VII SSRHR MEETING

XVIII MSRM ANNUAL MEETING

MSRM

President
Antonios Makrigiannakis

Honorary President
Omar Sefrioui

20 - 22 October 2023 Heraklion Crete Atlantis Hotel

www.ssrhrmeetings.com

Abstract Book

Under the Auspices

Hellenic Obstetrical and Gynecological Society

Medical Association of Heraklion

University of Crete

OP01

BIOLOGICAL THERAPIES FOR PREMATURE OVARIAN INSUFFICIENCY: WHAT IS THE EVIDENCE?

Kontogeorgi Adamantia[1], Moustaki Melpomeni[2], Tzoupis Haralambos[3], Makrygiannakis Fanourios[4], *Neofytou Spyridoula*[5], *Makrigiannakis Antonis*[6], *Kalantaridou Sophia*[7]

[1]*Medical school, University of Crete, Heraklion, Greece*
[2]*Department of Endocrinology and Diabetes Center, Hellenic Red Cross Hospital, Athens, Greece*
[3]*Department of Chemistry, University of Patras, Patras, Greece*
[4]*Laboratory of Human Reproduction, Department of Obstetrics and Gynaecology, Medical School, University of Crete, Heraklion, Greece.*
[5]*2nd Department of Obstetrics and Gynaecology, National and Kapodistrian University of Athens, School of Medicine, Aretaieion University Hospital, Athens, Greece*
[6]*Department of Obstetrics and Gynecology, University of Crete Medical School, Heraklion, Greece*
[7]*3rd Department of Obstetrics and Gynecology, Attikon University Hospital, National and Kapodistrian University of Athens, Medical School, Athens, Greece*

Background: Premature Ovarian Insufficiency (POI) is a multi-factorial disorder that affects women of reproductive age. The condition is characterized by the loss of ovarian function before the age of 40 years and several factors have been identified to be implicated in its pathogenesis. Remarkably though, at least 50% of women have remaining follicles in their ovaries after the development of ovarian insufficiency. Population data show that approximately up to 3.7% of women worldwide suffer from POI and subsequent infertility. Currently, the treatment of POI-related infertility involves oocyte donation. However, many women with POI desire to conceive with their own ova.

Materials & Methods: The current review has been conducted by following all PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The authors performed a literature search in three medical databases, Pubmed, Embase and Cochrane Library for the last 10 years.

Results: All studies concerning innovative treatments for ovarian rejuvenation including cell free therapies were studied and summarized; (PRP and Exosome therapy), in vitro activation, stem cell therapy, micro-RNAs and mitochondrial therapies.

Conclusions: Therefore, experimental biological therapies, such as Platelet-Rich Plasma (PRP), Exosomes (exos) therapy, In vitro Activation (IVA), Stem Cell therapy, MicroRNAs and Mitochondrial Targeting Therapies are experimental treatment strategies that focus on activating oogenesis and folliculogenesis, by upregulating natural biochemical pathways (neo-folliculogenesis) and improving ovarian microenvironment. This mini review aims at identifying the main advantages of these approaches and exploring whether they can underpin existing assisted reproductive technologies.

OP02

Subcutaneous endometriosis : a diagnostic dilemma

Ahmed Samy[1]
[1]Alexandria University, Alexandria , Egypt

abstract
Cutaneous endometriosis is is affecting women of reproductive age and is associated with cyclical pain during menses. It requires biopsy testing for a definitive diagnosis if not symptomatic . We report a case of a young woman 29 years old who presented with a recurrent localized pain at the left side of her skin incision . She was diagnosed with cutaneous endometriosis based on history and ultrasound and was managed with hormonal treatment .

Keywords: ultrasound , endometriosis , pain , hormonal treatment

Introduction
Endometriosis is non-neoplastic endometrial tissue outside the uterus and is common and typically affects the ovaries and uterosacral ligaments .cutaneous endometriosis is not common . It is divided into primary and secondary endometriosis Where secondary cutaneous endometriosis is assumed to occur due to seeding after surgery as in our case .It is rare and can mimic other diseases, such as keloid or desmoid tumor ,fibrous so, utaneous endometriosis can be difficult to diagnose. biopsy can be performed and Once the diagnosis has been established, hormonal agents and surgi cal excision with wide margins can be used .(1)
Case presentation :
A woman aged 29 years old and sexually active . Her menses is regular and she has an IUD fitted for years .she has 3 children and has delivered by cesarean section though pfennesteil incision . She is G5P3+2. .there is no medical or surgical history of relevance .she was complaining of lower abdominal pain that increased with menses and relieved after . She can pinpoint the area of tenderness and pain by a finger over abdominal wall .examination was irrelevant except for a local tenderness over the previously pointed area. The skin was normal over the affected area with no swelling or bulge . Ultrasound was done revealing an normal sized AVF uterus with IUD in place and both adenxa were free with out rectovaginal endometriosis . A guided ultrasound scan over the area of localized tenderness revealed s hypoechoic irregular subcutaneous mass around 2cm in dimensions with a grade 3 vascularity score with peripheral feeders. The mass in left side at the site of the cesarean scar . She was informed. About the possible diagnosis of subcutaneous implantation so she was advised to use a continuous combined pills for 6 months and she has improved then she was advised to continue as long as not progression in the size or the symptoms where we can proceed with surgery .
Discussion
Cutaneous endometriosis classically presents as a firm subcutaneous nodule around 2 cm in diameter as in our case and Its color can be blue or skin-colored as in our case . Patients report cyclical pain, swel- ling, and even bleeding that corresponds with their menstrual cycle . cutaneous endometriosis present in <1% of all cases . Primary endometriosis refers to cases in which the endometriosis develops with-

out any history of surgery and It is the less common .Secondary endometriosis, (scar endometriosis), is associated with prior surgery.Our patient was diagnosed with cutaneous endometriosis based on the cyclical nature of her pain and the the ultrasound picture along with the patient's surgical history .

the most common location for primary and secondary cutaneous endometriosis is the umbilicus and comprises 40% of cases, but other locations such as the groin, arm, episiotomy wounds, appendectomy scars, and cesarean scars were reported . The differential diagnosis includes keloid, dermatofibroma, dermatofibrosarcoma, and cutaneous metastasis of cancer (e.g., Sister Mary Joseph nodule). Differentiating between these lesions can be difficult , particularly when patients do not report a history of cyclical pain .(1) Dermatofibromas are benign fibrohistiocytic tumors that that dimple when compressed laterally due to tethering of the epidermis to the underlying nodule . Cutaneous endometriosis can also mimic malignancy and the tumor can nodular with telang- iectasia in the surrounding skin. (1)

the definitive treatment is surgical excision with wide margins, performing surgery at the end of the menstrual cycle when lesions are as small as possible, preoperatively, the goal of hormonal therapy is to shrink lesions to a smaller size and Postop- eratively, the goal is to prevent recurrence. Another option for patients who do not wish to undergo surgery is treatment with hormonal agents alone. Although surgical exci-sion with wide margins is the gold standard for therapy, if the decision is made to opt for hormonal therapy, surveillance is needed .(2)

References :

1. Raffi L, Suresh R, McCalmont TH, Twigg AR. Cutaneous endometriosis. *Int J Womens Dermatol*. 2019;5(5):384-386. Published 2019 Jul 2. doi:10.1016/j.ijwd.2019.06.025

2. Fernández Vozmediano JM, Armario Hita JC, Cuevas Santos J. Cutaneous endometriosis. Int J Dermatol. 2010 Dec;49(12):1410-2. doi: 10.1111/j.1365-4632.2010.04585.x. PMID: 21091675.

Figure legend :

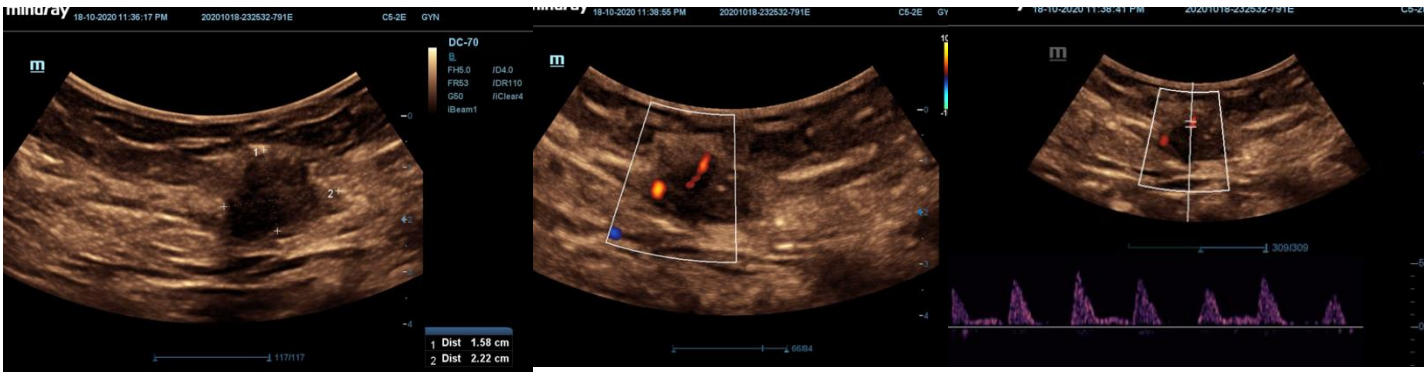

Figure 1:trans abdominal scan is showing an irregular hypoechoic mass of 3cm In diameter with positive vascularity .

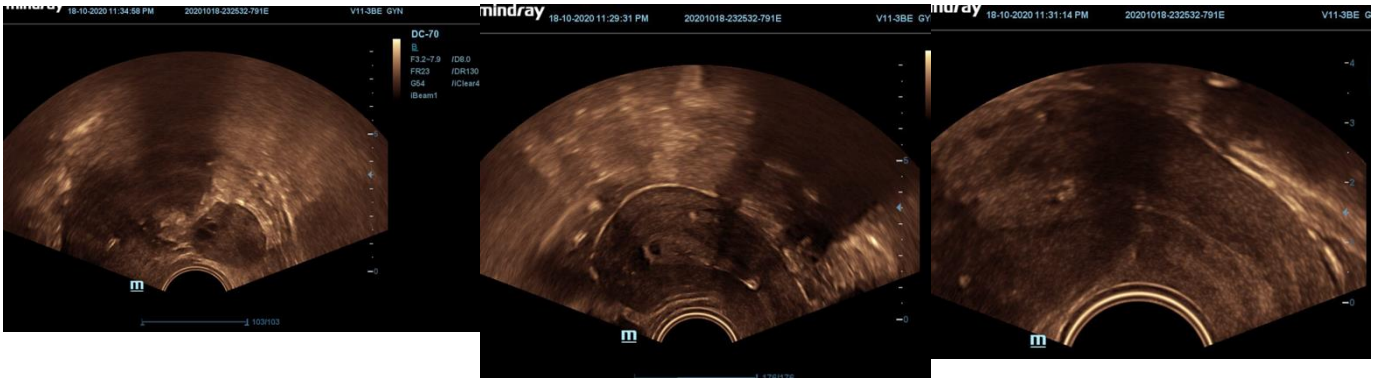

Figure 2:trans vaignal scan is showing the ovaries and the uterus with shadows of IUD along with free uterus areal area and peritoneal surface of the uterus and there was no Adenomyosis along with positive sliding .

OP03

Correlation of serum prolactin levels with metabolic and cardiovascular risk in Greek women with Polycystic Ovarian Syndrome

KONSTANTINOS KASTRINAKIS[1], Sofoklis Stavros[1], Chrisi Christodoulaki[2], Maria Kokotsaki[3], Eutychios Trakakis[1], Christos Tsagkaris[1], Sofia Kalantaridou[1], Georgios Mastorakos[4], Petros Drakakis[1], Periklis Panagopoulos[1]

[1]3rd University Ob/Gyn Department "Attikon", National and Kapodistrian University of Athens, Athens, Greece, [2]Ob/Gyn Department General Hospital of Chania "Saint George", Chania, Greece, [3]Senior Embryologist, Vienna, Austria, [4]2nd University Ob/Gyn Department "Aretaieio", National and Kapodistrian University of Athens, Athens, Greece

Background:
Polycystic Ovary Syndrome (PCOS) is a common endocrine disorder among females. PCOS is associated with various metabolic and cardiovascular complications, including insulin resistance, dyslipidemia, and an increased risk of type 2 diabetes mellitus and cardiovascular disease. The role of serum Prolactin (PRL) in the development of these complications in PCOS is not well understood.

Aim:
This study aims to investigate the correlation between serum PRL levels and metabolic and cardiovascular risk factors in Greek women with PCOS.

Methods:
The study utilized secondary outcomes from a prospectively collected patient database at the 3rd Department of Obstetrics and Gynecology, Medical School of the University of Athens. Data were collected from patients who visited the Gynecological Endocrinology - Pediatric and Adolescence Endocrinology Outpatient Clinic between January 2007 and December 2015. Measurements of various parameters, including PRL levels, BMI, waist circumference, hormone levels, lipid profiles, and insulin sensitivity, were obtained. Statistical analyses, including Mann-Whitney tests, chi-square tests, Spearman correlations, and multiple linear regression analyses, were conducted using SPSS software.

Results:
The study included 247 women with PCOS, with a mean age of 24.7 years. Participants were divided into two groups based on the median PRL level. Women with higher PRL levels (>14.9) had lower BMI and waist circumference, higher levels of certain hormones and insulin sensitivity, and lower levels of fasting insulin, total cholesterol, and total lipids. Factors associated with lower PRL levels included being overweight/obese and smoking more than 10 cigarettes per day. Higher age, BMI, waist circumference, and certain hormone levels were associated with lower PRL levels.

Conclusion:
The findings suggest a correlation between serum PRL levels and metabolic and cardiovascular risk factors in Greek women with PCOS. Further research is needed to elucidate the role of PRL in the pathophysiology of PCOS and to explore its potential as a diagnostic and therapeutic target.

OP04

NEPHROTIC SYNDROME AND PREGNANCY : CASE REPORT AND REVIEW OF LITERATURE

Kavvalou M. , Papastamatiou M. , Archontakis G. , Volonaki Z. , Tzanaki I. , Iacovidou G. , Andreadakis G. , Velegrakis A. , Vrekousis T. , Makrigiannakis A.

Background and aims: We present a severe condition called Nephrotic syndrome (NS) which rarely occurs in pregnancy. Nephrosis due to primary renal disease has been reported to occur in 0.028% of pregnancies. Pregnant women with nephrotic syndrome are at high risk for developing both maternal and fetal complications, even in the absence of significant renal impairment or uncontrolled hypertension at the time of presentation of nephrotic syndrome.

Methods: Data was retrieved from the medical file of a 25 year old pregnant woman with a history of a previous cesarean, was reffered to our hospital at 9 weeks of gestation with severe proteinouria (7.636 mg/24h) and suspicion of CMV infection. We reviewed the literature using the following databases: PubMed, UpToDate, Medscape and Medline and resulted in 125 articles, taking into account the temporal proximity, impact factor of the journal, time of publication, and the size of specimen of each research.

Results: Due to the resistant high levels of urine protein , she underwent kidney biopsy, which is revealed Membranous nephropathy. The therapy included a high-calorie diet with adequate protein (0.8 g/kg/day) and low salt and induce of prophylactic anticoagulation with low molecular weight heparin four days after the biopsy. The monitoring plan included complaints, vital signs, urine production and complete blood count. Unfortunately the day after the kidney biopsy she had a miscarriage. The results of PCR CMV was negative.

Conclusions: Nephrotic range proteinuria during pregnancy due to primary glomerular disease is associated with a high risk of several adverse outcomes, including superimposed preeclampsia, acute kidney injury, preterm birth, low birth weight, and the need for neonatal intensive care. Nevertheless, conservative management until delivery, particularly in patients who present in the third trimester, is often a reasonable management approach.

OP05

Leptospirosis in Pregnancy: A rare case report and review of literature

Anagnostopoulos P.[1], Papastamatiou M. [1], Archontakis G. [1], Kavvalou M. [1], Kalligianni Sofikiti K. [1], Makrygiannakis F. [1], AndreadakisG.[1], Kontezakis P.[2], Tsibris G. [3], Matthiopoulou G. [3], Vrekoussis T. [1], Makrigiannakis A. [1]

[1] Obstetrics & Gynecology Department, University General Hospital of Heraklion, Medical School of the University of Crete

[2] Obstetrics & Gynecology Department, General Hospital of Chania

[3] Internal Medicine / Infectious Diseases Department, University General Hospital of Heraklion, Medical School of the University of Crete

Background and aims: Leptospirosis is a leading zoonotic disease worldwide with more than 1 million cases in the general population per year, caused by pathogenic spirochetes of the genus Leptospira. Leptospira are spiral-shaped, highly motile aerobic spirochetes with 18 or more coils per cell. There are 64 recognized species (60 of these have been published under the rules of the International Code of Nomenclature of Bacteria). The aim of the report is to present a rare case of a pregnant woman diagnosed with Leptospirosis as well as reviewing the literature.

Methods: 19 -year-old G2P1 was transported from secondary hospital of Chania to University General Hospital of Heraklion due to severe headache, papilledema as well as oliguria. After a wide spectrum of evaluations from specialists of different departments, she was diagnosed with leptospirosis. MRI scan was performed in combination with biochemical laboratory tests.

Results: Ceftriaxone was administered in order to treat Leptospirosis. At 37th week of pregnancy, urgent Cesarean section was performed due to uterine contractions (previous C-section / 2021).

Conclusions: Incidence of leptospirosis in pregnancy is 1.3 per 10,000 in women. Infection in pregnant women may lead to severe fetal and maternal morbidity and mortality. There is also an overlap between the signs, symptoms and biochemical disturbances in other pregnancy associated conditions, such as pre-eclampsia, acute fatty liver of pregnancy (AFLP) and HELLP syndrome. It is very important the immediate administration of antibiotics .

OP06

Utero – cutaneous fistula: Case report presentation and review of literature

Papastamatiou M. , Anagnostopoulos P. , Archontakis G., Kavvalou M. , Kalligiani Sofikiti K., Makrygiannakis F. , Andreadakis G., Koutroulakis D., Vrekoussis T.

Background and aims: Utero-cutaneous fistula is an extremely rare condition characterized by an abnormal communication between the anterior wall of uterus and the abdominal wall. It mostly occurs consecutively to surgical intervention such as Cesarean section. The aim of this report is to present a rare case of utero-cutaneous fistula and its surgical treatment in our department.

Methods: A 38-year-old woman who had undergone a caesarean section 10 months earlier at another hospital unit, was presented to emergency department of our clinic complaining about severe pain and blood discharge during menstruation from the previous transverse supra-pubic scar. The patient also mentioned pus discharge from the same site of the scar between the menstrual cycles. Obstetrical history included two previous caesarean section deliveries. Transvaginal, transabdominal ultrasonography were held in combination with MRI scan with intravenous contrast of the pelvis which reported a linear tract of utero-cutaneous fistula.

Results: The therapeutic approach of our department was surgical intervention. The operation was performed under general anesthesia, the scar was excised and a hysterectomy was performed. The immediate post-operative condition was smooth and satisfactory. Follow up of the patient for 2 months now had shown no post-operative complications.

Conclusions: Despite the uncommon presentation of the utero –cutaneous fistula, it should be considered after caesarean section. Surgeons should be aware of such complications for proper investigation and early treatment.

OP07

ASSESSMENT OF INFERTILE WOMEN BY HYSTEROSCOPY AND UTERINE MICROBIOME. A CASE SERIES STUDY

Kouvalakis Alexandros[1], Mousouraki Georgia[1], Pikridis Ioannis[1], Ierapetritis Emmanouil[1], Zervakis Alexandros[2], Saitis Ioannis[3], Ntzelepis Konstantinos[1], Timotheou Stavros[1], Katasos Theodoros[1], Nikolaou Marinos[1]

[1]Department of Obstetrics-Gynecology, General Hospital of Agios Nikolaos, Lasithi, Crete, Greece
[2]IVF specialist, Herakleion, Crete, Greece
[3] Biologist, Scientific Director of Genemed,Herakleion, Crete, Greece

Background-Aim: Infertility and affect a significant proportion of women worldwide. Diagnostic hysteroscopy and uterine microbiome sampling are considered as a primary investigation tool in a basic infertility workup, while offering the possibility to solve most of the diagnosed pathology at the same time. The aim of this retrospective study is to evaluate the diagnostic validity of diagnostic hysteroscopy in the detection of uterine cavity pathologies in infertile patients and to capitalize on the existing literature by investigating if the presence of dysbiotic endometrium has an impact on fertility.

Material and Methods: A total of 52 infertile women underwent diagnostic hysteroscopy for further evaluation. In addition, 81 infertile women have undergone molecular identification of their uterine microbiota using 16S rRNA sequencing.
Results: The patients' ages ranged from 24 to 48 years (median was 34 years). In 60.7% of cases, hysteroscopy did not find any abnormality while in 39.2% of cases there were one or more abnormal findings. In addition, abnormal results of uterine microbiome have been identified in 48,2% of women observed. 28 cases have been treated and reassessed. 25% of them failed to achieve uterine eubiosis after one chemotherapy session. After successful treatment, 7,2% have managed to have a spontaneous pregnancy in 3 months interval, while in the first 6 months the percentage was doubled (CRR 14,4%). 7,2% have undergone IVF with a positive outcome. The live birth ratio is yet to be determined in all those groups.

Conclusion: Diagnostic hysteroscopy should be considered as an essential workup method prior to any further IVF cycles are considered in infertile women due to high prevalence of any predefined intrauterine pathologies. In our line of data, dysbiotic endometrium is found in a large percentage of women observed. The successful treatment with standard antibiotics/prebiotics regimen seems to suffice, for at least some patients, by leading to pregnancy while avoiding further ART.

OP08

Systemic Lupus Erythematosus (SLE) and fetal heart complications: Case report presentation and review of literature

Tzanaki I.[1], *Kavvalou M.*[1], *Archontakis G.*[1], *Iakovidou G.*[1], *Charitou M.*[1], *Andreadakis G.*[1], *Mytaras V.*[1], *Rasidaki M.*[1], *Germanakis I.*[2], *Vrekoussis T.*[1], *Makrigiannakis A.*[1]

[1]Obstetrics and Gynecology Department, University General Hospital of Heraklion, Medical School of University of Crete

[2]Pediatrics Department, University General Hospital of Heraklion, Medical School of University of Crete

Background and Aims: Systemic lupus erythematosus (SLE) is a chronic inflammatory autoimmune disease mainly affecting women of reproductive age. While most pregnancies in SLE patients are uncomplicated, there can be maternal and fetal complications during active disease. This report focuses on the treatment options of immune-mediated fetal heart block.

Methods: A 33-year-old primigravida with SLE, antiphospholipid syndrome, and β-thalassemia minor was admitted to our clinic at 21+4 weeks of gestation due to fetal bradyarrhythmia, fetal ascites, and pleural effusion.

Results: The fetus was diagnosed with complete atrioventricular heart block, with an initial heart rate of 47bpm and hydrops fetalis. Maternal conservative therapy was initiated using corticosteroids, a β-agonist, and intravenous immunoglobulin. Close monitoring, daily fetal echocardiography and maternal ultrasound were performed to evaluate treatment response. Although the fetal heart rate increased to 65bpm during the hospital stay, maternal ultrasound indicated absence of the diastolic wave in the middle cerebral artery, extended fetal anasarca, and increased nuchal translucency. The couple was informed about the severity of the case and their options and they decided to continue their treatment with intraamniotic dexamethasone administration.

Conclusions: SLE seropositivity in pregnancy can lead to multiple fetal complications, necessitating close monitoring of high-risk patients. Fetal heart block, occurring in 2-5% of SLE patients with anti-Ro/SSA and anti-La/SSB antibody seropositivity, has a recurrence rate of 12-25% in subsequent pregnancies. Currently, there are no official guidelines for its management, and the effectiveness of ongoing medical interventions depends on the severity of the block. Dexamethasone administration has shown positive fetal outcomes, but larger trials are needed to determine the recommended dose, timing, route of administration, and overall efficacy.

OP09

TUBO-OVARIAN ABSCESS (TOA) IN ELDERLY PATIENTS: CASE REPORT

Iacovidou G. [2], Anagnostopoulou E. [1], Anagnostopoulos P. [2], Kavvalou M. [1], Archontakis G. [2], Perysinakis I. [1], Velegrakis A. [2], Makrigiannakis A. [2], DeBree E. [1]

[1] Department of Surgical Oncology, University General Hospital of Heraklion, Medical School of the University of Crete

[2] Obstetrics & Gynecology Department, University General Hospital of Heraklion, Medical School of the University of Crete

Background and aims: Tube-ovarian abscess is an inflammatory mass involving the adnexa, which can be developed as a complication of a PID or, less commonly, from secondary infection from gastrointestinal sources. In the overwhelming majority of cases, TOA occurs in sexually active women of reproductive age. The aim of the report is to present a rare case of tube-ovarian abscess in a postmenopausal patient.

Methods: Data were retirieved by the medical report of a 78 year old woman who was presented at the ED due to abdominal pain, nausea and fever till 40°C. Routine blood work, transabdominal and transvaginal ultrasonography were held in combination with CT scan.

Results: An exploratory laparotomy was performed (by a General Surgeon and a Gynaecologist) in combination with drainage of the abscess (which was sent for culture and cytology), a partially left oopherectomy (which was sent for histologic examination) and peritoneal washing. The result of culture and cytology of the abscess made a conclusion Streptococcus anginosus and the result of the biopsy eliminated the suspicion of malignancy.

Conclusions: Tube-ovarian abscess in postmenopausal women is considered a very rare condition. A multidisciplinary approach is essential for the diagnosis and treatment of TOA.

OP10

THE CORRELATION BETWEEN PROGESTERONE AND MAMMOGRAPHIC DENSITY IN POSTMENOPAUSAL WOMEN: A SYSTEMATIC REVIEW OF THE LITERATURE AND META-ANALYSIS

Papakonstantinou Ioannis[1], Boutas Ioannis[2], Messaropoulos Pantelis[3], Kontogeorgi Adamantia[4], Makrigiannakis Antonis[4], Kalantaridou Sophia[5]

[1]Medical school, University of Athens, Phd Candidate
[2]Breast Unit, Rea Maternity Hospital, Athens, Greece
[3]Mediterraneo First Care Hospital, Vouliagmenis Avenue, 16674 Athens, Greece
[4]Department of Obstetrics and Gynecology, University of Crete Medical School, Heraklion, Greece
[5]3rd Department of Obstetrics and Gynecology, Attikon University Hospital, National and Kapodistrian University of Athens, Medical School, Athens, Greece

Background: Higher mammographic breast density in premenopausal and postmenopausal women is related to a higher breast cancer risk. In this review, we analyze the correlation between estrogen, progesterone, and mammographic density in postmenopausal women and clarify whether these findings are consistent across different types of mammographic breast density.

Materials & Methods: We performed an extensive search on various medical databases (Embase, PubMed, Pubmed Central and Cochrane Library). We extracted data concerning mammographic density increases in the populations treated with estrogen-only hormone replacement therapy and those treated with estrogen and progestin hormone replacement therapy.

Results: We found 6 relevant studies with the research question. The 6 studies that were identified for inclusion referred to 40649 postmenopausal women. We decided to perform a statistical analysis of the figures and see if a statistical tool would provide a more accurate representation of the data and extracted conclusions. After inputting the data in RevMan, we observed a very clear, statistically significant result in the forest plot the software produced.

Conclusions: Postmenopausal women treated with estrogen and progesterone regimens had a statistically significant lesser mammographic density increase than estrogen-only hormone replacement therapy regimens.

OP11

BREAST CANCER AND FERTILITY PRESERVATION IN YOUNG FEMALE PATIENTS: A SYSTEMATIC REVIEW OF THE LITERATURE

Messaropoulos Pantelis[1], Ioannis Boutas[2], Krokos Panagiotis[3], Kalantzi Maria[4], Kontogeorgi Adamantia[5], Papakonstantinou Ioannis[3], Kalantaridou Sophia[6]

[1]*Mediterraneo First Care Hospital, Athens, Greece*

[2]*Breast Unit, Rea Maternity Hospital, Athens, Greece*

[3]*Medical School, National and Kapodistrian University of Athens, Athens, Greece*

[4]*Medical School, University of Crete, Heraklion, Crete*

[5]*3rd Department of Obstetrics and Gynecology, Attikon University Hospital, National and Kapodistrian University of Athens, Athens, Greece*

Background: Breast cancer is a prevalent malignancy affecting young women worldwide. This systematic review addresses the pressing issue of fertility preservation in young breast cancer patients, a topic vital for their emotional and psychological well-being.

Materials & Methods: We explore the latest evidence on the impact of breast cancer treatment on fertility and examine various fertility preservation techniques. Following PRISMA guidelines, we conducted an extensive search of medical databases (PubMed, Embase, and the Cochrane Library) for relevant studies from the last 15 years. Data extraction and quality assessment were performed, focusing on key study characteristics and outcome variables.

Results: This review delves into the effectiveness of fertility preservation techniques, including ovarian suppression with luteinizing hormone-releasing analogs (LHRHa), oocyte and embryo cryopreservation, ovarian tissue cryopreservation (OTC), and in-vitro maturation (IVM). We scrutinize the role of ovarian suppression in protecting ovarian function during chemotherapy, with mixed findings regarding its impact on pregnancy rates. Oocyte and embryo cryopreservation emerge as promising options, with pregnancy rates exceeding 50% in breast cancer survivors.

Conclusions: Our review emphasizes the importance of comprehensive data on fertility preservation techniques and their accessibility, offering hope for a better quality of life post-breast cancer treatment. We call for continued research to address existing gaps in knowledge and ensure that young breast cancer patients can make informed decisions about their reproductive health. The evolving field of fertility preservation holds promise for a brighter future for these survivors.

OP12

Can autologous Platelet-Rich-Plasma (PRP) treatment affect endometrial stromal cell function?

Marmara M., Berdiaki A., Asmarianaki M., Makrygiannakis F. and Makrigiannakis A.

Laboratory of Human Reproduction, Department of Obstetrics and Gynecology, Medical School, University of Crete, Heraklion, Greece

Background and aims: Platelet-rich plasma (PRP) is an autologous blood-derived biologic therapy, which is reported to contain high concentrations of growth factors and other signaling molecules that can be used locally at the site of tissue injury, aiding body's healing mechanisms. Platelets are cells that carry a pool of growth factors that have been used as valuable tools in regenerative medicine. Due to its biological properties, this therapy gained huge popularity among several medical fields. In our study we aim to investigate the mechanisms by which PRP could improve endometrial decidualization and receptivity. In our initial experiments, we analyzed the effect of PRP treatment in stromal endometrial cell proliferation and gene expression.

Methods: Stromal cells were isolated from endometrial biopsies and were then cultured and treated with PRP isolated from peripheral blood of the same women donors. The PRP protocol used was optimized and different percentages of PRP were added in the culture medium (50%, 25%, 10%, 5%). After treatment, cells were either counted using a cell proliferation kit or total RNA was extracted and mRNA analysis was performed using real-time PCR.

Results: Data showed a PRP concentration dependent change of stromal cell proliferation. In addition, our preliminary results in gene expression demonstrated that IGFBP, a decidualization marker, was affected by PRP-addition after 48h of incubation.

Conclusions: Autologous PRP can effect endometrial stromal cell proliferation and further optimization experiments are needed in order to achieve optimal analysis of gene expression modulation by PRP.

OP13

TREATMENTS FOR POLYCYSTIC OVARIAN SYNDROME IN ADOLESCENTS

Kordali T. Stratoudakis G, Karamolegou E, Simirioti A, Ebrahim H, Patramani S, Kontezakis P, Kokolakis I, Kalloniatou M.
Department of Obstetrics & Gynecology of General Hospital of Chania, Crete, Greece

Background and Aims: Polycystic ovary syndrome (PCOS) is an endocrinological and metabolic disorder widely diffused and diagnosed in women of reproductive age. The pathology exhibits alteration of the reproductive functions, including conditions as hyperandrogenism, menstrual cycle irregularity, type 2 diabetes and phenotypical manifestations as hirsutism, acne, and obesity are common. We investigated different treatments in PCOS adolescents with non-severe metabolic conditions.
Methods: We enrolled teenagers with PCOS, aged 13-16 and 17-19 years old and we divided the patients in three groups. All groups were treated for 3 months either with oral contraceptive pills (OCP) drospirenone/ethinylestradiol (group 1), myo-inositol (group 2), or OCP plus myo-inositol (group 3).
Results: We pointed out that the group of teenagers 13-16 years old treated with myo-inositol exhibit a significant decrease of weight and body mass index (BMI), and an effective improvement the metabolic and hormonal parameters achieved with a non-pharmacological treatment. In the teenagers aged 17-19 years, data highlights that myo-inositol treatment in combination with OCP prevents the increases of weight and BMI, improves the metabolic profile of the patients, and strongly ameliorates the hormonal parameters analyzed.
Conclusions: The results indicate and suggest an important role of myo-inositol in the PCOS context. A therapy based on this natural compound alone or in combination with OCP seems effective to improve both metabolic and hormonal parameters of PCOS adolescents and thus could represent a novel and valid option to consider for the treatment of this syndrome.

OP14

PRIMARY AND SECONDARY POSTPARTUM HEMORRHAGE DUE TO UTERINE PSEUDOANEURYSM: CASE PRESENTATION

Konstantina Kalligianni Sofikiti[1], Paraskevas Anagnostopoulos[1], Zoe Volonaki[1], Maria Charitou[1], Ismini Tzanaki[1], George Andreadakis[1], Dimitris Koutroulakis[1], Georgios-Antonios Kakkos[2], Ilias Kehagias[2], Thomas Vrekoussis[1], Antonios Makrigiannakis[1]
[1]Obstetrics & Gynecology Department, University Hospital of Heraklion, Medical School of the University of Crete, Heraklion, Greece, [2]Interventional Radiology Unit , Department of Medical Imaging, University Hospital of Heraklion, Medical School of the University of Crete, , Heraklion, Greece

BACKGROUND

Postpartum hemorrhage (PPH), a leading cause of maternal mortality, can occur within 24h of delivery (primary PPH), or during the period from 24h after delivery to Week 6 of puerperium (Secondary PPH). Uterine artery pseudoaneurysm (UAP) is a rare cause of PPH that is thought to arise from abnormal vascular regression and a recurrent vascular healing state.

MATERIALS& METHODS

A 33yo female gravida 2 para 2 was referred to our clinic due to severe anemia on day 1 after caesarian section. A large uterus hematoma of 5 x 7,3cm was revealed on CT scan and further confirmed with transvaginal sonography. 6 days post admission, the patient was hemodynamically stable with no signs of vaginal bleeding, and eventually exited willfully. The following day the patient arrived in the ER with hypovolemic shock and heavy vaginal bleeding, and the diagnosis of secondary PPH was put. After hemodynamic stabilization, she underwent arteriography that revealed a pseudoaneurysm in the ascending branch of the uterine artery. Contralateral left medial iliac catheterization and left uterine artery catheterization followed. The patient underwent right uterine artery catheterization a few days later, before D&C.

RESULTS

The pseudoaneurysm was successfully obliterated and the patient exited 15 days after her second admission with no further events.

CONCLUSIONS

UAP is a rare cause of PPH that leads to fatal massive hemorrhage. Angiographic embolization is a safe and competent method for managing PPH caused by pseudoaneurysm, with the added advantage of fertility preservation.

OP15

ASSOCIATION BETWEEN INFERTILITY AND HPV VACCINATION

Stratoudakis G, **Kordali T**, Karamolegou E, Simirioti A, Ebrahim H, Patramani S, Kontezakis P, Kokolakis I.
Department of Obstetrics & Gynecology of General Hospital of Chania, Crete, Greece

Background and Aims: Human papillomavirus (HPV) is a virus that causes common sexually transmitted infection and the HPV vaccine has been recommended for adolescents and young adults as primary prevention for HPV. This study examined the percentage of vaccination against HPV and the relationship between HPV immunization and self-reported infertility in the territory of our health responsibility.
Methods: During the last year all women aged 18-33 years presented to our outpatient office of our department were asked about demographic characteristics, medical histories, history of abdominal or pelvic surgery, and meanly about the vaccination status against HPV and if they meet conditions of infertility.
Results: During the study period 1133 women aged 20-33 years old who were young enough to have been offered HPV vaccines and old enough to have been queried about infertility, were studied. The percentage of women who have been vaccinated against HPV was 38.92% (441 of 1133 women). The percentage of women who reported infertility in the vaccinate group was 11.1% (49 of 441 women). The percentage of women who reported infertility in the non-vaccinate group was 12.5% (87 of 692 women). No other associations between HPV and infertility were found.
Conclusions: Although the limitations of our study, HPV vaccination coverage in our study group is low (38.92%) but there was no evidence of increased infertility among women who received the HPV vaccine. These results provide further evidence of HPV vaccine safety and should give providers confidence in recommending HPV vaccination, excluding the fear of female infertility.

OP16

Placenta Percreta: Clinical Experience and Management in our Department

Maria Charitou, Maria Kavvalou, Gaetano Archontakis, Ismini Tzanaki, George Andreadakis, Vassilis Mytaras, Maria Rasidaki, Antonis Makrigiannakis

[1]University General Hospital of Heraklion Obstetrics & Gynecology Department, Heraklion , Greece

Background and aims: Placenta Percreta refers to abnormal placental growth through the full thickness of the uterine wall and occasional invasion of nearby organs such as the colon or bladder. It belongs in the Placenta Accreta Spectrum disorder. We present a case of Placenta Percreta with invasion of the urinary bladder wall while also being placenta previa.

Methods: The medical file of the 37 year old patient was reviewed, she had two Caesarean sections in her obstetrical history. She was admitted to the hospital in 31 weeks and 3days of gestation for close monitoring. The patient was diagnosed with placenta previa and placenta Percreta with invasion of the urinary bladder wall through serial ultrasound scanning and an MRI, which was conducted at 32weeks of gestation. Before her scheduled C-section at 33 weeks, ureteric catheters were placed bilaterally by urologists to protect the ureters.

Results: During surgery the posterior wall of the bladder was torn, sutured and checked using methylene blue. To sustain hemodynamic stability, the patient was transfused with 1 pRBC before the operation and during it with 7 pRBC, 2FFP, 3FIB and 1PLT flask. She delivered a healthy infant (who was admitted to NICU for a short period of time) and after surgery she was admitted in ICU, where she stayed for 24 hours. A Foley catheter stayed in place for 14 days.

Conclusion: Placenta Percreta is a condition increasing in incidence due to repeated caesareans, which is associated with severe and occasionally life-threatening complications.

OP17

PREGNANCIES IN WOMEN WITH PREMATURE OVARIAN INSUFFICIENCY AND DIMINISHED OVARIAN RESERVE FOLLOWING INTRAOVARIAN INJECTION OF AUTOLOGOUS PLATELET-RICH PLASMA: A PILOT STUDY

Kontogeorgi Adamantia[1], Tsangkalova Gkalia[2], Koutoulakis ioannis[2], E. Meridis Eleftherios[2], Douliotis Ioannis[2], Stamou Zenia[2], Kalantaridou Sophia[3]

[1]*Medical School, University of Crete, Heraklion, Greece*

[2]*Serum Fertility Clinic, Athens, Greece*

[3]*3rd Department of Obstetrics and Gynecology, Attikon University Hospital, National and Kapodistrian University of Athens, Athens, Greece*

Background: Both women with premature ovarian insufficiency and poor ovarian response have poor fertility outcomes. At present, egg donation is the treatment of choice for women with premature ovarian insufficiency. Similarly, the pregnancy rates are low in women with low ovarian reserve. Intraovarian injection of autologous platelet-rich plasma has been used experimentally for ovarian rejuvenation. Ovarian rejuvenation is a novel method used to restore ovarian fertility and development during the climacteric period, and it has been shown to improve fertility in women with premature ovarian insufficiency (POI).

Materials and Methods: This is a pilot study including 58 women with premature ovarian insufficiency and diminished ovarian reserve (POI: n=12, DOR: n=46) undergoing intraovarian injection of autologous platelet-rich plasma (PRP). The study took place in Serum Fertility Clinic in Athens, between September 2021 and September 2022. All participants provided written informed consent.

Results: Twelve women with POI and forty-six women with diminished ovarian reserve with an age range of 34-46 years, rejected the oocyte donation program and underwent intraovarian injection of autologous PRP. Blood collection (20ml) was followed by centrifugation which then led to isolation of the fraction containing the platelets (PRP). Activation of platelets was achieved using the appropriate reagents. Four ml of PRP were injected into the ovaries (2ml per ovary). Overall, there were 14/58 pregnancies (24%). Four women delivered a healthy baby (one following natural conception and three following IVF). There were 2 biochemical pregnancies, 3 miscarriages and, at present, there are 5 ongoing pregnancies.

Conclusions: If intraovarian injection of autologous platelet rich plasma is proven to be a method of ovarian rejuvenation, it may help women with low fertility potential to achieve a pregnancy with their own oocytes.

OP18

CERVICAL ECTOPIC PREGNANCY

Zoi Volonaki[1], Maria Charitou[1], Ismini Tzanaki[1], Georgia Iakovidou[1], Fanis Makrygiannakis[1], George Andreadakis[1], Vasileios Mytaras[1], Eleftherios Ziogos[1], Thomas Vrekoussis[1], Antonios Makrigiannakis[1]

[1]*University Hospital Of Heraklion, Obstetrics and Gynecology Department, Univercity of Crete-Madical School, Heraklion, Greece*

BACKROUND AND AIMS: To present a case of successful management of a cervical ectopic pregnancy with positive cardiac activity that was referred to our department.

MATERIALS AND METHODS: Data were retracted from the medical file of a 33y.o patient with 7weeks amenorrhea and medical history of 2 cesarean deliveries that was referred to our department. A decision of administrating methotrexate and performing embolization of the left uterine artery (embolization of the right uterine artery was not feasible) with simultaneous close monitoring of the patient's β-hCG levels was made. Immediately after the embolization the cardiac activity of the fetus was ceased. 10 days later,β-hCG level dropped at 8,87. Prophylactic suture ligation of the cervicovaginal branches of the uterine artery with absorbable sutures at the 3 and 9 o'clock positions of the cervix and evacuation with dilatation and curettage, under transabdominal ultrasound guidance, was performed.

RESULTS: The cervical ectopic pregnancy was successfully evacuated with simultaneous preservation of the patient's reproductive capability.

CONCLUSIONS: Cervical pregnancy is a rare variation of ectopic pregnancy. Diagnosis and treatment of cervical pregnancy have enormously changed in the last 20 years. Still, the management is controversial. Cervical pregnancy is diagnosed by ultrasound during the Ist trimester of pregnancy. The success of conservative treatment depends mainly on early diagnosis. Such cases would be ideally managed at specialized tertiary referral centers and preferably, where available, Early Pregnancy Assessment Units, (either medical, surgical, or combined treatment modalities)can be attempted.

OP19

PROSPECTIVE ATTITUDES TOWARDS RESPIRATORY SYNCYTIAL VIRUS (RSV) IN PREGNANT WOMEN IN GREECE PENDING VACCINE AUTHORIZATION. PRELIMINARY OUTCOMES

Anna Damatopoulou[1], Ypatia Diamanta[1], Michail Matalliotakis[1], Ioannis Pikrides[2], Emmanouil Ierapetritis[2], Fani Ladomenou[3]

[1]Department of Obstetrics and Gynecology, Venizeleio General Hospital, Crete, Greece
[2]Department of Obstetrics and Gynecology, General Hospital of Agios Nikolaos, Lasithi, Crete, Greece
[3]Assistant Professor in Pediatrics Infectious diseases Medical School University of Ioannina, Greece

Background and aims: The respiratory syncytial virus is a negative-strand, single-stranded RNA virus that is responsible for causing infections of the lower respiratory tract and bronchiolitis in infants. Recently, FDA approved the maternal RSV vaccine, with a recommendation of vaccination during pregnancy (CDC's Advisory Committee). The aim of this study is to assess the intention of vaccination of pregnant females against RSV.
Methods: Questionnaires were distributed to 204 pregnant females >16 years old that are monitored in the outpatient department of Venizeleio General Hospital of Heraklion and the General Hospital of Agios Nikolaos in Lasithi.
Results: The findings we present include, among else, the awareness of pregnant females regarding RSV and its clinical manifestations in neonates and infants. Furthermore, we demonstrate the intention for immunization with the current vaccines recommended during pregnancy, any previous vaccination against COVID-19 and the willingness to acquire immunity against RSV with the upcoming vaccine.
Conclusions: For the most part, pregnant females were not familiar with the upcoming RSV vaccine. In order to achieve on-time vaccination for pregnant females, proper education of healthcare professionals is required.

OP20

PRENATAL EXPOSURE TO BISPHENOL A: IS THERE AN ASSOCIATION BETWEEN BISPHENOL A IN SECOND TRIMESTER AMNIOTIC FLUID AND FETAL GROWTH?

Nikolaos Vrachnis[1], Nikolaos Loukas[2], Dionysios Vrachnis[3], Nikolaos Antonakopoulos[4], Areti Mina[5], Ioannis Papoutsis[6], Sofoklis Stavros[7], Petros Drakakis[8]

[1]*Third Department of Obstetrics and Gynecology, Attikon Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece*
[2]*Department of Obstetrics and Gynecology, Tzaneio General Hospital, Piraeus, Greece*
[3]*Department of Clinical Therapeutics, Alexandra Hospital, Medical School, National and Kapodistrian, University of Athens, Athens, Greece*
[4]*Third Department of Obstetrics and Gynecology, Attikon Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece*
[5]*Department of Forensic Medicine and Toxicology, Medical School, National and Kapodistrian University of Athens, Athens, Greece*
[6]*Department of Forensic Medicine and Toxicology, Medical School, National and Kapodistrian University of Athens, Athens, Greece*
[7]*Third Department of Obstetrics and Gynecology, Attikon Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece*
[8]*Third Department of Obstetrics and Gynecology, Attikon Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece*

Background and aims: Fetal growth abnormalities increase the risk of negative perinatal and long-term outcomes. Bisphenol A (BPA) is a ubiquitous endocrine disruptor to which humans are exposed from the environment, via various consumer products, and through the diet. It possesses estrogen-mimicking properties and exerts epigenetic and genotoxic effects, and it has been associated with harmful effects impacting the entire spectrum of human life, including the intrauterine period. We investigated the role of maternal exposure to BPA in abnormal fetal growth velocity.
Methods: Amniotic fluid samples were collected from 35 women who underwent amniocentesis early in the second trimester. Pregnancies were followed until delivery, and birth weights were recorded. The amniotic fluid samples were divided into three groups based on fetal birth weight, as follows: AGA, SGA, and LGA. Amniotic fluid BPA levels were determined by gas chromatography coupled with mass spectrometry.
Results: BPA was detected in 80% of our amniotic fluid samples. Median concentration was 281.495 pg/mL and ranged from 108.82 pg/mL to 1605.36 pg/mL. No significant association was observed between the study groups regarding BPA concentration. A significant positive correlation between amniotic fluid BPA concentration and birth weight centile ($r = 0.351$, p-value = 0.039) was identified. BPA levels were also inversely associated with gestational age in pregnancies at term ($r = -0.365$, p-value = 0.031).
Conclusions: Our findings suggest that maternal exposure to BPA during the early second trimester of pregnancy can potentially contribute to increased birthweight percentiles and to decreased gestational age in pregnancies at term.

OP21

Dehydroepiandrosterone (DHEA) age related effect in gene expression of human decidualized endometrial stromal cells

Makrygiannakis F., Marmara M., Berdiaki A., Asmarianaki M., Vrekoussis T. and Makrigiannakis A.

Laboratory of Human Reproduction, Department of Obstetrics and Gynecology, Medical School, University of Crete, Heraklion, Greece

Background and aims: Over the last decades, increased maternal age has been associated with reduced fertility and adverse pregnancy outcomes, in the developed world countries. Our previous published work pinpointed the role of womens' age in endometrial cell proliferation and decidualization. Decidualization of the endometrium is a crucial step for uterus to become receptive for the embryo and is characterized by changes in endometrial stromal cell function and gene expression. Dehydroepiandrosterone (DHEA) is an adrenal androgen precursor that is abundant in the circulation. The circulating pool of DHEA declines with age and concentrations of DHEA in women ages 40–50 are half those of women in their 20s. In our study, therefore, we aim to investigate the possible use of DHEA in endometrial cell function. We correlated womens' age with changes in human endometrial decidualized stromal cell gene expression after incubation with DHEA.

Methods: Endometrial biopsies from women at different ages (23y-44y) undergoing hysteroscopies were obtained, with informed consent. Stromal cells were isolated resulting in 98% pure cultures. Stromal cells were then cultured and treated with 8-bromo-cAMP, with and without DHEA addition in different concentrations. Total RNA was extracted and mRNA analysis was performed using real-time PCR.

Results: Data demonstrated a statistically significant increase in the expression of IGFBP, OPN, STAT3 in decidualized stromal cells, after addition of DHEA, with increasing age.

Conclusions: DHEA can affect decidualization of the endometrium of older women, showing a possible mechanism to overcome age related endometrial dysfunctions.