , 5 patients with past history of perforated appendicitis, 3 patients with tubal tuberculosis.

Salpingectomy was done in all patients. 16 patients became pregnant without A.R.T , 28 patients with embryo transfer had pregnancy's

Informed Consent in Female Cosmetic Genital Surgery

Dr. Nahid Radnia

Obstetrician & Gynecologist – Fellowship in Pelvic Floor Disorders
Associate Professor, Department of Obstetrics and Gynecology, Hamadan University of Medical Sciences ◦ Key Points: • 1. Nature and : Cosmetic genital surgeries are elective and optional procedures with no urgent or essential medical necessity. Common goals include: improving appearance, reducing functional discomfort (such as friction, pain from clothing or during intercourse), and enhancing self-confidence. 2. Realistic Expectations: Guaranteeing results is not possible and this must be clearly stated. Individual body differences may affect surgical outcomes. 3. Specific Risks and Complications: The physician must review all common and rare complications with the patient. • Bleeding, infection, undesirable scarring • Altered or reduced sensation (particularly in labiaplasty and clitoral hood reduction), vaginal dryness or discomfort during intercourse • Chronic pain or prolonged discomfort • Possible need for corrective or revision surgery 4. Alternative Treatments: • No surgery: patients should be informed that surgery is a choice, not a requirement. • Non-surgical options such as laser, radiofrequency, sex therapy, or pelvic floor physiotherapy may be considered. 5. Ethical and Legal Issues: • Consent must be given freely, without pressure from a spouse or society. • The patient must be an adult, competent, and capable of independent decision-making.
• Confidentiality and protection of patient privacy are mandatory. 6. Process of Informed Consent: • Consent should be obtained through a face-to-face consultation where all aspects are explained in simple language, not merely through signing a paper. • The use of images and diagrams is recommended to improve understanding. • Sufficient time must be provided for questions and answers. 7. Special Considerations in Female Genital Surgery: • The physician must ensure that the patient's motivation is personal and informed, not influenced by cultural expectations or social pressure. • The consent form should explicitly
state that surgery does not guarantee improved sexual function and may even alter it.
• Postoperative limitations and care must be explained clearly and transparently.

Surgical Management in Placenta Accreta Spectrum (PAS)

Dr. Samaneh Saghafian

The main goal in management of PAS is to reduce massive postpartum hemorrhage. Cesarean hysterectomy is the most common management method for PAS and is performed using various techniques. Supracervical hysterectomy is associated with a greater need for reoperation and perioperative mortality compared to total hysterectomy,so total hysterectomy is the preferred method.

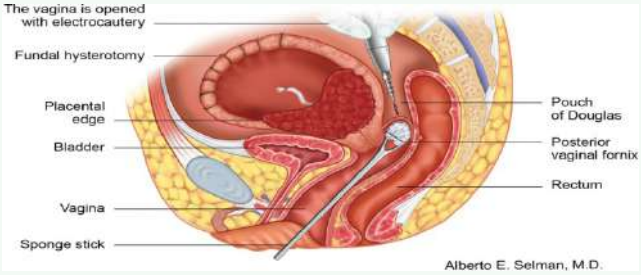
It's recommended to insert a bladder catheter and ureteral stents. The patient should be placed in the lithotomy position with boot stirrups, a vaginal prep with povidone-iodine should be performed, and in non-previa cases, a counted sponge should be placed directly beneath the cervix to delineate it.

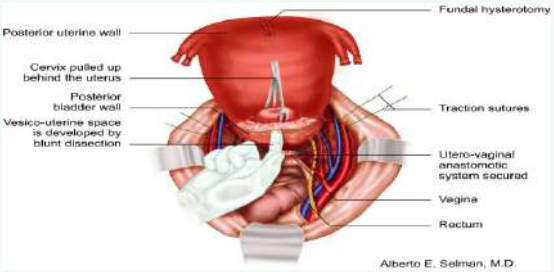
Bladder dissection should be done sharply using electrosurgery or Metzenbaum scissors. In cases where the vesicocervical space is highly vascular and dissection is difficult, At first open the paravesical space. After safely clamping and suturing the uterine artery, dissection of the bladder at the midline should be attempted.

One of the recommended techniques in percreta cases is the Retrograde Posterior Abdominal Hysterectomy. In this method, the vagina is opened into the Pouch of Douglas using an electrocautery. Before pulling the bladder down, the uterosacral and cardinal ligaments, and the uterine artery are dissected after bringing down the broad ligament.The cervix is then elevated toward the posterior wall of the uterus, and the bladder dissection is performed.

Another technique, which is associated with a significant reduction in intraoperative hemorrhage, is the Modified Radical Hysterectomy. Utero-ovarian and round ligaments are first dissected. a retroperitoneal dissection is performed, the incision is extended toward the paravesical space. Dissection in an upward direction allows for the visualization of

the ureter and the bifurcation point of the common iliac artery. The anterior branch of the internal iliac artery is visualized, and the uterine artery is ligated at its origin.





Persistent Pain after Endometriosis Surgery: Challenges and the Role of Interventional Pain Management

Dr. Kambiz Sadegi

Background:
Although surgical excision is a cornerstone in the treatment of endometriosis, a significant proportion of patients continue to experience persistent or recurrent pelvic pain. Etiologies include residual or deep infiltrating disease, adhesions, fibrosis, neuropathic mechanisms, central sensitization, and overlapping conditions such as adenomyosis or pelvic floor dysfunction. This chronic pain not only reduces quality of life but also imposes a considerable psychosocial and economic burden.

Methods:
A narrative review of current literature and clinical practice was performed, with emphasis on interventional pain strategies in the management of persistent pain after endometriosis surgery. Evidence was drawn from clinical trials, guidelines, and expert consensus, highlighting practical approaches and gaps in knowledge.

Results:
Conventional treatments such as hormonal suppression and analgesics are often inadequate in refractory cases. Interventional pain management techniques, including superior hypogastric plexus block or neurolysis, presacral neurectomy, pudendal and sacral nerve modulation, and myofascial or trigger point injections, have shown benefit in carefully selected patients. These procedures, performed under ultrasound or fluoroscopic guidance, can disrupt abnormal nociceptive pathways, reduce sensitization, and improve short- and medium-term pain control. Patient selection requires multidisciplinary evaluation to exclude hidden diagnoses and optimize outcomes. Current evidence supports a multimodal and patient-centered framework, integrating surgery, medical therapy, interventional procedures, psychological support, nutrition, and physiotherapy.

Conclusion:
Persistent pain after endometriosis surgery remains a complex and multifactorial challenge. Interventional pain management provides valuable tools for addressing refractory cases, bridging surgical and medical care, and improving patient outcomes. However, high-quality randomized controlled trials and long-term data are still limited. Future research should focus on defining optimal indications, standardizing techniques, and integrating interventional strategies into evidence-based algorithms for comprehensive management of endometriosis-related pain.

The role of Exercise in reducing mortality among women

Third Vice President and Head of Women Committee of Iran Football Federation

Dr.Farideh Shojaei

Regular exercise is one of the most important factors in improving overall health and reducing mortality rates among women. Physical activity strengthens the cardiovascular system and lowers the risk of diseases such as heart attacks, high blood pressure, osteoporosis and diabetes. Exercise also helps maintain and reduce weight, prevents obesity, which is itself a major contributor to chronic conditions. Moreover, physical activity improves women's mental health by reducing stress and anxiety, and enhancing sleep quality. These combined benefits contribute to increased life expectancy and decreased mortality from various diseases in women. Studies have shown that women who engage in regular exercise have a lower risk of death from cardiovascular diseases and cancer.

The Role of Physiotherapy in the Management of Pain in Women: Focus on Exercise, Electrical Stimulation, and Biofeedback

Dr. Alireza Shahab

Specialized Doctor of Sports Pathology, Candidate DPT, Member of the Board of Directors of the Medical Committee of the Football Federation, Member of the Board of Directors of the Iranian Physiotherapy Association Association, Physiotherapist of the Iranian National Football Team

Abstract:
Chronic pain is highly prevalent among women and often linked to musculoskeletal dysfunctions, pregnancy-related changes, and pelvic floor disorders. Physiotherapy offers effective, evidence-based approaches for pain management, including therapeutic exercise, neuromuscular electrical stimulation (TENS/NMES), and biofeedback. These modalities improve muscle function, modulate pain, and enhance neuromuscular control. This presentation highlights the role of physiotherapy in managing conditions such as chronic pelvic pain, low back pain, and postpartum discomfort, emphasizing non-pharmacological strategies to restore physical function and improve quality of life.

Preoperative Optimization and Scheduling for Pelvic Organ Prolapse Surgery

Dr. Samira Sohbati

Preoperative optimization is central to improving safety and long-term outcomes in women undergoing pelvic organ prolapse (POP) surgery. Contemporary recommendations from UpToDate, the International Urogynecological Association (IUGA), and the International Continence Society (ICS) emphasize a structured approach integrating medical, functional, and patient-centred factors.

Comprehensive risk assessment should include history, standardized POP quantification, and selective urodynamic testing. Comorbidity review, anesthesia consultation, and medication reconciliation reduce perioperative morbidity. Optimizing modifiable risks—smoking cessation, glycemic control, correction of anemia, weight management, and treatment of constipation—improves recovery and surgical outcomes.

Pelvic floor–specific interventions support functional optimization. Pelvic floor muscle training may enhance continence and structural support, while topical vaginal estrogen is advisable in postmenopausal women with atrophic mucosa to promote tissue integrity and healing. Preoperative counselling on bowel management, sexual function, and postoperative physical activity enhances patient preparedness.

Shared decision-making remains essential. Patients should receive clear counselling regarding recurrence risk, concomitant continence procedures, and bladder management strategies. Scheduling must balance prolapse severity, symptom burden, and comorbidity profile, ensuring that surgery is performed at an optimal window of fitness and quality-of-life impact. Evidence supports avoiding routine bowel preparation, tailoring thromboprophylaxis to risk, and implementing multimodal perioperative analgesia.

Recent systematic reviews confirm that structured preoperative pathways reduce morbidity, shorten catheter duration, and accelerate functional recovery. Standardized prehabilitation and scheduling protocols, as advocated by ICS and IUGA, enhance surgical safety, improve patient-reported outcomes,

and promote efficient allocation of surgical resources.

In conclusion, preoperative optimization for POP surgery should integrate medical stabilization, pelvic floor conditioning, and individualized scheduling within a shared decision-making framework. This evidence-based approach improves outcomes, reduces complications, and represents best practice in modern urogynecology.

Key words: Pelvic Organ Prolapse surgery, Preoperative Care, Patient Optimization

The Role of Exercise in the Prevention of Osteoprosis

Dr. Safoora Sabbaghian Rad

Ph.D.in Sport Biomechanics
Faculty Member of the Department of Physical Education ,University of Qom

Abstract
Osteoporosis is one of the most common metabolic bone diseases, characterized by decreased bone density and increased bone fragility. Nowadays, exercise is recognized as one of the primary non-pharmacological interventions for the prevention and management of this condition. Whole-body vibration exercises improve bone density in the spine and hip, particularly in postmenopausal women, by stimulating mechanoreceptors and activating osteoblasts.Resistance training of moderate to high intensity also leads to significant increases
in bone mineral density (BMD) through biomechanical and hormonal mechanisms, such as the Wnt/β-catenin and IGF1- pathways.Balance exercises, such as Tai Chi and yoga, although not directly affecting bone density, play a crucial role in reducing the risk of falls and fractures.
Recent findings (2024–2023) indicate that combining aerobic and resistance training is the most effective approach for simultaneously improving bone density and muscle function. However, the beneficial effects gradually diminish if physical activity is discontinued.Recent systematic reviews emphasize that the principles of "progressive loading" and exercise consistency are key factors in the effectiveness of exercise programs. Accordingly, designing multifaceted and sustainable training protocols can be considered a safe and practical approach for the prevention and management of osteoporosis.

Causes and Management of the Desire for Multiple Pregnancies

Dr. Fatemeh Tara-Fellowship in perinatology, Professor of Mashhad University of Medical Sciences, Mashhad, Iran

The desire for multiple pregnancies, especially twins or higher-order gestations, has become more prevalent due to assisted reproductive technologies (ART) and social or cultural preferences. While multiple pregnancies may be seen as desirable for increasing family size quickly, they carry significant maternal and fetal risks, including preterm birth, low birth weight, and pregnancy complications.

Causes of the Desire for Multiple Pregnancies

1. Assisted Reproductive Technologies (ART): The use of ART, such as in vitro fertilization (IVF), often involves transferring multiple embryos to improve the chances of pregnancy. This approach inadvertently increases the likelihood of multiple gestations.

2. Delayed Childbearing: Women increasingly choose to conceive later in life. Older maternal age is associated with higher rates of multiple ovulations, which can lead to twin or higher-order pregnancies.

3. Socioeconomic and Cultural Factors: Preferences for larger families, lack of awareness regarding risks, and cultural perceptions that value multiple births contribute to the desire for multifetal pregnancies.

Management and Reduction Strategies

1. Patient Education and Counseling: Comprehensive counseling about the health risks associated with multiple pregnancies helps patients make informed reproductive decisions.

2. Single Embryo Transfer (SET): Adopting SET during ART can maintain overall pregnancy success rates while significantly reducing the incidence of multifetal gestations.

3. Multifetal Pregnancy Reduction (MFPR): In cases of existing multiple fetuses, MFPR may be considered to lower maternal and fetal risks. Decisions should be made collaboratively, considering medical, ethical, and personal factors.

4. Clinical Guidelines and Policies: Limiting the number of embryos transferred and adhering to evidence-based guidelines effectively reduce the frequency of multiple pregnancies.

In summary, the desire for multiple pregnancies is influenced by medical, social, and cultural factors. Through education, careful reproductive planning, and adherence to clinical strategies, the risks associated with multifetal pregnancies can be minimized, improving outcomes for both mothers and infants

manage postpartum hemorrhag

Dr.Gholamraza tizroo

More recently ،developed a simple, cost-effective technique to manage postpartum hemorrhage in resource-limited settings. This method, known as the "Glove Balloon," requires only basic, readily available materials: a sterile surgical glove, a Nelaton catheter, an IV set, a serum bag, an IV pole, and silk thread.

Here is how the technique is performed:

– The glove is tied at the wrist opening. – A small puncture is made in the tip of one of the glove's fingers, through which a Nelaton catheter is inserted and secured with silk. – The glove is placed inside the uterus. – The serum bag is hung on an IV pole and connected via the catheter. A blood pressure cuff is wrapped around the bag and inflated to push fluid into the glove. – Inflation continues until the intrauterine pressure is about 4 cmHg higher than the patient's arterial pressure, tamponading the bleeding. – The IV line is clamped to maintain pressure, mimicking vessel compression. – After 12 hours, the glove is deflated and removed.

I recently used this method to save several patients from undergoing unnecessary and life-altering hysterectomies, including a young mother with placenta percreta. I've been called upon multiple times by colleagues to assist in critical cases of postpartum hemorrhage, including atonia, where initial attempts witha bekriyballon were unsuccessful.

In my experience, the "Glove Balloon" technique has proven significantly more effective, providing superior control of bleeding and enabling uterine preservation, even in severe cases where hysterectomy would have otherwise been the only option.

This technique was published in a gynecology journal as a simple, life-saving, and low-cost intervention for postpartum hemorrhage, especially beneficial in resource-constrained settings

Labiaplasty: History and Normal Labia

Dr.Mansooreh Yaraghi

In our society, the request for labiaplasty has increased sharply, following the global trend. Factors such as the relationship with her partner and increased access to media can be mentioned as a major influence. The main motivation for undergoing this procedure was to improve the appearance of the genitalia and sexual relationships. The study showed that aesthetic, sexual, andpsychological reasons are the most important parameters. Despite this rapid increase, the definition of normal labia, surgical indications, the best surgical method, its complications, and ethical considerations remain unclear.

A study reported that nearly %89 of women believe that the appearance of genitalia were normal, and that symmetry and color were the most relevant factors (2023). Furthermore, even educational sources do not provide a definition of the natural limits of the labia.

on the other hand, recent studies, similar to previous articles, have shown that the anatomy of the female external genitalia varies greatly in size, ranging from 5 mm to 48 mm. Another study showed that the variation in labia minora size was not directly related to satisfaction with genital appearance, and other factors influence the perception of beauty (Iran 2025).

The World Health Organization (WHO) published in 2025 new guidelines on the prevention of female genital mutilation (FGM) and management of its complications. Although it is not directly about cosmetic genital surgeries, it emphasizes the importance of avoiding the medicalization of unnecessary procedures and respecting women's health and rights (WHO, 2025).,

This scenario emphasizes the need for research on natural diversity, assessment of social demand, and refraining from unnecessary interventions on healthy tissues.

From Data to Decision: AI applications in Reproductive Biology

Dr.Amir-Hassan Zarnani

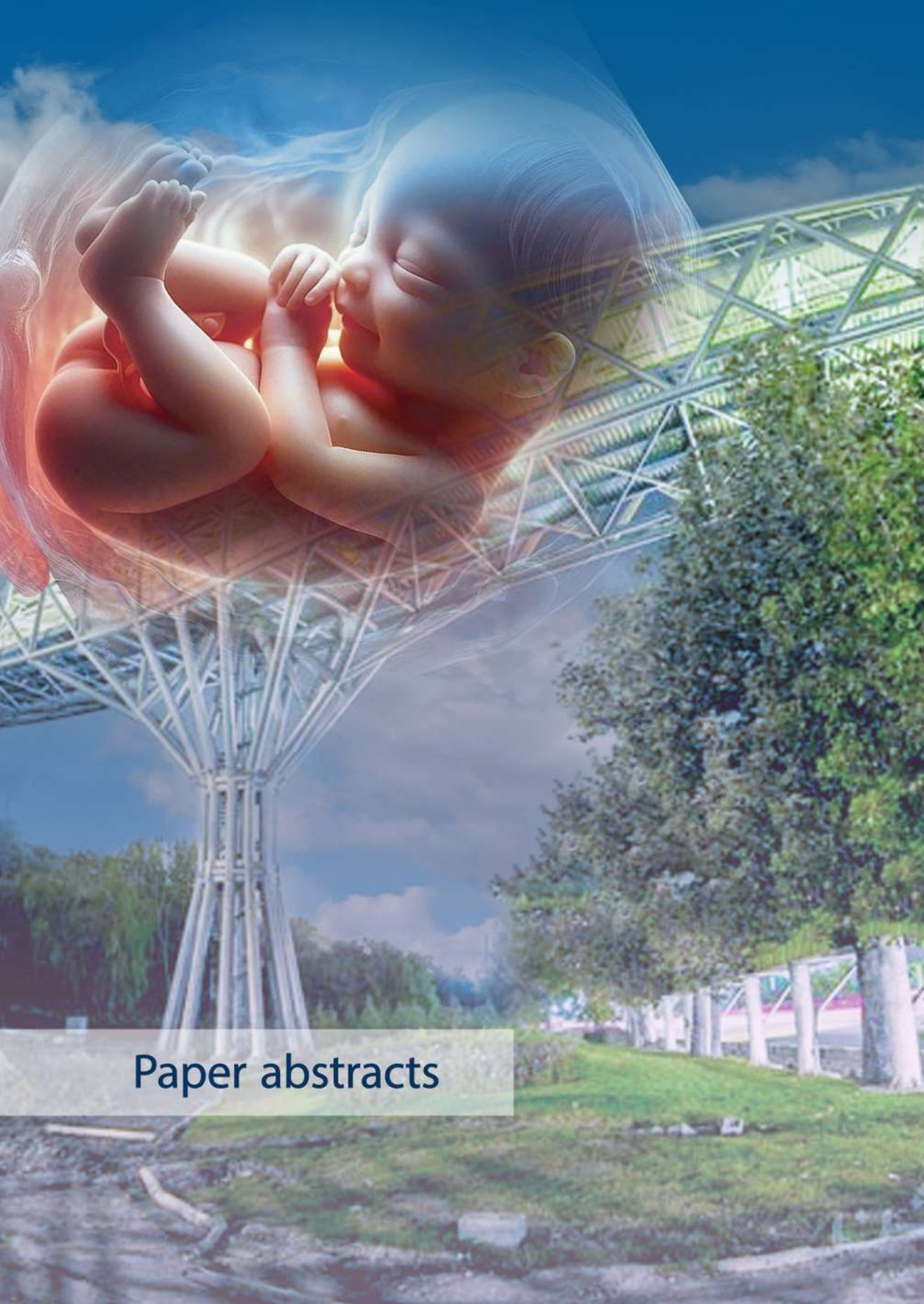
Department of Pathobiology, School of Public Health, Tehran University of Public Health

mbryo implantation is a delicate interaction between developing blastocyst and a receptive endometrium, a process fundamental to pregnancy success. While we understand this involves extensive endometrial remodeling, immune cross-talk, and complex molecular signaling, a complete picture remains elusive. Disruptions in these finely tuned processes are linked to infertility and pregnancy loss, yet clinical diagnostics often fail to capture their complexity.

Modern multi-omics technologies have revolutionized our approach by generating vast datasets on the genes, proteins, and metabolites involved in implantation. However, this wealth of information presents a new challenge: integrating these complex, disparate data to find meaningful patterns. This is where artificial intelligence (AI) becomes a transformative tool. AI and machine learning algorithms are uniquely equipped to mine these large-scale datasets, uncovering hidden relationships and predictive biomarkers that escape conventional analysis.

By deciphering the intricate biological codes within the data, AI moves us from simple observation to actionable insight. It offers the potential to redefine reproductive phenotypes, moving beyond conservative diagnostic guidelines towards a more applicable understanding of reproduction. Ultimately, the integration of AI into reproductive biology is not just about managing data; it is about unlocking a new era of personalized diagnostics and therapeutic strategies, finally addressing the root causes of infertility and recurrent pregnancy loss with unprecedented precision.

Key words: Reproductive biology, Implantation, Embryo, Artificial intelligence, Infertility, Pregnancy loss



Paper abstracts

The Effect of Medicinal Plants on Dysmenorrhea Caused by Endometriosis: a multicenter randomized double-blind placebo-controlled trial

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Background

Endometriosis is a common disorder observed in half of women with fertility issues, characterized by the presence of endometrial-like tissue outside the uterine cavity, along with chronic pelvic pain and infertility. Long-term management remains challenging with conventional treatments, prompting many patients to explore self-management strategies, including dietary modifications. Growing evidence highlights the central role of inflammation in endometriosis, influencing processes such as proliferation, apoptosis, and angiogenesis. Additionally, oxidative stress—an imbalance between reactive oxygen species and antioxidants—has been implicated in disease progression, contributing to inflammatory responses in the peritoneal cavity. Given the potential benefits of antioxidant therapies alongside surgical or assisted reproductive techniques, this review examines the role of medicinal plants (e.g., curcumin, ginger, green tea, chamomile) in managing endometriosis-related pain and infertility by targeting inflammation, oxidative stress, invasion, apoptosis, and angiogenesis.

Management of patients with ovarian cancer during pregnancy

Dr. Soheila Aminimoghaddam

Introduction:
Gynecological cancers during pregnancy are rare, 2 to 5 per 100000 pregnancies primarily during first trimester. Both maternal and fetal health should be considered. Improve the benefit of treatment for the mother while minimizing harm to fetus.

Result:
Staging and treatment should be discussed in multidisciplinary team. Work up and treatment should be conducted in a specialized center in management of gynecological cancers. Ultrasound examination is recommended for diagnosis and staging during pregnancy and MRI should be performed in patients with an adnexal mass with an inconclusive ultrasound.

Discussion:
Pregnancy preserving staging surgery for ovarian cancer could be considered in first or early second trimester. Cytoreductive surgery for advanced ovarian cancer is not recommended during pregnancy. In apparent early stage surgery with frozen section is done and in non-Epithelial ovarian cancer (EOC), conservative surgery with chemotherapy(CT) if indicated. In EOC limited to ovary and G.A < 18 weeks(W.), surgical staging considered and in stage > 2 termination of pregnancy desired and in ≥ 18 W. biopsy ± adnexectomy is done and CT during pregnancy and restaging / debulking after delivery recommended. apparent advanced stage ≥ 3, core cut biopsy / open-laparoscopy and delivery or CT during pregnancy and debulking after delivery recommended.

Key word:
Management , ovarian cancer , pregnancy

Design and synthesis of phytosolve-based hesperidin for reducing depression in an animal model of PMS

Dr.Marziyeh Ajdari

Abstract

Background and Objective: Premenstrual syndrome (PMS) is one of the most common female problems that affects women's quality of life. Among many treatments deployed for easing PMS, one of them being involve hesperidin. Hesperidin has a low bioavailability due to poor dissolution, whereas sustained release formulations (SRDDSs) offer a favorable result in increasing bioavailability. The present study is undertaken to investigate the effect of hesperidin loaded in nano phytosolve on the PMS model.

Materials and Methods: The phytosolve formula contained a mixture of S75 lipid, glycerol, and MCT oil, which was prepared using a probe sonicator. In this study, 36 female NMRI mice were divided into six groups: control, sham, PMS model, hesperidin treatment, Phytosolve treatment, and combined hesperidin/phytosolve treatment. After the completion of the treatment period, the forced swimming test was performed and ensuing results were recorded.

Results: The mean particle size of the phytosolve formulation was 69.9±7.07 nm. Approximately 40% of the phytosolve was released in the first 48 hours. After 12 hours, the release of phytosolve reached 10-20% per day. The immobility rate in the forced swim test was significantly increased in the phytosolve containing hesperidin group compared to the hesperidin group ($P<0.0001$).

Conclusion: Phytosolve based on lipoid S75 loaded with hesperidin reduced depression. The phytosolve S75 formul ation will be useful for developing a drug delivery system with excellent biocompatibility and therapeutic effect for the treatment of PMS and other related biomedical applications.

Keywords: Premenstrual syndrome (PMS), Hesperidin, Forced swim test, Phytosolve formulation

Methods

A systematic literature search was conducted using PubMed, Scopus, and Web of Science to evaluate the effects of medicinal plants on endometriosis-associated pain. The analysis included only randomized controlled trials (RCTs) and clinical studies published between 2016 and 2024 to ensure relevance and reliability.

Results

The findings revealed that curcumin supplementation (500 mg twice daily for 8 weeks) did not significantly improve primary or secondary dysmenorrhea ($p = 0.496$). Studies on other herbal remedies, including chamomile, cinnamon, and ginger, demonstrated no clear superiority over placebo in pain relief (mean difference [MD] -1.55 points, 95% CI -2.43 to -0.68). However, chamomile showed a slight advantage over NSAIDs (MD -1.42 points, 95% CI -1.69 to -1.15). Dietary analysis indicated that increased consumption of green vegetables was associated with a reduced risk of endometriosis (odds ratio [OR] 0.39, 95% CI 0.21–0.74, Ptrend = 0.004), whereas carrots and green tea exhibited no significant correlation (P = 0.51).

Conclusion

Current evidence does not strongly support the efficacy of dietary supplements in alleviating dysmenorrhea, and safety profiles remain understudied. Nevertheless, preliminary findings suggest potential benefits for certain herbal interventions, warranting further high-quality research to validate their therapeutic role.

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Keywords: Endometriosis, Curcumin, Herb, Dysmenorrhea, Pain.

Investigation of knowledge and Attitude about Human Papillomavirus Disease and Its Related Factors among Medical Students of Kashan University of Medical Sciences

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Introduction: Since students are at risk of human papillomavirus disease and are in the reproductive age, and the possibility of risky behavior is higher in them, they should be aware about HPV virus and its complications and vaccine and the extent of vaccine prevention of the disease. Studying is more important for students. For these reasons, conducting this study among students is more important. The purpose of this study is to determine the knowledge and attitude of medical students about HPV and its related factors.

Materials and methods: In this cross-sectional study, non-clinical medical students (basic sciences and physiopathology section) of Kashan University of Medical Sciences were assessed in 2023 year. In order to investigate the knowledge and attitude of students about HPV, a researcher-made questionnaire was used in cooperation with the professors of the Department of Midwifery, Obstetrics and Gynecology, Infectious Diseases, and Virology. Then, the questionnaire was examined in terms of face and content validity (calculation of CVI and CVR). The calculated ICC for the two questionnaires of awareness and attitude were 0.902 and 0.845, respectively, which were favorable values. Following the direction of reliability, the questionnaire was completed by 10 students (target group) two times with an interval of one

week, and the correlation test was performed between the two stages. Finally, the questionnaire was distributed among the target population and the data was entered into SPSS version 16 and analyzed.

Results: The average age of the participating students was 20.75 ± 1.78 years. The majority of the studied students were girls. The average score of knowledge about HPV among students was 15.06 ± 6.26, among which only 13.3 percent of students had a good level of knowledge about HPV. Also, the average score of attitude towards HPV in students was 57.58 ± 6.93, among which 16.4% of students had a positive attitude towards HPV. In the regression analysis in the field of knowledge, marital status, the presence of at least one first-degree family member as a member of the treatment staff, taking a virology course, having information about the HPV vaccine and vaccination against HPV were the variables that were related to the level of knowledge. In the field of attitude in the regression analysis, gender, family income, vaccination against HPV and higher knowledge score were related to students' attitude in this regard.

Conclusion: In this study, the findings showed that the knowledge and attitude of students about HPV is unfavorable. Considering the various complications that this virus can cause and the need to have correct information about HPV for medical students, it seems that the medical curriculum in basic sciences and physiopathology course should be revised and more practical content about HPV should be included in order to improve the level of students' awareness and attitude.

Keywords: Human papillomavirus (HPV), Knowledge, Attitude, Medical Student

Conflict of interest: No

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Comparison of fresh and frozen-thawed Intracytoplasmic Sperm Injection (ICSI) cycles in maternal and neonatal outcome and Comparison with spontaneous pregnancy

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Comparison of fresh and frozen-thawed Intracytoplasmic Sperm Injection (ICSI) cycles in maternal and neonatal outcome and Comparison with spontaneous pregnancy

Abstract

Background:
Given the increasing trend in applying Assisted Reproductive Technologies (ART) and especially Frozen Embryo Transfer (FET) cycles, comprehensive studies on comparing perinatal and obstetric effects of fresh and frozen cycles with spontaneous pregnancies can be helpful. The present study aimed to compare pregnancy outcomes from ART cycles with the FET and Fresh-ET methods and spontaneous pregnancies.

Methods:
This prospective cohort study was performed on mothers who underwent ICSI in at university Hospital by the FET or Fresh-ETmethods. In total, 100 pregnancies by fresh technique, 103 pregnancies by frozen method and 103 by spontaneous method were included to assess.

Results:
The rate of single pregnancy was higher and adversely twin pregnancy was lower in spontaneous pregnancy as compared with IVF techniques with no difference between the two types of IVFs. In terms of single pregnancy condition, no significant differences were found across the three study groups in prevalence of gestational diabetes mellitus, preeclampsia, hypothyroidism, hyperemesis, postpartum bleeding, placenta abruption, PROM, and cardiac malformations, while in twin pregnancy condition, the prevalence rate of diabetes, preeclampsia and hypothyroidism were higher in spontaneous pregnancy as compared to IVFs groups with no difference between the two IVFs groups. With respect to neonatal outcome, those neonates delivered following spontaneous pregnancy had lower birth weight, lower head circumference at birth, and higher rate of ICU admission as compared to the groups by ICSI methods.

Conclusion:
Our study revealed the high utility of the two FET and Fresh-ET techniques than the spontaneous pregnancy in terms of maternal and neonatal outcome, with no remarkable excellence between the two techniques. Neonatal outcome was better in ART groups.

Key words:
frozen-thawed Intracytoplasmic Sperm Injection (ICSI), neonatal outcome, maternal outcome.

Funding:
No funding was received.

Evaluation of the cytotoxic effect of magnetite nanoparticles carrying paclitaxel on the growth and proliferation of MCF7 breast cancer cell line

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Breast cancer remains a formidable contender in the global health challenge landscape, with its complex pathogenesis and diverse clinical manifestations posing significant barriers to effective treatment and prevention. With the global increase in the incidence of this disease, it is essential to unravel the multifaceted nature of breast cancer to develop effective treatment strategies Magnetic nanoparticles (MNPs) are a unique class of nanoparticles (often made from materials such as iron, nickel, or cobalt). Therapeutically, magnetic nanoparticles are used to deliver drugs and bioactive compounds directly to cells in cancer treatment, thereby targeting cancer cells more effectively.
The type of study is research (descriptive-analytical).
The aim of this study was to investigate the cytotoxic effect of magnetite nanoparticles carrying the drug paclitaxel (PTX) on the growth and proliferation of breast cancer cell line MCF7.
Materials and Methods: In this study, magnetite-heparin nanoformulation was prepared by chemical precipitation and paclitaxel was loaded onto the aforementioned nanoformulation by oil-in-water emulsion method at two temperatures (37°C and 42°C) and pH (5.5 and 7.4). The MCF-7 cell line, which is related to breast cancer, was cultured in RPMI-1640 medium under standard conditions, in the presence and absence of nanoformulation containing paclitaxel, and the toxicity of nanoformulations on cancer cells was examined using the resazurin kit at (24, 48, 72) hours. In this study, for

targeted treatment and reduction of toxicity of paclitaxel, it was loaded onto magnetite magnetic nanoparticles attached to heparin polymer. The effect of treatments (MNP, HP, HP-MNP, PTX, PTX-HP-MNP) on MCF-7 cancer cell line was investigated.
Results: According to FTIR spectroscopy and DLS diagram, MNP nanoparticles had a spherical, dense shape and dimensions of 69nm. By coating it with heparin polymer, it became less dense, spherical in shape and dimensions of 75nm, and by adding PTX drug, it became much less dense and relatively spherical in shape and dimensions of 95nm. By measuring drug release and toxicity, it was concluded that PTX-HP-MNP had a more successful therapeutic effect than free PTX. At times (24, 48, 72) hours, the survival percentage of all treatments was significantly reduced compared to the control group. The lowest survival effect at time 24 hours was related to the PTX-HP-MNP nanoparticle treatment with a concentration of 100%, which was 48.5%. At time 48 hours, the lowest survival effect was related to the PTX-HP-MNP nanoparticle treatment with a concentration of 100%, which was 49%. At time 72 hours, the lowest survival effect was related to the PTX-HP-MNP nanoparticle treatment with a concentration of 100%, which was 45.25%.
Conclusion: The percentage of cell survival and cytotoxicity in hours (24-48-72) in the breast cancer cell line, the lowest survival effect was reported for PTX-HP-MNP treatment with concentrations of 50% and 100%.

Keywords: Breast cancer, MCF7, Magnetite nanoformulation, Paclitaxel, Cytotoxicity.

Minimally Invasive Surgery Rates in Gynecological Surgery in Iran

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Abstract

Background

Medical education requires significant financial investment and a lengthy time commitment to earn a medical degree. This study aimed to examine the employment status of minimally invasive surgeons in Iran, with a particular focus on gynecological surgery.

Methods

A cross-sectional design was used, with a validated questionnaire distributed to 135 Iranian obstetricians and gynecologists involved in laparoscopic surgery.

Results

The study achieved a response rate of 46%. Descriptive statistical analyses provided insights into the educational backgrounds and employment conditions of minimally invasive surgeons in Iran. In contrast, frequency analyses clarified the distribution of laparoscopic surgical expertise across academic institutions.

Conclusion

This study enhances understanding of minimally invasive gynecological surgery practices in Iran and highlights both the benefits and challenges of participation, supporting recommendations for improving educational programs for minimally invasive surgeons in the country.

Keywords: Minimally Invasive Surgery, Gynecology, Iran

Abdominal Wall Endometriosis Post-Cesarean Section: Diagnosis, Surgical Management, and Case Study of Extensive Uterine Adhesion

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Abstract

Introduction

Endometriosis involves ectopic endometrial tissue outside the uterus, commonly in the pelvis but sometimes affecting organs like the urinary tract, gastrointestinal system, and respiratory tract. Abdominal wall endometriosis (AWE) is a rare subtype where endometrial tissue infiltrates the abdominal wall, often occurring secondarily in surgical scars, particularly after cesarean sections. Diagnosing AWE is difficult due to varied symptoms and locations, making imaging techniques such as ultrasound and MRI crucial for evaluation. Preoperative assessment is vital to determine the extent of tissue invasion, especially if large muscles, the peritoneum, or bowel are involved, which may require general surgical intervention

Case Presentation

A 43-year-old woman with a history of three cesarean sections presented with menorrhagia and chronic pelvic pain, and a palpable lump above her cesarean scar. Ultrasonography revealed a hypoechoic irregular mass measuring 39 × 34 mm in the Linea alba above the cesarean scar, extending into the peritoneal cavity and adherent to the uterine body. Surgical wide excision of the mass was attempted, but due to its extension and severe adhesion to the uterus, complete excision with clear margins was not possible. So, a total hysterectomy with bilateral salpingo-oophorectomy was performed.

Discussion

AWE mainly results from iatrogenic implantation of endometrial cells, particularly following cesarean sections, though lymphatic spread and metaplasia are also possible causes. It typically presents as a painful abdominal mass with symptoms like localized pain, swelling, bruising, bleeding, intermittent pelvic pain, and reduced fertility. Diagnosis is primarily made via abdominal and transvaginal ultrasound, with MRI used in uncertain cases. Medical treatments such as oral contraceptives, progesterone, danazol, and GnRH agonists offer only partial symptom relief without curing AWE. The definitive treatment is wide local surgical excision with at least 1 cm margins

to prevent recurrence or rare malignant transformation. When the fascia and muscle are involved or defects exceed 50 mm, fascia mobilization and polypropylene mesh placement may be necessary. In malignant or extensive cases, complete hysterectomy with bilateral salpingo-oophorectomy may be indicated. Preventive surgical measures during cesarean sections include gentle uterine handling, bleeding control, high-pressure saline irrigation before closure, avoiding dead spaces, use of wound protectors, thorough abdominal wall cleaning, specimen retrieval bags, and employing new needles and sutures to reduce AWE risk.

Conclusion

AWE is a rare condition with unclear causes, increasingly relevant due to rising cesarean and obstetric procedures. Diagnosis relies on clinical assessment, patient history, ultrasound, and MRI. The primary treatment is wide surgical excision, which may be more extensive for large or complex lesions, with careful follow-up to monitor for recurrence.

Key words: Endometriosis, Abdominal wall, Cesarean Section, Excision

Conflict of interest statement:

The authors declare that there is no conflict of interest.

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figure1: A) Abdominal wall endometriosis is adherent to uterine body

Comparison of Oral Dydrogesterone Plus Vaginal Progesterone Suppository Versus Intramuscular Progesterone Injection Plus Vaginal Progesterone for Luteal Phase Support in ICSI Patients

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Abstract

Introduction:

Luteal phase support (LPS) is critical in assisted reproductive cycles such as ICSI. Progesterone, the key hormone in this phase, can be administered via oral, vaginal, or intramuscular routes. While intramuscular injections are traditionally used, they often lead to discomfort and poor compliance. Oral dydrogesterone, with favorable bioavailability and tolerability, has emerged as a potential alternative. This study aimed to compare clinical outcomes of two LPS regimens: oral dydrogesterone plus vaginal suppository versus intramuscular progesterone plus vaginal suppository in women undergoing ICSI.

Methods:

This retrospective cohort study was conducted at the IVF center of Imam Khomeini Hospital in Sari. Medical records of 126 women who underwent ICSI treatment from 2021 onward were reviewed. Based on the type of progesterone regimen received during treatment, patients were classified into two groups: those who had received oral dydrogesterone in combination with vaginal progesterone suppositories (n = 66) and those who had received intramuscular progesterone in combination with vaginal progesterone suppositories (n = 60). Demographic and clinical data, including age, body mass index (BMI), anti-Müllerian hormone (AMH) level, cause of infertility, ovarian stimulation protocol, type of embryo transfer, number of embryos transferred, and number of gestational sacs, were extracted from the medical records. The primary outcomes were ongoing pregnancy beyond 12 weeks, miscarriage, and failure to achieve pregnancy. This research was conducted without any financial support from external organizations.

Results:

Among 126 patients (mean age 37.03 ± 5.53 years, BMI 27.3 ± 4.2), the average AMH was 2.99. Most underwent frozen embryo transfer (99.2%). Infertility causes were female (45.2%), male (17.5%), and combined (37.3%). The antagonist protocol was more common (62.7%), and most patients (67.5%) had two embryos transferred.

Ongoing pregnancy was significantly higher in the dydrogesterone group (50%) than in the injection group (21.7%) ($p = 0.001$). Miscarriage rates were 10.6% vs. 6.7%.

Subgroup analysis showed significantly higher ongoing pregnancy rates with dydrogesterone in female infertility (52.2% vs. 17.6%, $p = 0.015$) and male infertility (58.8% vs. 20%, $p = 0.029$), but not in combined infertility.

Among women with BMI ≤ 25, ongoing pregnancy was 66.7% in the dydrogesterone group vs. 11.1% in the injection group ($p = 0.004$), with no significant differences in higher BMI categories.

Conclusion:

Oral dydrogesterone combined with vaginal suppository significantly improved ongoing pregnancy rates compared to intramuscular progesterone in women undergoing ICSI, especially in those with female or male infertility and lower BMI. This suggests that oral dydrogesterone is a promising and patient-friendly alternative in luteal phase support during frozen embryo transfer.

Key Words: ICSI, Luteal Phase Support, Dydrogesterone, Progesterone

Comparative Study Of 3 Trigger Methods in Antagonist Cycle in IVF Outcomes on Poor Responders (POSIDON 3/4): Traditional, Dual and Triple Trigger; A Clinical Trial

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Abstract

Objective: Poor ovarian responders (PORs) pose an excellent challenge for fertility clinics worldwide. This study aimed to examine whether a 'triple trigger' consisting of human chorionic gonadotropin (hCG) plus gonadotropin-releasing hormone agonist (GnRHa) plus human menopausal gonadotropin (HMG) is beneficial or not regarding implantation rate, mature oocyte and embryos for POR.

Method: In this prospective randomized study, we analyzed 105 poor responder patients based on POSIDON 3/4 criteria divided equally into three groups. The first group received only an hCG trigger, the second group received a dual trigger hCG and GnRH agonist, and the third group received a triple trigger hCG and GnRH agonist and hMG. The treatment outcomes, such as clinical pregnancy, chemical pregnancy, number of embryos, number of oocytes (Metaphase II), implantation rate, and ongoing pregnancy, were analyzed and compared.

Results: The baseline characteristics such as age (P value=0.689), anti-mullerian hormone (AMH) level (P value=0.838), and antral follicle counts (AFC) (P value=0.244) were statistically similar in three groups. The number of embryos (P value=0.036) was significantly higher in the Triple trigger group. The number of oocytes was higher in the triple trigger group but didn't reach statistical significance (P value=0.468). The frequency of Zero embryos (51.4%) was significantly higher in the traditional trigger group (P value=0.020). Three groups had no significant difference in terms of zero oocytes (MII) (P value=0.256), chemical pregnancy (P value=0.196), implantation rate (P value=0.568), clinical pregnancy (P value=0.326) and ongoing pregnancy (P value=0.999).

Conclusion: Our study indicated that the number of embryos was significantly higher in the triple trigger and the number of oocytes was higher in the triple trigger group but didn't reach statistical significance. Furthermore, the zero-embryo variable was higher in the traditional trigger group. Although triple trigger seemed to be the best option in poor responder patients regarding all evaluated variables (zero oocytes (MII)), chemical pregnancy, clinical pregnancy, implantation rate, and ongoing pregnancy), statistical significance wasn't achieved.

Keywords: hMG, hCG, GnRHa, poor ovarian response

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Title: Successful Full-Term Pregnancy in Congenital Thrombotic Thrombocytopenic Purpura: A Case Report and Literature Review

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Background: Thrombotic thrombocytopenic purpura (TTP) is a rare, life-threatening thrombotic microangiopathy characterized by thrombocytopenia, microangiopathic hemolytic anemia, and microvascular thrombosis. Congenital TTP (cTTP, Upshaw–Schulman syndrome) is an inherited form that predisposes affected women to acute relapses, particularly during pregnancy, due to physiologic reductions in ADAMTS13 activity. These episodes carry significant maternal and fetal risks, including miscarriage and preterm delivery. Timely plasma replacement can substantially improve outcomes, although monitoring is challenging in resource-limited settings.

Case Presentation: We report a 32-year-old woman with cTTP diagnosed at age 3 following hematuria, anemia, thrombocytopenia, and renal biopsy demonstrating microangiopathy. She received monthly prophylactic fresh frozen plasma (FFP, 4 units) until age 25, when recurrent relapses necessitated biweekly infusions. After two early miscarriages, her prophylactic regimen was intensified to FFP every 10 days prior to conception. During her third pregnancy, ADAMTS13 monitoring was limited; clinical surveillance relied on platelet counts and lactate dehydrogenase. FFP was administered every 10 days, increased to weekly in the third trimester as ADAMTS13 approached the lower normal range. She delivered a healthy male infant via cesarean section at 37 weeks + 4 days, with only diet-controlled gestational diabetes. Postpartum FFP was continued every 10 days for six weeks, then tapered to a 14-day maintenance regimen.

Discussion: This case demonstrates that pregnancy in cTTP can be successfully achieved with individualized plasma prophylaxis. In settings with limited ADAMTS13 testing, surrogate markers such as platelet count and LDH provide practical guidance. Early and consistent plasma replacement mitigates maternal and fetal risks, underscoring that pregnancy is not contraindicated in cTTP when managed with close multidisciplinary care.

Keywords: congenital thrombotic thrombocytopenic purpura, pregnancy, ADAMTS13

Investigating the effect of bisphenol A on autophagy pathway genes in the ovaries of pregnant mice

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Abstract

Introduction: Bisphenol (BPA) is an endocrine disrupting chemical that exposure to leads to the loss of several key stages of oocyte and follicle development. Reports indicate that BPA also disrupts the process of cellular autophagy. Therefore, in this study, we investigated the effect of bisphenol on the expression level of autophagy pathway proteins in the ovary of pregnant mice.

Methods: 30 5-week-old female NMRI mice were divided into 5 groups. Control group, sham group (receiving solvent: DMSO and Corn oil), group receiving 3 mg/kg bisphenol, group receiving 30 mg/kg bisphenol and group receiving 90 mg/kg bisphenol. Gavage was performed for 4 weeks. Then the mice were pregnant and on day four and a half, blood was collected and serum estrogen and progesterone levels were measured. Ovarian tissue was isolated and the expression of BECN1/Cathepsin B/ATG5 proteins was examined using Western blotting.

Results: The expression of all three proteins Beclin 1, ATG 5 and Catephsin B increased in the bisphenol-treated groups compared to the control group, and this increase was dose-dependent. Also, the levels of estrogen and progesterone hormones in the bisphenol-treated groups decreased significantly compared to the control group.

Conclusion: BPA negatively affects ovarian function by increasing autophagy and leads to a decrease in the production of ovarian hormones required to maintain pregnancy. Given the increasing use of endocrine-disrupting chemicals, further studies in this field seem necessary to maintain pregnancy health.

Keywords: Bisphenol A - Autophagy - Ovary

Efficacy of Adjunct Therapy with Citalopram to Improve Health-Related Quality of Life and Associated Symptoms in Patients with Endometriosis: A Randomized Clinical Trial

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Abstract

Background: Endometriosis is a chronic, estrogen-dependent inflammatory disease associated with pain, infertility, and impaired quality of life. Given the proposed role of selective serotonin reuptake inhibitors (SSRIs) in pain and inflammation, this study investigated the efficacy of adjunctive citalopram in improving symptoms and health-related quality of life in women with endometriosis.

Methods: This randomized clinical trial included 80 women with symptomatic endometriosis. Participants were randomly assigned into two groups: the intervention group received citalopram (20–40 mg) in combination with Verogest (2 mg daily) for 12 weeks, while the control group received Verogest with placebo. Pain was assessed using a visual analogue scale (VAS) and the ENDOPAIN-4D questionnaire, while health-related quality of life was evaluated with the Endometriosis Health Profile-30 (EHP-30).

Results: Forty patients were analyzed in each group. Baseline characteristics were comparable between groups. Compared with placebo, adjunctive citalopram significantly improved domains of emotional well-being (p=0.001), control and powerlessness (p=0.013), and social support (p=0.005). The VAS demonstrated significant reductions in dysmenorrhea (p=0.006), dyschezia (p=0.040), and chronic pelvic pain (p=0.004), but not in dyspareunia (p=0.081). ENDOPAIN-4D showed significant improvements in all domains except pain-related disability (p=0.117). The overall improvement in total scores was significantly higher in the citalopram group (p=0.002).

Conclusion: Adjunctive citalopram therapy significantly reduced pain and improved health-related quality of life in patients with endometriosis compared to placebo. These findings suggest that SSRIs, particularly citalopram, may serve as a valuable addition to standard therapy. Further studies are warranted to determine optimal dosing and compare the efficacy of different SSRIs.

Conflict of Interest: The authors declare no conflict of interest.
Funding: This research received no specific grant from any funding agency.

Keywords: endometriosis; SSRI; citalopram; pelvic pain; health-related quality of life

Episiotomy Scar Endometriosis: Case Presentation

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Background: Endometriosis is a frequent gynecological disease among women of reproductive age, a benign condition with an uncertain etiology, but with multiple theories being proposed as main mechanisms of development.

Perineal endometriosis is an uncommon condition, with various theories about its pathogenesis including the contiguous propagation of endometrial tissue over the episiotomy perineal scar.

Case report: A 32-year-old woman, G1 P1, presented with cyclic pain in the episiotomy area, with significant impairment of her daily quality of life. Clinical examination revealed a palpable mass in the episiotomy area and a probable clinical diagnosis of perineal scar endometriosis was considered. Perineal ultrasound revealed a hypoechoic solid mass measured 50*27*21mm with 10 mm distance from skin near serosal layer of anus but not extended to muscularis layer. The informed consent was taken from the patient including rectal injury, fistula, since the excision should be performed with 1 cm healthy margin. The patient was surgically treated by local excision of the perineal mass. The mass was near to external sphincter and was injured but repaired. The histopathologic examination of the mass confirmed the diagnosis of perineal endometriosis in the episiotomy scar. The patient experienced a favorable postoperative recovery, with a good perineal healing and the disappearance of pain.

Conclusion: Although perineal endometriosis remains a rare condition, it should be considered in all patients with vaginal delivery and a painful perineal mass during menstrual cycle, a wide excision of the affected tissue remaining the best option for a permanent cure.

Key words: Episiotomy, Scar, Endometriosis

There was no funding for this research.

Maternal risk factors before pregnancy for stillbirth: An umbrella review

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Conflict of interest: The authors declare no conflict of interest, financial or otherwise.

Abstract
Background: Stillbirth is the death of a fetus at or after 20 weeks of gestation, making up 60% of perinatal deaths and having significant psychosocial and economic impacts. The present umbrella review assessed the maternal risk factors before pregnancy associated with stillbirth based on meta-analytic studies.

Materials and Methods: We searched three major databases until January 2025. We included meta-analyses that focused on evaluating environmental risk factors associated with stillbirth. We calculated summary effect estimates, 95% confidence intervals (CIs), heterogeneity (I^2), 95% prediction intervals, small-study effects, excess significance biases, and sensitivity analyses. This standardized approach categorizes associations into five hierarchical evidence classes based on stringent methodological criteria: Convincing evidence (Class I), highly suggestive evidence (Class II), suggestive evidence (Class III), weak evidence (Class IV) and Non-significant (ns). To assess the quality of the meta-analyses, we utilized the A Measurement Tool to Assess Systematic Reviews 2 (AMSTAR 2).
Result: The risk factor of pre-existing hypertension (OR 2.56, 95% CI: 2.08, 3.15), race (OR 2.03, 95% CI: 1.85, 2.22), and maternal age (>35 years) (OR 1.64, 95% CI: 1.56, 1.72) was graded as suggestive evidence (class III). The pre-existing diabetes (OR 2.88, 95% CI: 2.04, 4.07), cardiovascular diseases (OR 1.48, 95% CI:

1.01, 1.1), and cesarean delivery (OR 1.39, 95% CI: 1.11, 1.74) were classified as weak evidence (Class IV).

Conclusion: We believe this study could provide valuable insights into the relationship between pre-pregnancy maternal risk factors and stillbirth. Our findings indicate that being Black, having pre-existing hypertension, and being over the age of 35 are highly suggestive risk factors for stillbirth. Additionally, obesity and being overweight also show suggestive evidence of association. In contrast, factors such as having a caesarean section, cardiovascular diseases, and pre-existing diabetes appear to be weakly related to the risk of stillbirth.

Keywords: Stillbirth; Risk factors; Umbrella review; Pregnancy; Maternal

Oxytocin Discontinuation or Continuing in the Active Phase of Induced Labor: Maternal and Fetal Outcomes

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Abstract: Oxytocin, the most commonly used drug to induce labor, may cause adverse effects due to uterine hyperstimulation. The aim of this study was to compare the maternal and fetal outcomes of discontinued or continued oxytocin during the active phase of labor induction. This study was conducted on 70 pregnant women referred to Baath Mission Hospital in Sanandaj, Iran. Patients were randomly assigned to have their oxytocin stimulation continued or discontinued in the active phase of labor. The average duration of the third stage of labor was longer in the oxytocin discontinued group than in the oxytocin continued group (p=0.02). Also, the duration of the first and second stages of labor was longer in the oxytocin discontinued group than in the oxytocin continued group (p=0.01 and p=0.04 respectively). Also, labor induction time was longer in the oxytocin continued group than in the oxytocin discontinued group (p=0.04). In this study, discontinued oxytocin lengthened the first, second, and third stages of labor and shortened the labor induction time. Neither discontinued nor continued oxytocin affected maternal or fetal outcomes.

Keywords: pregnancy, Labor induction, oxytocin.

The impact of early diagnosis of endometriosis on quality of life

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Abstract

Back ground : Endometriosis is one of the most common chronic diseases in women, with a prevalence of up to 10%. The disease particularly affects women of reproductive age. Endometriosis has a significant impact on the patient's quality of life(QoL). In the current study, we aimed to evaluate the role of early diagnosis of endometriosis on patients' QoL.

Methods: In this longitudinal prospective study, 205 women with endometriosis who were referred to the gynecology department of Amir al-Mominin Hospital (Zabol-Iran) in 2021 were evaluated. Patients were divided into two groups based on the time of diagnosis, including early diagnosis and late diagnosis. An Endometriosis Health Profile (EHP) questionnaire was used to collect information about QoL before and 18 months after treatment. Data were analyzed using SPSSv.26 software and significance level was considered less than 0.05.

Results: In both groups with early and late diagnosis, the QoL scores improved without significant difference ($p = 0.303$). There was a significant difference between lower stages (1 and 2) and higher stages (3 and 4) in terms of treatment effects on patients' QoL, and higher stages of endometriosis affected patients' QoL before and after treatment more than lower stages (P values < 0.05).

Conclusion : Early or late diagnosis of endometriosis doesn't affect patients' QoL and patients benefit from treatment regardless of the time of diagnosis.

Keywords: Diagnosis · Endometriosis · Quality of life · Woman · Public health

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Attitudes towards childbearing and related factors among employees with one child in Ilam health centers - 2024

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ABSTRACT

Background: Childbearing is an important social and demographic issue that has received increasing attention from policymakers and researchers

in recent years due to declining fertility rates. Today, some couples tend to delay having children, some space their children out, and others choose not to have children at all. This study aimed to investigate the attitude towards childbearing among employees with one child working in medical and health centers in Ilam city.

Material & methods: This descriptive-cross-sectional study was conducted between November and February 2024 on 260 employees with one child working in medical and health centers in Ilam city. After obtaining written consent, data were collected through an online questionnaire and checklist (on the Press line platform). The questionnaire included demographic, cultural, social, fertility and attitude towards childbearing information. Data were analyzed using SPSS version 18 software and independent t-tests, analysis of variance, Mann-Whitney, Kruskal-Wallis and Spearman correlation. The significance level was considered less than 0.05.

Results: The results showed that the average score of attitudes towards childbearing was 117.9614.51±, which was assessed at a high level. There was a significant inverse relationship between the age of women (p=0.006) and the age of their husbands (p=0.001) with the decision to have children. Also, an inverse relationship was observed between the age of women (p=0.011) and attitude towards childbearing. Participation in social programs (p=0.041) and cultural activities were significantly related to the decision to become pregnant (p=0.001). Also, attitudes towards childbearing were significantly related to the level of social connections (p=0.005) and interaction with family members (p=0.019).

Conclusion: The findings of this study showed that the attitude and intention to have children among employees with one child are influenced by demographic factors, fertility status, and the level of family, social, and cultural connections. These results can be used in formulating policies and programs to promote fertility in working groups.

Keywords: Fertility intention, attitude, childbearing, Single-child employees.

Sponsor: This study was conducted with the financial support of Ilam University of Medical Sciences

Maternal obesity and occult type 2 diabetes in pregnancy

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I**ntroduction**.Obesity is one of the common problems during pregnancy, and about 34% of mothers are overweight. One of the most common conditions associated with obesity is diabetes. Usually, diabetes screening is performed during pregnancy at 24 to 28 weeks, but in obese mothers, screening is necessary as soon as possible. Method and material. A total of 100 pregnant mothers between the ages of 18 and 40 who had a BMI above 30 underwent fasting blood sugar control in the first trimester and at the first prenatal visit. Of these mothers, 30 had fasting blood sugar levels above 95mg/dl, indicating at least gestational diabetes or occult type 2 diabetes. In subsequent serial controls, these mothers had fasting blood sugar levels above 90mg/dl and blood sugar levels two hours after meals above 120 mg/dL. Of the remaining 70 mothers, 10 had abnormal GTT tests at 24 to 28 weeks. In contrast, of 150 mothers of similar age who had a BMI of less than 25, only 15 cases had high fasting sugar in the first trimester**. Result** In cases of obesity or high BMI, the rate of diabetes may be as high as 30%, compared to 10% in the group with a normal BMI. **Conclusion**. Obesity is one of the conditions that is associated with diabetes in most pregnancies, and sometimes the mother is unaware of her type 2 diabetes, so it is best to follow up and evaluate the mother's .condition in terms of diabetes at the first visit

Keywords: diabetes, obesity, pregnancy

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Spontaneous Successful Pregnancy Following Lifestyle Modification in a Woman with Secondary Infertility and Polycystic Ovary Syndrome (PCOS): A Case Report

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Conflict of Interest: None
Degree: Midwifery Expert

Abstract
Background: Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders in women of reproductive age and a leading cause of anovulatory infertility. Lifestyle modification, including dietary adjustment, regular physical activity, and stress management, is recommended as the first-line intervention.

Case Presentation: A 33-year-old woman with a 5-year history of secondary infertility and one previous failed intrauterine insemination (IUI) attempt presented for evaluation. She had a prior successful pregnancy. Ultrasound examination revealed multiple peripheral small follicles in both ovaries consistent with polycystic ovarian morphology (PCO). Hormonal and biochemical tests were within normal limits. Her husband's semen analysis showed asthenozoospermia, which improved after preparation.

Method: Both partners were counseled to implement lifestyle modifications, including a balanced diet with reduced simple carbohydrates, regular moderate physical activity, and stress management strategies. No pharmacological or assisted reproductive interventions were performed.

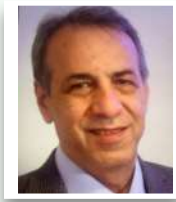
Results: After four months of adherence to lifestyle modification, the patient achieved spontaneous ovulation, and a pregnancy was confirmed with a positive beta-hCG test on 5 Azar 1403. The pregnancy progressed without complications, and a healthy newborn was delivered.

Discussion: This case demonstrates that lifestyle modification alone can be an effective strategy for achieving pregnancy in women with PCOS and prolonged secondary infertility, even after previous failed assisted reproductive techniques. Potential mechanisms include improved insulin sensitivity, decreased androgen levels, and enhanced oocyte quality. Lifestyle interventions may also positively influence sperm parameters, contributing to successful conception.

Conclusion: Lifestyle modification represents a simple, low-cost, and effective approach for managing infertility associated with PCOS. It should be considered as a first-line intervention prior to pharmacological or assisted reproductive methods, even in cases of long-standing infertility.

Keywords: Polycystic Ovary Syndrome, Secondary Infertility, Lifestyle Modification, Spontaneous Pregnancy, Case Report

Funding: No financial support was provided for this study.



Sleep Disorders in Patients with Endometriosis

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Abstract

Background

Endometriosis, affecting 10–15% of women of reproductive age, is a significant gynecological condition linked to pain and infertility, both of which negatively affect patients' quality of life. This study aimed to assess the prevalence and severity of sleep disorders in women diagnosed with endometriosis.

Methods

This cross-sectional analytical study included 665 women attending three hospitals in Tehran (Rasool-e-Akram, Pars, and Nikan), consisting of 463 with endometriosis and 202 without the condition. All participants were informed about the study's objectives and design, provided informed consent, and completed the Pittsburgh Sleep Quality Index (PSQI). Data were then analyzed using SPSS version 22.

Results

The average age of the study population was 35.4 ± 7.9 years. The endometriosis group had a significantly higher mean global PSQI score compared to controls. Additionally, patients reporting dyspareunia, dysuria, pelvic pain, and dyschezia showed significantly higher PSQI scores ($P < 0.05$).

Conclusion

The present study shows that women with endometriosis have significantly poor sleep quality. These results highlight the need for increased clinical focus on sleep issues in this group, which could lead to changes in treatment strategies.

Keywords : Central sensitization inventory; Endometriosis; Sleep disorders; The pittsburgh sleep quality index (PSQI).

Evaluation of Serum Hepcidin Levels in the Diagnosis of Endometriosis

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Abstract

Background: Endometriosis is an inflammatory disease associated with iron overload. Serum hepcidin, indicating iron storage and inflammatory cytokines, may be helpful in its diagnosis.

Material and Methods: For this purpose, serum levels of hemoglobin, iron, ferritin, and Hepcidin were compared among 32 patients with histologic confirmation of endometriosis and 20 patients with negative histologic exams for endometriosis.

Results: The analysis of the data revealed that serum Hepcidin levels >4.85 mcg/l had a sensitivity of 75% (95% CI: 56.6%–88.54%) and specificity of 60% (95% CI: 36.05%–80.88%) for diagnosis of endometriosis with an area under the curve of 0.78 (95% CI: 0.65–0.90).

Conclusions: Serum hepcidin, hemoglobin, and iron levels were higher in the endometriosis group. These results suggest that using serum hepcidin as a complementary diagnostic tool in endometriosis may be helpful.

Keywords: Endometriosis; Hepcidin; Sensitivity; Specificity

Role of Epitranscriptomics and CRISPR-Based Genome Editing in Reprogramming Endometrial Receptivity to Overcome Recurrent Implantation Failure: The Future of Personalized ART

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Introduction:
It is estimated that 10-15% of ART cycles are RIF due chiefly to disturbed endometrial receptivity. Until recently, RIF has remained an unruly disorder to be treated due to the inherent complexity of endometrial-embryo interactions at the molecular level. Epitranscriptomics, m6A RNA methylation in particular, and gene editing utilizing the CRISPR system stand at the forefront of scientific research that could turn dramatically in favor of RIF treatment. This review considers the potential that may be afforded to the redrawing of personalized ART prescriptions. Type of Study: Narrative review.
Methods: With keywords such as "epitranscriptomics in RIF," "CRISPR in ART," "m6A methylation," and "endometrial receptivity," a systematic literature search was performed on PubMed, Scopus, and Web of Science from 2020 to 2025. The search included studies relating to epitranscriptomic modifications and CRISPR applications on human tissues, animal models, and in vitro settings. Such data were then thematically synthesized to determine biomarkers, potential targets for therapy, and clinical feasibility. Meta-analysis could not be conducted due to differences in the study.

Findings:
Epitranscriptomic profiling revealed m6A dysregulation in genes such as METTL3, ALKBH5, and FTO in the RIF endometrium, with downstream effects on receptivity markers (like HOXA10, LIF). The m6A-modified RNAs in uterine fluid could be non-invasive diagnostic markers (with AUCs >0.85). CRISPR-Cas9 could effect changes in epigenetic regulators (like EZH2) in endometrial cell lines and increase receptivity markers in vitro. CRISPR-corrected methylation of lncRNA H19 restores implantation rates in animal models. While multi-omics integration points at new RNA targets like circ_0025671 for CRISPR-based therapy, pilot data place CRISPR-edited endometrial organoids towards ART protocol personalization as a marker for sperm epitranscriptomic profiles linked with male-factor RIF.

Discussion:
With epitranscriptomics and CRISPR, a newly evoked opportunity presents itself for the RIF management, far transcending conventional interventions with hormonal regimes. Non-invasive biomarkers and precise gene editing might provide the markers for perfect timing for embryo transfer with endometrial preparation. However, off-target effects with CRISPR technology could be an issue, in addition to issues arising from the standardization of epitranscriptomic assays. Compared to the traditional measurements or diagnostic apparatus, this line offers greater specificity for personalized interventions.

Conclusion:
The potential of epitranscriptomics, coupled with CRISPR-based editing, is revolutionary for alleviating RIF, thus paving the way for precision ART. It is imperative that clinical trials address this matter from a safety and efficacy perspective.

Keywords:
Recurrent Implantation Failure, Epitranscriptomics, CRISPR-Cas9, Assisted Reproductive Technologies, Personalized Medicine

Funding Sources:
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Assessment of Radiofrequency Therapy for SUI and Vaginal Atrophy: A Clinical Trial

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Conflict of interest

The authors declare no conflict of interest, financial or otherwise.

Background and Aim:
Stress urinary incontinence (SUI), and vaginal atrophy (VA), poses a significant burden on women's health and quality of life. While various treatment options exist, they may not always provide satisfactory outcomes. This clinical trial aims to assess the efficacy of radio frequency (RF) therapy as a novel treatment technique for SUI and VA [1-14].

Method:
A clinical trial was conducted at Rasta Clinic, involving 45 women diagnosed with SUI (29 women from 30 to 78 years old) and VA (16 women from 38 to 67 years old). Participants underwent RF therapy sessions, where RF energy was non-invasively applied to the pelvic floor muscles using specialized equipment. Treatment was administered monthly for a total of 3 months. Related objective measures alongside subjective assessments were employed for treatment evaluation. Follow-ups performed after 6 and 12 months for all patients.

Results:

Analysis of the data revealed statistically significant patients' satisfaction in both SUI and VA following RF therapy. According to Kolmogorov-Smirnov non-parametric test as well as T-Test, women who suffered from SUI satisfied by an average of 50% and VA patients' satisfaction were 70% in average with 95% Confidence. There is no significant difference in patients' satisfaction between 6 and 12 months following the RF therapy for both SUI and VA. Subjective assessments demonstrated significant enhancements in symptom severity and quality of life for SUI cases; and also significant reductions in vaginal dryness, itching, and dyspareunia, along with improvements in sexual function and overall quality of life for women who suffered from VA. Notably, no significant adverse effects were reported during or after the RF treatment sessions.

Conclusion:

This clinical trial underscores the efficacy of RF therapy as an effective treatment technique for SUI and VA. By targeting the pelvic floor muscles with RF energy, this approach offers a non-invasive solution for managing urinary incontinence and enhancing the overall well-being of affected women. RF therapy presents a promising alternative or adjunct to traditional treatments, providing a novel avenue for addressing SUI and VA effectively. Further research with larger sample sizes and longer follow-up periods is warranted to validate these findings and refine treatment protocols.

Key words: Stress urinary incontinence, Vaginal atrophy, Radio frequency therapy, Pelvic floor muscles

The correlation between the systemic immune-inflammation index (SII) and Gestational diabetes mellitus (GDM): a systematic review and meta-analysis study

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Introduction: Gestational diabetes mellitus (GDM), a glucose intolerance developing during pregnancy, is linked to inflammation, and this systematic review and meta-analysis evaluates the association between the systemic immune-inflammation index (SII) and GDM to assess SII's potential as a diagnostic and prognostic biomarker.

Methods: Databases such as Web of Science, Cochrane, Scopus, PubMed, Embase, and Google Scholar were utilized for articles published until August 2025. Data were analyzed using STATA 14.

Results: Elevated levels of the SII index were found to significantly augment the risk of GDM (OR=1.52, 95%CI: 1.25, 1.86), with the second (OR=1.11, 95%CI: 1.03, 1.19) and fourth (OR=1.31, 95%CI: 1.03, 1.66) quartiles also correlating with a heightened risk of GDM. Moreover, high SII index levels in the United States, as well as in the cross-sectional study, exhibited no statistically significant correlation with GDM (OR=0.98, 95%CI: 0.59, 1.62). Conversely, in China and within cohort studies, elevated SII index levels were associated with an increased risk of GDM (OR=1.60, 95%CI: 1.30, 1.98). Furthermore, elevated systemic inflammation response index (SIRI) levels were shown to enhance the risk of GDM (OR=1.37, 95%CI: 1.17, 1.62), while high SIRI index levels in the United States and the cross-sectional study were found to diminish the risk of GDM (OR=0.72, 95%CI: 0.53, 0.99). Nevertheless, in China and cohort studies, elevated SIRI index levels were linked to an increased risk of GDM (OR=1.47, 95%CI: 1.24, 1.74).

Conclusion: The findings demonstrate that elevated SII and SIRI serve as

meaningful predictors of gestational diabetes mellitus risk. Specifically, high SII levels confer a 52% increased risk, while elevated SIRI levels contribute to a 37% increased risk of GDM development. These substantial effect sizes suggest that both inflammatory markers possess clinical utility for risk stratification during pregnancy.

Keywords: Gestational diabetes mellitus, Systemic immune-inflammation index, Systemic inflammation response index

Conflicts of interest:

The authors declare that they have no competing interests.

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Evaluating the Effectiveness of Gynecological Disease Education on the Health Literacy of Housewives

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Abstract

Background: Education plays a critical role in promoting women's health by increasing awareness and fostering positive attitudes toward gynecological diseases. Health education improves women's knowledge of conditions such as cervical cancer, encouraging preventive behaviors, timely screening, and treatment. Beyond awareness, education empowers women to make informed health decisions, adopt healthier lifestyles, and access appropriate healthcare, thereby reducing health disparities, improving fertility outcomes, decreasing maternal mortality, and enhancing mental health.

Methods: This study evaluated the impact of a brief educational intervention on the knowledge of housewives regarding gynecological diseases. Training sessions were conducted by gynecologists at cultural centers across Tehran, supported by the Tehran Municipality Health Department. The sessions covered cervical cancer and human papillomavirus (HPV), menopause, fibroids and abnormal uterine bleeding, and prevention of sexually transmitted infections (notably HIV and hepatitis). Participants completed a questionnaire before and after each session to measure changes in knowledge.

Results: The findings indicated significant improvements in correct

responses across all topics. In the cervical cancer and HPV class (n=88), correct answers increased notably; for example, knowledge about the vaccine-preventable female cancer rose from 22% to 84%. In the menopause class (n=39), understanding of premature menopause improved, and for fibroids and abnormal uterine bleeding (n=24), the proportion of correct answers nearly doubled for both symptoms and surgical indications. Additionally, in the sexually transmitted diseases prevention class (n=21), awareness of HIV transmission and non-transmission methods increased substantially.

Conclusions: The findings demonstrate that targeted educational programs effectively enhance women's health literacy concerning key gynecological conditions. This enhancement supports prevention, early diagnosis, and treatment efforts, ultimately contributing to improved women's and community health outcomes.

Keywords: Gynecological Disease Education, Health Literacy, Housewives

Efficacy of Biological Dressing (Aminodisc) Compared to Conventional Treatment in Women with Cervical Intraepithelial Neoplasia Grade 1 (CIN1)

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Abstract

Introduction: Cervical intraepithelial neoplasia Grade 1 (CIN1) does not require treatment and patients are only monitored for its progression; therefore, an action preventing progression and accelerating the return to normal could be very useful. In this regard, the present study was conducted to evaluate the efficacy of biological dressing (AminoDisc) compared to conventional treatment in women with CIN1.

Materials and Methods: This prospective study was conducted on 40 patients with CIN1 who underwent colposcopy-directed biopsy. The intervention group received complementary treatment with AminoDisc and the control group received follow-up or expectant management. After 6 months, a sample (biopsy) was taken from the site again and the progression or regression of the condition was examined and recorded.

Results: There was no significant difference in the mean age and the BMI of the two groups. In the 6-month follow-up, 18 patients in the intervention group were negative for CIN1 and 2 patients were positive. Also, 8 patients in the control group were negative for CIN1 and 12 patients were still positive, which was statistically significant ($p \leq 0.05$). The analyses showed that the intervention (biological dressing) increased the chance of CIN1 resolution by 13.768 times compared to expectant management.

Discussion and Conclusion: Given the positive efficacy of amniotic membrane in eradicating CIN1, this method can be used as a treatment and prevention method for cervical intraepithelial neoplasia.

Keywords: Intraepithelial neoplasia, Biological dressing, Amniotic membrane, Colposcopy

Comparison of Efficacy and Safety of Rivaroxaban, Heparin, and Enoxaparin in Preventing Thrombosis in Gynaecologic Oncology Surgeries

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Abstract

Introduction: Venous thromboembolism (VTE) is one of the factors that increase mortality in gynaecologic oncology surgeries. The present study was conducted to compare the efficacy and safety of rivaroxaban, heparin, and enoxaparin in preventing thrombosis in gynaecologic oncology surgeries.

Methods: In this clinical trial, 85 patients undergoing gynaecologic oncology surgery were randomly assigned to one of three treatment groups: Group 1 received rivaroxaban 10 mg once daily; Group 2 received enoxaparin 60-40 mg once daily subcutaneously based on weight, and Group 3 received unfractionated heparin 5000 units (for weight below 90 kg every 12 hours and for weight above 90 kg every 8 hours). Data were analyzed using SPSS 26 software at a significance level of <0.05.

Results: The mean age of the patients was 58.43±9.92 years. 14 patients (16.5%) required blood transfusion, and the need for blood transfusion was significantly higher in the rivaroxaban group than in the other two groups (P≥0.05). One week after discharge, the prevalence of peripheral edema was significantly higher in the rivaroxaban group (P≥0.05).

Discussion and Conclusion: Considering the similar effects and outcomes of heparin, enoxaparin, and rivaroxaban in thromboprophylaxis, any of these agents that better match the patients' conditions could be used.

Keywords: Venous thromboembolism, Rivaroxaban, Heparin, Enoxaparin, Gynaecologic oncology

The radioprotective effect of Edaravone on ovarian tissue on adult mouse exposed to X-radiation in doze of 2 Gy

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" The authors declare that there is no conflict of interest regarding the publication of this paper."

Abstract

Radiotherapy is one of the common approaches in cancer treatment that relies on the use of ionizing radiation, which has the potential to destroy cancer cells. However, exposure to radiation can lead to damage to healthy tissues. One of the destructive effects of radiotherapy is ovarian tissue damage, as the ovaries are highly sensitive to radiation and cause premature ovarian failure, ovarian cysts, reduced follicular reserves, chromosomal damage, and infertility.

Changes in the ovarian reserve were mostly related to the primordial follicle count, providing reproducible evidence that radiation with 2 Gy leads to a significant depletion also Radiation effects on the ovarian microenvironment including theca-interstitial, endothelial, oocysts and granulosa cells by different mechanisms such as apoptosis. Recent studies have focused on the use of radioprotective agents such as Edaravone. As a potent antioxidant, Edaravone acts as a strong scavenger of free radicals and reduces the damage caused by radiotherapy. Accordingly, the aim of this applied fundamental research was to investigate the effect of Edaravone on the ovarian tissue.

Methods and materials: In this study, 36 NMRI were randomly assigned to six groups:

Control: Animals received no treatment or radiation. Radiation: Animals received 2 Gy of X-ray radiation on 7th day. Medicine: they received Edaravone at 0.8 mg/kg/day for two week . Treat- 1: they received Edaravone at 0.4 mg/kg/day for one week, followed by X-ray exposure on 7th day, and continued treatment for another week. Treat-2: the same protocol as treatment 1was applied, but injection dose of Edaravone was 0.8mg/kg/day. Treat-3: the same protocol as treatment 1, but dose of Edaravone was 1.6 mg/kg/day. On 15th day of the experiment, all animals were anesthetized, then the ovaries were removed and the necessary assessments were performed.

Results: The results showed that X-rays led to ovarian tissue damage. while, treatment with Edaravane significantly improved ovarian histology and follicular reserves and contributing to the preservation of ovarian tissue structure.

Conclusion: The findings of the study indicates that Edaravone has a protective role against the damaging effects of X-rays and restoring ovarian quality and reserve can be considered as a protective agent.

Keywords: Edaravone, Antioxidant, X-ray, Ovary, Follicular reserves

Extracellular Vesicles in Maternal–Fetal Crosstalk: A Novel Approach to Implantation Failure and Infertility Treatment

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Abstract:

Introduction: Embryo-maternal endometrial communication during implantation must be dynamic, i.e., include factors in each that facilitate implantation. Recently extracellular vesicles (EVs) have appeared as new participants of this two-way signalling. The size of these nanoparticles is nano, and the bioactive molecules that they transfer are microRNAs, mRNAs and proteins that are increasingly being linked towards endometrial receptivity as well as immune tolerance. **Background and Type of Study:**This is a narrative review based on the latest experimental and clinical literature. The review explores the novel role of EVs in embryo–endometrial interaction and their clinical potential in diagnosing and managing implantation failure in assisted reproductive technologies (ART).

Materials and Methods: Relevant English-language articles published between 2015 and 2024 were retrieved from PubMed, Scopus, and Web of Science. Keywords included "extracellular vesicles," "implantation," "endometrium," and "infertility." Inclusion criteria encompassed experimental in vitro/in vivo studies, clinical investigations, and translational approaches evaluating EV function in embryo–maternal communication and implantation.

Findings: Various studies have shown that endometrial-derived and preimplantation-derived EVs as well as endometrial-preimplantation-derived EVs respectively regulate key implantation events like adhesion, angiogenesis and immune regulation. Recurrent implantation failure (RIF) patients have a dysregulated expression of EVs that present different microRNAs of adhesion and inflammation. Moreover, EVs of mesenchymal stem cells (MSCs) have demonstrated therapeutic potentials by enhancing

the endometrial receptivity in experimental animals. Regulation of gene expression by EVs is also extremely coordinated and sensitive to hormonal feedback, which also supports its role in coordination the timing of implantation.

Discussion and Conclusion: The use of EVs can present a new and non-invasive field in the field of reproductive medicine. Their potential to affect endometrial environment as well as the development of the embryo makes them the focus of emerging solutions to both the diagnosis and treatment of implantation disorders. More studies on EV profiling and therapeutic bioengineering are needed in clinical translation. The results offer a fresh conceptual model of treatment of implantation failure in ART especially in cases of unexplained infertility or RIF. The clinical trial of its efficacy and safety in human beings should be expected in the future.

Findings: EDCs such as phthalates, bisphenol A (BPA), dioxins, and organochlorine pesticides have demonstrated the ability to disrupt androgen and estrogen pathways by binding to nuclear receptors (e.g., AR, ERα/β), antagonizing or mimicking hormonal activity. These interactions downregulate key genes like SRY, SOX9, and INSL3, altering Sertoli and Leydig cell function. Epigenetic changes, including DNA methylation and histone modifications, further disturb gene regulatory networks essential for gonadal differentiation. Morphological outcomes include hypospadias, cryptorchidism, Müllerian duct persistence, and impaired spermatogenesis. Recent findings also show that EDC-induced epimutations may be heritable across generations, amplifying long-term reproductive health risks.

Conclusion: EDCs significantly disrupt reproductive development by interfering with hormonal and genetic regulation during embryogenesis. Their ability to induce epigenetic alterations and affect key developmental genes highlights their role in congenital anomalies and possible transgenerational risks. Integrating these insights into reproductive health strategies is essential for prevention and policy-making.

Keywords: Extracellular vesicles, Implantation failure, Endometrium, Infertility, Embryo–maternal communication

Evaluation of the use of sweet anise (Pimpinella anisum L.) on functional constipation in women with infertility problems: a clinical trial study

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Introduction: Despite the beneficial effects of sweet anise on digestive problems and its strong phytoestrogenic effects as a suitable supplement in the treatment of infertile women, no clinical trial has been conducted to date on the effect of this plant on constipation in infertile women. Accordingly, this study was designed to investigate the effect of sweet anise consumption on functional constipation in infertile women referring to the Infertility Center of Sabzevar University of Medical Sciences. Methods: This study was conducted on women referred to the Infertility Center of Sabzevar University of Medical Sciences who had functional constipation based on the international ROM V criteria. Patients were randomly assigned to two intervention and control groups using a block design. Patients in the intervention group received 5 grams of anise powder and the control group received starch powder twice a day with lunch and dinner for 8 weeks. For blinding purposes, the drug and placebo were provided in identical packaging. In this study, both participants and the investigator were completely unaware of the packaging of the drug and placebo. The primary outcome in this disease was the number of bowel movements per week, which was assessed based on a checklist based on the international criteria for diagnosing chronic constipation ROM V at the beginning of the study and at the end of each week for 8 weeks. The secondary outcome of the study was the frequency of bowel movements with hard or bulky stools per week, the frequency of feeling discomfort and pressure

during bowel movements per week, the frequency of feeling incomplete evacuation during bowel movements, and the frequency of using manual maneuvers per week. Results: In this study, 42 participants were evaluated in the intervention group and 42 in the control group. The trend of changes in the mean frequency of bowel movements and the frequency of using

manual maneuvers per week over time was similar in both groups, and there was no statistically significant difference between the two groups (intergroup) over time (P=0.06). The trend of changes in the mean frequency of bowel movements with hard or bulky stools, the frequency of feeling discomfort and pressure during bowel movements, and the frequency of feeling incomplete

defecation over time differed between the two groups (intergroup), and there was a statistically significant difference between the groups over time (P = 0.001). Comparing the mean difference in outcomes before the intervention and at week eight in the intervention group showed that the intervention had a significant impact on four outcomes: frequency of bowel movements, frequency of hard or bulky stools, frequency of discomfort and pressure, and frequency of incomplete defecation. It only had no significant impact on the frequency of using manual maneuvers. Conclusion: The results of the present study indicated that the intervention led to significant changes in some indicators (frequency of bowel movements with hard or bulky stools, frequency of discomfort and pressure during bowel movements, frequency of incomplete defecation) over time and affected the trend of changes compared to the control group, suggesting the effect of star anise in the intervention grou

Cancer-Testis Antigens: A Novel Group of Tumor Biomarkers in Ovarian Cancers

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Abstract

Context: Ovarian cancer is the most fatal gynecological malignancy with no effective screening strategy for early detection. As most cases are being detected in advance stages, conventional therapies are not beneficial for the majority of patients. Cancer-testis antigens (CTAs) are a group of tumor associated antigens with specific expression pattern in cancers which potentiate them for application as cancer biomarkers and targets for immunotherapy.

Evidence Acquisition: We performed a computerized search of the MEDLINE/ PUBMED databases with key words: ovarian cancer, cancer-testis antigen, biomarker and immunotherapy.

Results: Thirty five CTAs have been shown to be expressed in ovarian cancer. At least 13 of them have been shown to elicit immune responses in different studies. The pattern of expression for some of them may facilitate molecular classification of different histo- logic classes of ovarian cancer. In addition, some CTAs such as NY-ESO-1 and MAGE have been used as targets for immunotherapeutic approaches with promising results.

Conclusions: The expression pattern of CTAs in ovarian cancer and the preliminary results of clinical trials indicate that CTAs can be used as targets for immunotherapy of ovarian cancer patients.

Keywords: Cancer-Testis Antigen, Ovarian Cancer, Biomarker, Immunotherapy