XIII. EndoAcademy Endometrioma January 16, 2022, Konya

TURKISH ENDOMETRIOSIS & ADENOMYOSIS SOCIETY 2009

13th year 2009-2022

ENDOMETRIOSIS BULLETIN JANUARY 2022 / ISSUE XX

SELECTED ARTICLES

Relationship Between Primary Dysmenorrhea and Endometriosis

A New Ultrasonographic Marker in the Diagnosis of Endometriosis

Relationship Between Bone Marrow Stem Cells and Endometriosis

Special Interview

Ghassan Loutfi

www.endometriozisdernegi.org

PREFACE

Hello,

We are here with you again with our 20th issue.

You can find the newest updates on endometriosis and adenomyosis here in this bulletin, which is published every three months.

In this issue, we included the abstracts of studies on endometriosis terminology, a new potential ultrasound marker for endometriosis, and studies on the relationship between endometriosis and dysmenorrhea, endometriosis and placenta previa, postpartum haemorrhage, endometriosis and bone marrow stem cells and studies on malign conditions associated with endometriosis.

Our new Webinar series **'Experts Discuss Endo-Adeno with Real Cases'** has started with the participation of **Prof. Recai Pabuccu, MD., Prof. Ertan Saridogan, MD.,** and **Prof. Yakup Kumtepe, MD.**, which was moderated by **Prof. Engin Oral, MD.**

On our society's Instagram account, we continued our live broadcasts on endometriosis where we share up-to-date information on endometriosis and answer questions. The 30th, 31th, 32nd, 33rd broadcasts featured experts in the field such as; **Prof. Erbil Dogan, MD., Prof. Murat Sonmezer, MD., Prof. Berna Dilbaz, MD., Prof. Husnu Gorgen, MD., and Fatih Aktoz, MD, Aysegul Bestel Ciftci, MD, Eda Ureyen Ozdemir, MD,** and **Nilufer Akgun, MD.**

The webinar series organized by European Endometriosis League continued during November and December with valuable presentations by **Carla Tomasetti**, and **Annemiek Nap**. You can find the monthly webinar program for 2022 in our bulletin.

On November 7th junior members of our society ran **Istanbul Marathon** to raise awareness for endometriosis.

We are proud and excited to announce the publication of our new book titled as **'Endometriosis and Adenomyosis from A to Z'**. **Prof. Engin Oral, MD**. and **Assoc. Prof. Hale Goksever Celik, MD**. edited the book, where 89 authors contributed with a total of 600 pages.

On 2**6-27 November 2021, 'Workshop on Uterine Benign Disorders'** chaired by **Prof. Engin Oral, MD.** and **Prof. Taner Usta, MD.** took place as a hybrid organization.

Minimally Invasive Hysterectomy Course organized by our society and chaired by **Prof. Taner Usta, MD.** and **Prof. Ahmet Kale, MD.** took place on December 17, 2021 at Kartal Lutfi Kirdar City Hospital. In this hybrid course experts from all around Turkey participated as speakers.

On January 16, 2022 **13th EndoAcademy-Endometrioma Course** took place in Konya, which was organized by two of our board members, **Prof. Umit Inceboz, MD.** and **Assoc. Prof. Pinar Yalcin Bahat, MD.**

7th EMEL Conference on Endometriosis and Uterine Disorders will take place on January 20-21, 2022 at Dubai with the participation of Prof. Engin Oral, MD., Prof. Taner Usta, MD. and Prof. Ahmet Kale, MD.

For this issue's Interview with an Endo Expert section, one of your junior members **Ezgi Darici, MD.** interviewed **Prof. Ghassan Loutfi, MD.**, who is the president of EMEL.

In our next issue we hope to share new updates on endometriosis and adenomyosis.

Best regards,
Prof. Taner Usta, MD.
President of Turkish Endometriosis & Adenomyosis Society

Turkish Endometriosis & Adenomyosis Society Board of Directors 2019-2022

Turkish Endometriosis and Adenomyosis Society's Founding President
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Endometriosis e-bulletin is prepared by Turkish Endometriosis & Adenomyosis Society. If there are any topics that you would like us to include in the bulletin or any questions you would like to ask, you can contact us via e-mail at drcihankaya@gmail.com.

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TABLE OF CONTENTS

A SELECTED ARTICLES

A SELECTED ARTICLES

1 An International Terminology for Endometriosis, 2021

International Working Group of AAGL, ESGE, ESHRE and WES; C Tomassetti, N P Johnson, J Petrozza, M S Abrao, J I Einarsson, A W Horne, T T M Lee, S Missmer, N Vermeulen, K T Zondervan, G Grimbizis, R L De Wilde. Facts Views Vis Obgyn. 2021 Oct 22;13(4).

Abstract

Background: Different classification systems have been developed for endometriosis, using different definitions for the disease, the different subtypes, symptoms and treatments. In addition, an International Glossary on Infertility and Fertility Care was published in 2017 by the International Committee for Monitoring Assisted Reproductive Technologies (ICMART) in collaboration with other organisations. An international working group convened over the development of a classification or descriptive system for endometriosis. As a basis for such system, a terminology for endometriosis was considered a condition sine qua non.

Objectives: The aim of the current paper is to develop a set of terms and definitions on endometriosis that would be the basis for standardisation in disease description, classification and research.

Materials and methods: The working group listed a number of terms relevant to be included in the terminology, documented currently used and published definitions, and discussed and adapted them until consensus was reached within the working group. Following stakeholder review, further terms were added, and definitions further clarified. Although definitions were collected through published literature, the final set of terms and definitions is to be considered consensus-based. After finalisation of the first draft, the members of the international societies and other stakeholders were consulted for feedback and comments,

which led to further adaptations.

Results: A list of 49 terms and definitions in the field of endometriosis is presented, including a definition for endometriosis and its subtypes, different locations, interventions, symptoms and outcomes. Endometriosis is defined as a disease characterised by the presence of endometrium-like epithelium and/or stroma outside the endometrium and myometrium, usually with an associated inflammatory process.

Conclusions: The current paper outlines a list of 49 terms and definitions in the field of endometriosis. The application of the defined terms aims to facilitate harmonisation in endometriosis research and clinical practice. Future research may require further refinement of the presented definitions.

What is new?: A consensus based international terminology for endometriosis for clinical and research use.

2 The "Speckle Sign" in the Diagnosis of Posterior Compartment Endometriosis

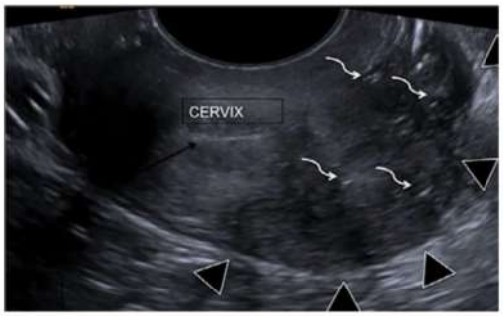
Balcacer P, Jaramillo-Cardoso A, Gupta S, Mortele K, Johnson SC. J Ultrasound Med. 2021 Oct;40(10):2181-2188.

Abstract

Objective: To determine usefulness of the "speckle sign" in the diagnosis of deep invasive endometriosis.

Materials and Methods: This HIPAA-compliant, institutional review board-approved retrospective study with informed consent waived included 25 women (mean age 20-69 years) with histopathologically confirmed posterior cul-de-sac endometriosis between 2013 and 2018. Transvaginal ultrasound exams of these patients were reviewed by 2 expert radiologists searching for the "speckle sign," defined as irregular obliteration of the posterior cul-de-sac and bright (hyperechoic) internal echoes. The frequency of additional findings such as "kissing ovaries," endometriomas in the adnexa, bowel tethering in the posterior pelvic compartment, retroflexed uterus, adenomyosis, and pelvic free fluid were also analyzed. Data regarding clinical features, histopathologic findings and management were collected through a review of the medical record.

Results: Reader one identified posterior compartment endometriosis in 20/25 patients, and reader two in 22/25 patients, with 96% agreement. Adnexal endometriomas were



found in 21/25 patients for both readers (k = 0.70) and were bilateral in 23% of patients.

The ovaries were adherent to each other in the midline ("kissing ovaries") in 50% of patients; the bowel was tethered anteriorly in 20%; the presence of adenomyosis was seen in about 27%, and a retroflexed uterus was seen in 24% of patients.

Conclusions: The speckle sign could be helpful in making the diagnosis of posterior compartment endometriosis, and the sign is often found in conjunction with other imaging features of endometriosis.

3 Is primary dysmenorrhea a precursor of future endometriosis development?

Clemenzaa S, Vannuccinia S, Capezzuolia T, Melecaa CI, Pampalonia F, Petragliaa F Gynecol Endocrinol. 2021;37(4): 287-293.

Abstract

Primary dysmenorrhea (PD) is the most common gynecologic disorder during adolescence and it is characterized by crampy lower abdominal pain that occurs during menstruation. Secondary dysmenorrhea, in contrast, has the same clinical features but occurs in women with a disease that could account for their symptoms (endometriosis, adenomyosis, uterine fibroids, pelvic inflammatory disease). Endometriosis is the most common cause of secondary dysmenorrhea and it should be considered in patients with persistent and clinically significant dysmenorrhea despite treatment. It is often diagnosed after a long delay, increasing the likelihood of pain chronicity and fertility problems at a later age. Women who suffer from dysmenorrhea in adolescence have higher risk of endometriosis in future. The open question is if endometriosis was already present at the onset of dysmenorrhea but undiagnosed or if PD favors subsequent development of endometriosis-associated pain. Since PD is associated with higher risk for developing chronic pain state and shares some of the same pain pathways of endometriosis

(prostaglandins overproduction, inflammation, peripheral sensitization, central sensitization and abnormal stress responses), a correlation between PD and endometriosis is suggested. To know whether it is a risk factor for the development of endometriosis-associated pain may provide an opportunity for early intervention and prevention. The present review aims to investigate the clinical and pathogenetic features of PD and endometriosis in order to identify a possible association between the two conditions.

Keywords: Primary dysmenorrhea; chronic pelvic pain; endometriosis; peripheral and central sensitization; prostaglandins.

4 The association of endometriosis with placenta previa and postpartum hemorrhage: a systematic review and meta-analysis

Matsuzaki S , Nagase Y, Ueda Y, Lee M , Matsuzaki S, Maeda M, Takiuchi T, Kakigano A , Mimura K, Endo M, Tomimatsu T, Kimura T. Am J Obstet Gynecol MFM. 2021 Sep;3(5):100417.

Abstract

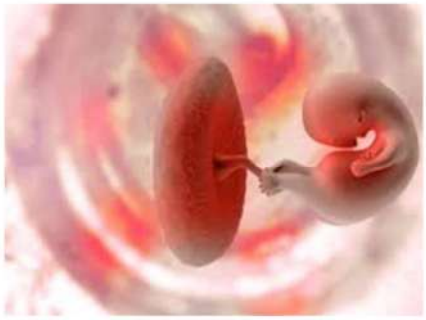
Objective: This study aimed to review the effect of endometriosis on the prevalence of placenta previa and postpartum hemorrhage in pregnant patients and the surgical outcomes of pregnant patients with endometriosis developing placenta previa.

Data sources: In compliance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, a systematic review of the literature was conducted on December 31, 2020, using PubMed, Scopus, and the Cochrane Library.

Study eligibility criteria: Comparative studies between pregnant women with and without endometriosis and studies that investigated the surgical outcomes of patients with and without endometriosis developing placenta previa were included.

Methods: Here, 2 reviewers independently screened the titles and abstracts, completed data extraction, and assessed the reporting quality using the Risk of Bias in Nonrandomized Studies of Interventions tool.

Results: Overall, 19 studies (from 2010 to 2020) met the inclusion criteria (98,463 pregnancies with endometriosis and 7,184,313 pregnancies without endometriosis). In the adjusted pooled analysis, endometriosis was associated with a higher rate of placenta previa (adjusted odds ratio, 3.17; 95% confidence interval, 2.58-3.89), whereas the incidence of postpartum hemorrhage was similar between pregnant women with and without endometriosis (adjusted odds ratio, 1.15; 95% confidence interval, 0.99-1.34). When the analysis was restricted to histologically confirmed endometriosis cases, the relationship of endometriosis with placenta previa (adjusted odds ratio, 4.23;



95% confidence interval, 1.74-10.30) and postpartum hemorrhage (adjusted odds ratio, 1.29; 95% confidence interval, 0.50-3.34) was consistent with results from the nonrestricted analysis. There was no study that examined the surgical outcomes of patients with endometriosis developing placenta previa patients. However, there are 3 studies that examined the effect of endometriosis on surgical outcomes during cesarean delivery: 1 study showing that endometriosis was associated with increased intraoperative bleeding during emergent cesarean delivery; the other study showing that endometriosis was associated with an increased incidence of postpartum hemorrhage during cesarean delivery (adjusted odds ratio, 1.1; 95% confidence interval, 1.0-1.2), especially in primiparous women with singleton pregnancies (adjusted odds ratio, 1.7; 95% confidence interval, 1.5-2.0); and another study suggesting a significantly higher rate of hysterectomy (7.1%) and bladder injury (7.1%) in patients with endometriosis than in those without endometriosis.

Conclusion: Endometriosis can potentially be associated with adverse surgical outcomes during cesarean delivery. Although there is a correlation between endometriosis and increased rate of placenta previa, the surgical outcomes of patients with endometriosis developing placenta previa remain understudied.

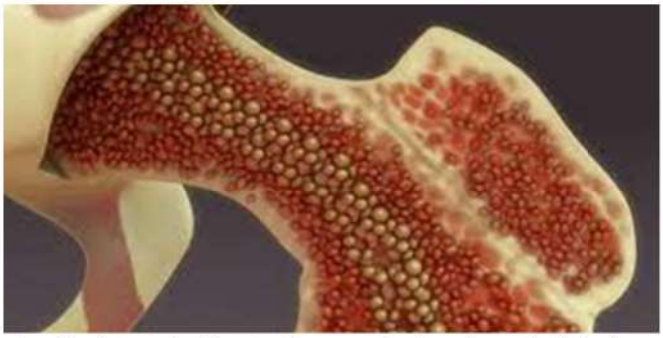
Keywords: endometriosis; placenta previa; postpartum hemorrhage; systematic review. endometriosis; placenta previa; postpartum hemorrhage; systematic review.

5 Endometriosis Cell Proliferation Induced by Bone Marrow Mesenchymal Stem Cells

Chen P, Mamillapalli R, Habata S, Taylor HS. Reprod Sci. 2021 Feb;28(2):426-434.

Abstract

Endometriosis is an estrogen-dependent gynecological disorder that affects 10% of reproductive-aged women and causes pelvic pain and infertility. Bone marrow-derived stem cells (BMDCs) are known to engraft endometriosis in association with lesion growth; however, they do not undergo significant clonal expansion. The indirect effects of BMDCs on endometriosis growth and cell proliferation are not well characterized. Here, we demonstrate that BMDCs' co-culture increased endometrial stromal cell proliferation. In vitro studies using endometrial cells showed that BMDCs increased cell proliferation and activation of CDK1 in both an endometriosis cell line and primary endometrial stromal cells from women with endometriosis, however not in normal endometrial cells. In vivo studies using a mouse model of endometriosis showed increased CDK1+ expression associated with engrafted GFP + BMDCs. These results suggest that endometrial cell proliferation is induced by stem cell-derived



trophic factors leading to the growth of endometriotic lesions. Targeting the specific signaling molecules secreted by BMDC may lead to novel therapeutic strategies for controlling cell proliferation in endometriosis.

Keywords: Bone marrow–derived cells (BMDCs); CDK1; Cell proliferation; Endometriosis.

6 Endometriosis and malignancy: The intriguing relationship

Dahiya A, Sebastian A, Thomas A, George R, Thomas V, Peedicayil A. Int J Gynaecol Obstet. 2021 Oct;155(1):72-78.

Abstract

Objective: To determine the prevalence and study the association of ovarian, uterine, and breast cancers with endometriosis.

Methods: A cross-sectional study of all women with a tissue-proven diagnosis of endometriosis postoperatively in a tertiary care hospital between January 1, 2010, and December 31, 2019, was conducted to determine the prevalence of coexistent malignancy. Patient details were obtained from electronic clinical records. Univariate analysis followed by multivariate analysis was done to find independent risk factors associated with malignancy.

Results: Out of 800 patients, 104 (13.0%) were found to have coexistent malignancy: ovarian (50, 6.2%); endometrial (33, 4.1%); synchronous ovarian and endometrial (7, 0.9%); and breast (14, 1.8%). Increasing age (odds ratio [OR] 1.13; 95% confidence interval [CI] 1.09-1.16), higher levels of cancer antigen 125 (CA 125) (OR 1.002; 95% CI 1.001-1.005), postmenopausal status (OR 6.2; 95% CI 2.0-19.2), duration of endometriosis over 5 years (OR 4.7; 95% CI 2.5-9.0), and endometriomas larger than 8 cm (area under the curve 0.83) were predictive of coexistent malignancy.

Conclusion: Endometriosis is associated with an increased risk of ovarian, endometrial, and breast malignancy. Increasing age, postmenopausal status, higher levels of CA 125, larger endometrioma, and long-standing disease are predictive risk factors.

Keywords: breast cancer; endometrial cancer; endometriosis; ovarian cancer.

B NEWS FROM OUR SOCIETY
PAST ACTIVITIES

@endometriosis_tr Live Broadcasts

On our society's Instagram account, we continued our live broadcasts, which we started in the beginning of the pandemic and took a break over the summer of 2021. These broadcasts feature experts in the field such as; Prof. Erbil Dogan, MD, Prof. Murat Sonmezer, MD, Prof. Berna Dilbaz, MD, Prof. Husnu Gorgen, MD, and Fatih Aktoz, MD, Aysegul Bestel Ciftci, MD, Eda Ureyen Ozdemir, MD, and Nilufer Akgun, MD.

Q&A 30
Everything You Want to Know About Endometriosis
Prof. Erbil Dogan, MD
Fatih Aktoz, MD

Q&A 31
Everything You Want to Know About Endometriosis
Prof. Murat Sonmezer, MD
Aysegul Bestel, MD

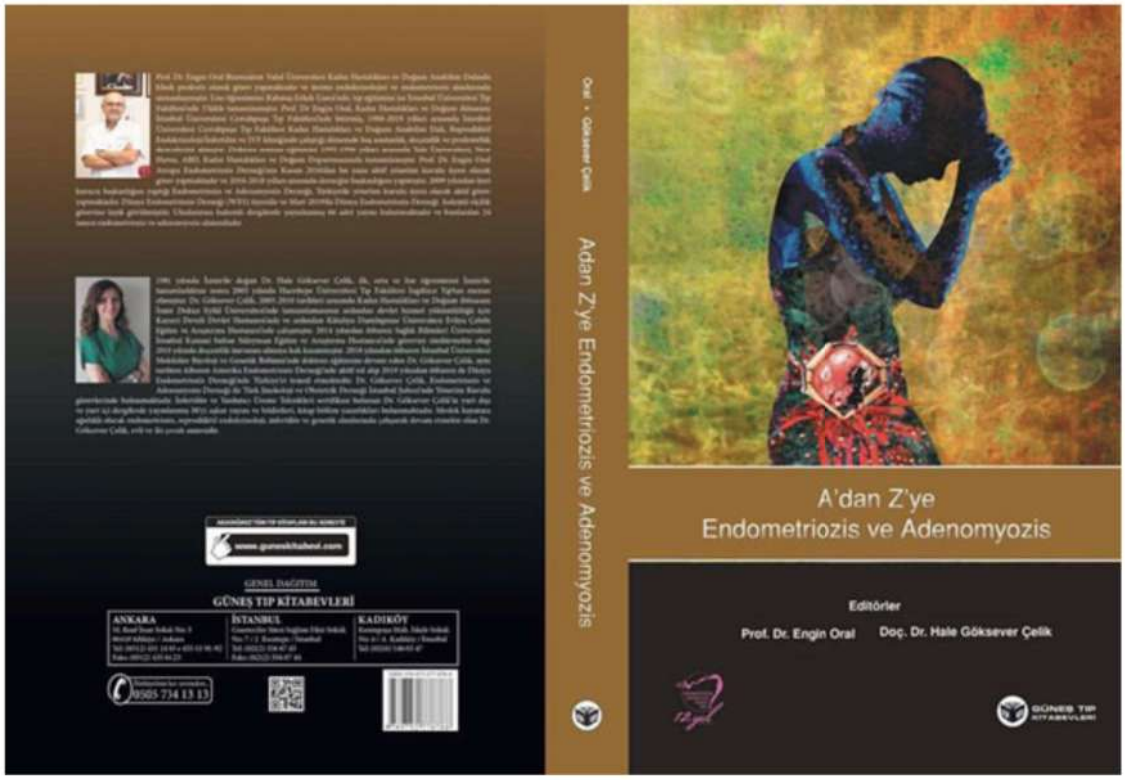
Q&A 32
Everything You Want to Know About Endometriosis
Prof. Berna Dilbaz, MD
Eda Ureyen Ozdemir, MD

Q&A 33
Everything You Want to Know About Endometriosis
Prof. Husnu Gorgen, MD
Nilufer Akgun, MD

Webinar Series – Experts Discuss Endo-Adeno with Real Cases

The new webinar series of our association Experts Discuss Endo-Adeno with Real Cases took place on October 26, with Prof. Recai Pabuccu, MD, Prof. Ertan Saridogan, MD, Prof. Yakup Kumtepe, MD participating and Prof Engin Oral, MD moderating.

Our book, Endometriosis and Adenomyosis from A to Z, which was edited by Prof. Engin Oral, MD and Assoc. Prof. Hale Goksever Celik, MD, has 600 pages and was prepared with great efforts of 89 authors. This book, which is a reference source for healthcare professionals, can be obtained from Gunes Medical Bookstore.



Comments on "Endometriosis and Adenomyosis from A to Z" by Prof. Kutay Biberoglu, MD

When the editorial board offered me to write the "history of endometriosis" section of the book “Endometriosis and Adenomyosis from A to Z", I accepted without any hesitation. I would like to offer my thanks. Writing the history of a disease, an enigmatic entity, like endometriosis, where the unknown is more than the known, was beyond being an honor, has allowed me to register my 50 years of medical experience, my perfection in a way, or at least that is how I perceive it. I would like to take this opportunity to thank my young colleague, dear Fırat, who made the greatest contribution to the book chapter we wrote together. This 631-page book, which made me feel nostalgic from beginning to end, is undoubtedly one of the most comprehensive works written in this field by experts.

I am aware that publications in the digital environment are gradually replacing the printed books and this is an inevitable development. Still, I must admit that I prefer the pleasure of inhaling the smell of ink that comes out as I turn the pages of a newly published book.
This nostalgic post has given me the opportunity to chat with my younger colleagues in an unusual, perhaps even in a strange way, mixed with highly emotional memories. When I think about the past and the dazzling pace of developments in the years after that, I think I am a member of a very lucky generation. I am lucky because my generation has seen a number of developments which would normally would not fit in a lifetime.

In my childhood the gramophone, had just entered daily life. At home it was carried around with care. The gramophone arm was only under the authority of my grandfather, and was slowly turned. We formed a circle around the sound of the stone record, watched the event with astonishment and admiration and listened to the stories of "more tomorrow" by inserting our ears into the gigantic wooden radios with ropes. We were careful to save the letter arms of the Remington that got stuck on each other when they were typed a little too fast. The first black and white Turkish National Television broadcasts were cut off frequently. The neighbors gathered in a house in the evenings to watch TV series. The first computer came to Hacettepe University, and we curiously and secretly came to Hacettepe to spy on these noisy instruments. We searched the index medicus to access medical journals and books and looked for resources on the shelves of the library. We colored presentation slides by putting transparent gelatin papers on top of them, and we lined up the slide cassettes that fell off the carousels during oral presentations. All these memories came to me vividly as if I were living them today.

During my student years at Hacettepe Faculty of Medicine, the topics of reproductive endocrinology, infertility appeared in the curriculum, but I find it difficult to say that the course content was sufficient. My interest in endocrinology started when I was a student, but the disappointment of not being able to reach enough information both in the courses and in the very limited number of sources left traces on me. I remember it painfully and like yesterday that my plan to study in the US in order to gain access to deeper knowledge on endocrinology had to be postponed as the required ECFMG exam questions were lost in Turkey that year. In order not to take a gap year, I started and completed my specialty training at Hacettepe University, during which my interest did not deviate from reproductive medicine.

Comments on "Endometriosis and Adenomyosis from A to Z" by Prof. Kutay Biberoglu, MD

My specialization thesis which was titled as “The role of estriol production and measurement in monitoring fetal well-being in pregnant women”, my experiences in culdoscopy during the time when laparoscopy was rarely performed, and the laparoscopy trainings given by world-famous experts such as Patrick Steptoe and Kurt Semm in the Hacettepe operating room kept my interest in reproductive medicine alive.

The opportunity to study in the US, which I had dreamed of for years and finally achieved, provided my first and real introduction to the topic of reproductive endocrinology and infertility, and to endometriosis. Samuel Jan Behrman, whose works I read many times, was one of the few leading professors in the world of that period and I, as a Turkish physician, had the chance to work and gain experience and knowledge from him for more than four years. When we designed the study on "Dosage aspects of danazol therapy in endometriosis: short-term and long-term effectiveness" that we wrote together, we certainly did not have in mind the idea of inventing the "Biberoglu - Behrman Pain Scale (B&B Scale)", which is still in use all over the world. Our aim was to establish objective clinical criteria in order to demonstrate the efficacy of treatment. During the years we worked together, we encountered many cases of endometriosis. I observed every day how different clinical presentation of endometriosis was, how it could coexist with many other diseases and which overlapped with each other. I learned by experience how common endometriosis cases, whose fertility capacities seemed hopeless, could spontaneously get pregnant while others who suffered from minimal lesions were unable to have children for life, and how impossible it was to predict the outcome for patients with this mysterious disease. The conclusion I have reached is that what we do not know about this disease is more than what we think we know. The possibility that endometriosis is not a disease in its own right, but rather a larger group of diseases or just a small subgroup of a larger entity should be kept in mind. Endometriosis, irritable bowel syndrome, painful bladder, even dysmenorrhea, migraine, lower back pain and many other entities may be the result of a common defect, and it should be kept in mind that the triggering stimulus may be the result of manipulations of the brain, immune or endocrine systems.

The development of endoscopy in surgery and in vitro fertilization in infertility have occurred at a dazzling pace. At that time, in Hacettepe, the conversion from diagnostic laparoscopy to surgical laparoscopy started with primitive methods. Cysts, ectopic pregnancies, fibroids, and pelvic abscess drainage with mixed cannulas were removed by inserting conventional surgical instruments through mini-incisions made in the right and left lower abdominal wall. These were the pioneers of current excellent endoscopic technologies. Desire for development, ambition to achieve and curiosity are indispensable and necessary traits of scientists. The new endoscopic intervention trials, which were found to be unusual and therefore inappropriate, were subject to loud criticism at Hacettepe training meetings at that time, but the progress of technological developments could not be stopped.

Comments on "Endometriosis and Adenomyosis from A to Z" by Prof. Kutay Biberoglu, MD

Being able to witness such a rapid development has been a great opportunity and a source of pride for me. My thesis for associate professorship was on the pathophysiology of Polycystic Ovary Syndrome, which inevitably included intensive endocrine evaluation and testing. Although the thesis jury unanimously accepted my thesis as successful, the confession made by a member later was that all of the members expressed a positive opinion because they did not understand anything from the thesis data. I remember very well that I defined adenomyosis as external endometriosis when I was talking about endometriosis, in the lectures I gave.

My friends and young colleagues, considering myself as an older brother to most of you I would like to emphasize the importance of giving priority to ‘do no harm’ by always acting cautiously and being open-minded when managing patients. Medicine changes and develops very rapidly, and that sometimes these developments are reached without evidence-based science, and these "so-called" innovations can deviate from the truth and can be misleading causing undesirable results. While reading this book, which was created by the great efforts of many experts, you will get the most up-to-date and accurate information on Endometriosis. Also, keep in mind that many more books will be written to shed light to the true and accurate information on this subject.

With my love and respect,

Dr. Kutay Biberoglu
January 10, 2022
Ankara

43rd Istanbul Marathon

On November 7, young group members of our society participated in the Istanbul Marathon to raise awareness on endometriosis.

Workshop on Uterine Benign Disorders 2021

The Workshop on Uterine Benign Disorders 2021, organized by Prof. Taner Usta, MD and Prof. Engin Oral, MD, took place on November 26-27, 2021 at Acibadem Altunizade Hospital with the participation of the members of our board of directors, as well as experts from Turkey and abroad, and with approximately 150 participants. This hybrid course covered the topics like abnormal uterine bleeding, fibroids, adenomyosis, endometriosis, which are benign diseases of the uterus. In addition to scientific discussions, two live surgeries were performed; laparoscopic myomectomy performed by Prof. Taner Usta, MD and laparoscopic hysterectomy performed by Prof. Ahmet Kale, MD.

UTERINE WORKSHOP ON BENIGN DISORDERS 2021

November 26-27, 2021 Acibadem Altunizade Hospital Conference Hall

12th year

November 26th, 2021 - Friday	
OPENING	
09:00-09:10	Opening Speeches, **Taner Usta, Engin Oral**
	Pre-Course Assessment - Quizz 1 - **Hale Göksever Çelik**
SESSION-1	**ABNORMAL UTERINE BLEEDING AND FIBROID**
Chairs	**Yucel Karaman , Isik Sozen**
09:10-09:30	Abnormal Uterine Bleeding: Organic Pathologies, **Emre Pabuccu**
09:30-09:50	Rarely Considered, But A Common Disease in Abnormal Uterine Bleeding and Infertility; Isthmocele, **Cem Demirel**
09:50-10:10	Relationship between Fibroid and Infertility, **Umit Inceboz**
10:10-10:30	Fibroid and Leiomyosarcoma, **Murat Api**
10:30-10:45	**Discussion**
10:45-11:00	**COFFEE BREAK**
SESSION-2	**FIBROID**
Chairs	**Turan Cetin , Gulfem Basol**
11:00-11:20	Abnormally Located Giant Myomas and Their Management, **Gokhan Boyraz**
11:20-11:40	Hysteroscopic Myomectomy: Is There Any Limits?, **Hulusi Bulent Zeyneloglu**
11:40-12:00	How to Do Myomectomy: Laparoscopy or Laparotomy?, **Isa Aykut Ozdemir**
12:00-12:20	Morcellation of Myoma: Current Approach, **Cihan Kaya**
12:20-12:30	**Discussion**
12:30-13:10	**LUNCH**
SESSION-3	**ADENOMYOSIS I**
Chairs	**Engin Oral, Ezgi Darici**
13:10-13:40	How Can We Diagnose Adenomyosis with Ultrasound?, **Ayse Seyhan**
13:40-14:00	Adenomyosis and Abnormal Uterine Bleeding, **Levent Senturk**
14:00-14:20	Adenomyosis and Pelvic Pain, **Pınar Yalcin Bahat**
14:20-14:40	3 Diseases in the Devil's Triangle: Endometriosis, Adenomyosis, Fibroid, **Kutay Biberoglu**
14:40-15:00	**Discussion**
15:00-15:20	**COFFEE BREAK**
SESSION-4	**ADENOMYOZIS II**
Chairs	**Engin Oral, Isil Ayhan**
15:20-15:40	Medical Treatment of Adenomyosis: What is the Gold Standard Treatment in the Fertile Group?, **Hale Goksever Celik**
15:40-16:00	Management of Adenomyosis Associated Infertility, **Bulent Berker**
16:00-16:20	Uterin Preserving Surgery of Adenomyosis, For Whom? When? How?, **Attila Bokor**
16:20-16:40	How Can We Follow-up Pregnant Women Having Endometriosis and/or Adenomysis?, **Simone Ferrero**
16:40-17:00	**Discussion**
17:00	**1st Day Closing Remarks**

www.uterusunselimhastaliklari.org

HYBRID WORKSHOP

UTERINE WORKSHOP ON BENIGN DISORDERS 2021

November 26-27, 2021 Acibadem Altunizade Hospital Conference Hall

12th year

November 27th, 2021 - Saturday	
SESSION-5	MINIMUM KNOWLEDGE FOR LAPAROSCOPIC HYSTERECTOMY
Chairs	**Gurkan Kiran, Salih Yilmaz**
09:00-09:20	Pelvic Surgical Anatomy: The Least You Need to Know, **Gernot Hudelist**
09:20-09:40	Energy Modalities in Laparoscopic Hysterectomy, **Tolga Karacan**
09:40-10:00	Laparoscopic Hysterectomy for Benign Uterine Disorders: From Simple to Complex Cases, **Attila Bokor**
10:00-10:15	**Discussion**
LIVE SURGERY I	LAPAROSCOPIC MYOMECTOMY
Moderator	**Cihan Kaya**
10:15-12:00	Surgeon, **Taner Usta**
12:00-13:00	**YEMEK ARASI**
SATELLITE SYMPOSIUM	JOHNSON & JOHNSON - ETHICON
Moderator	
12:00-13:00	*Will be announced soon...*
SESSION-6	ENDOMETRIOZIS
Chairs	**Taner Usta, Arif Serhan Cevrioglu**
13:00-13:20	Endometriosis and Pelvic Pain, **Yusuf Aytac Tohma**
13:20-13:40	Endometriosis and Infertility, **Baris Ata**
13:40-14:00	Medical Treatment of Endometriosis, **Simone Ferrero**
14:00-14:20	Surgical Treatment of Endometriosis, **Gernot Hudelist**
14:20-14:40	**Discussion**
LIVE SURGERY II	LAPAROSCOPIC HYSTERECTOMY FOR DIFFICULT CASES (Endometriosis, Adenomyosis and/or Fibroid + Surgical History)
Moderator	**Onur Topçu**
15:00-17:00	Surgeon, **Ahmet Kale**
17:00-17:30	Post-Course Assessment, Quizz 2, **Pinar Bahat**
17:30-18:00	**Closing Remarks**

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HYBRID WORKSHOP

Minimally Invasive Hysterectomy Course

Minimally Invasive Hysterectomy Course organized by our society was held on December 17, 2021 at Kartal Lutfi Kirdar City Hospital. Leading names in the field from Turkey participated as speakers in this hybrid course, which was held with a total of 220 participants, where all the details about hysterectomy were discussed. Additionally, Prof. Taner Usta, MD performed live laparoscopic hysterectomy and Prof. Ahmet Kale, MD performed live vNOTES Hysterectomy.


MİNİMAL İNVAZİV HİSTEREKTOMİ
WORKSHOP 2021
Minimal İnvaziv Histerektominin Püf Noktaları
17 ARALIK 2021, CUMA | KARTAL DR. LÜTFİ KIRDAR ŞEHİR HASTANESİ
HIBRIT WORKSHOP
AÇILIŞ
09:00 - 09:10 Dr. Recep Demirhan, Kartal Dr. Lütfi Kırdar Şehir Hastanesi Başhekimi
Dr. Taner Usta, Kurs Başkanı
Dr. Ahmet Kale, Kurs Başkanı
1. OTURUM TEORİK OTURUM
Oturum Başkanları Dr. Engin Oral, Dr. Aygen Çelik
09:10 - 09:30 Elektro Cerrahi Temel Prensipler, Dr. Salih Yılmaz
09:30 - 09:50 Laparoskopik Histerektomi'de Anatomi; Minimum Bilinmesi Gerekenler, Dr. Tolga Karacan
09:50 - 10:10 Laparoskopik Histerektomi'de Ameliyathane Set-up; Daha Kolay Yapabilir miyiz?, Dr. Elif Cansu Gündoğdu
10:10 - 10:20 Tartışma
2. OTURUM TEORİK OTURUM
Oturum Başkanları Dr. Gürkan Kıran, Dr. Gülfem Başol
10:40 - 11:00 Laparoskopik Sütür Teknikleri; Minimum Bilinmesi Gerekenler, Dr. Hüseyin Cengiz
11:00 - 11:20 Laparoskopi Histerektomi Standart ve Güvenli Teknik, Dr. Ali Yavuzcan
11:20 - 11:40 V-NOTES Standart Teknik, Dr. Cihan Kaya
11:40 - 11:50 Tartışma
CANLI CERRAHİ-1
TRANSVAJİNAL NOTES (vNOTES) HİSTEREKTOMİ
Moderatörler Dr. Murat Ekin, Dr. Önder Sakin
11:50 - 13:30 Cerrah: Dr. Ahmet Kale
3. OTURUM TEORİK OTURUM
Oturum Başkanları Dr. Eralp Başer, Dr. İlhan Şanverdi
13:30 - 13:50 Laparoskopik Histerektomi'de Üriner Komplikasyonlardan Nasıl Kaçınabiliriz?, Dr. Emre Mat
13:50 - 14:10 Laparoskopik Damar, Barsak, Evisserasyon gibi Komp likasyonlardan Nasıl Kaçınabiliriz?, Dr. Yunus Emre Altıntaş
14:10 - 14:30 Laparoskopik Zor Histerektomi; Teknik Ne Olmalı? Nasıl Kolaylaştırabiliriz?, Dr. Yücel Karaman
14:30 - 14:40 Tartışma
CANLI CERRAHİ-2
KONVANSİYONEL LAPAROSKOPİK MULTIPORT HİSTEREKTOMİ
Moderatörler Dr. Serhan Cevrioğlu, Dr. Veli Mihmanlı
14:40 - 16:10 Cerrah: Dr. Taner Usta
16:10 - 16:30 Kurs Sonu Değerlendirme; Eve Götürülecek Mesaj

PLANNED ACTIVITIES

XIII. EndoAcademy, Endometrioma, Konya

Our board members, Prof. Umit Inceboz, MD and Assoc. Prof. Pinar Yalcin Bahat, MD are organizing the 13th EndoAcademy - Endometrioma course, which will be held in Konya on January 16, 2022.

XI. Endometriosis School, Istanbul

Endometriosis School Istanbul, which includes theoretical and hands-on laparoscopy training, and was previously held with valuable international experts, will take place in Istanbul on May 27-28, 2022.

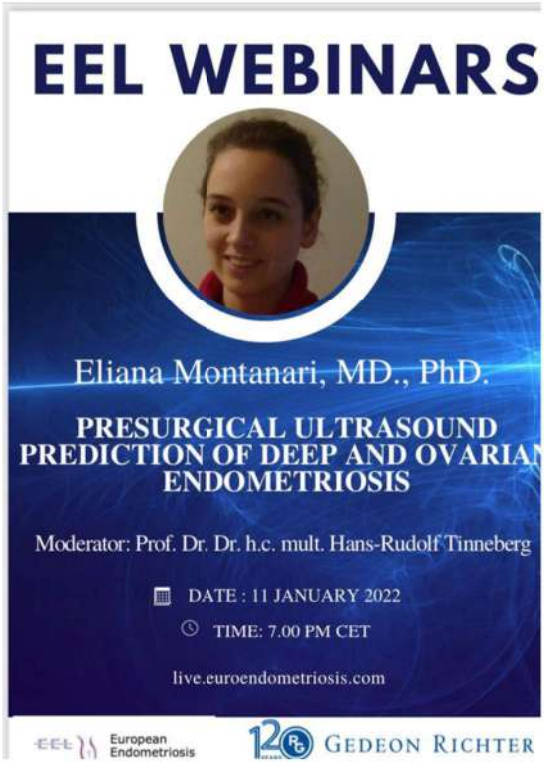
C NEWS FROM THE WORLD OF ENDOMETRIOSIS

EEL WEBINAR Program 2021

European Endometriosis League (EEL) Webinar programs continued in 2021 as well.

In the EEL Webinar held in October, Luk Rombauts, MD., PhD. explained surgery vs IVF in the treatment of endometriosis related infertility with the title "Surgery or IVF for endometriosis-related infertility". The EEL webinar "Endometriosis and infertility the use of EFI", which was held in November, was presented by Carla Tomasetti, MD., PhD. In December, Annemiek Nap, MD., PhD. talked about 'Endometriosis and diet what is the evidence?'.

EEL Webinar series will continue in 2022. The first one was held on January 11 by Eliana Montanari, MD., Phd., with the title 'Presurgical ultrasound prediction of deep and ovarian endometriosis' and will be moderated by Prof. Dr. Dr. hc mult. Hans-Rudolf Tinneberg.



For more information, visit https://www.endometriosis-league.eu/home or follow the European Endometriosis League or Euro Endo League accounts on social media.

ACE 2021

The 9th Asian Endometriosis Congress, which was organized together by the Sri Lanka Endometriosis Association and the Asian Endometriosis and Adenomyosis Association, was held on 28-30 October, 2021. From our country, our founding president, Prof. Dr. Engin Oral, MD. and Prof. Dr Kutay Biberoglu, MD. contributed to the scientific program of the congress with the topic "Endometriosis after the age of 40" and "Endometriosis-related infertility management" and "Dienogest in endometriosis-related pain" respectively.

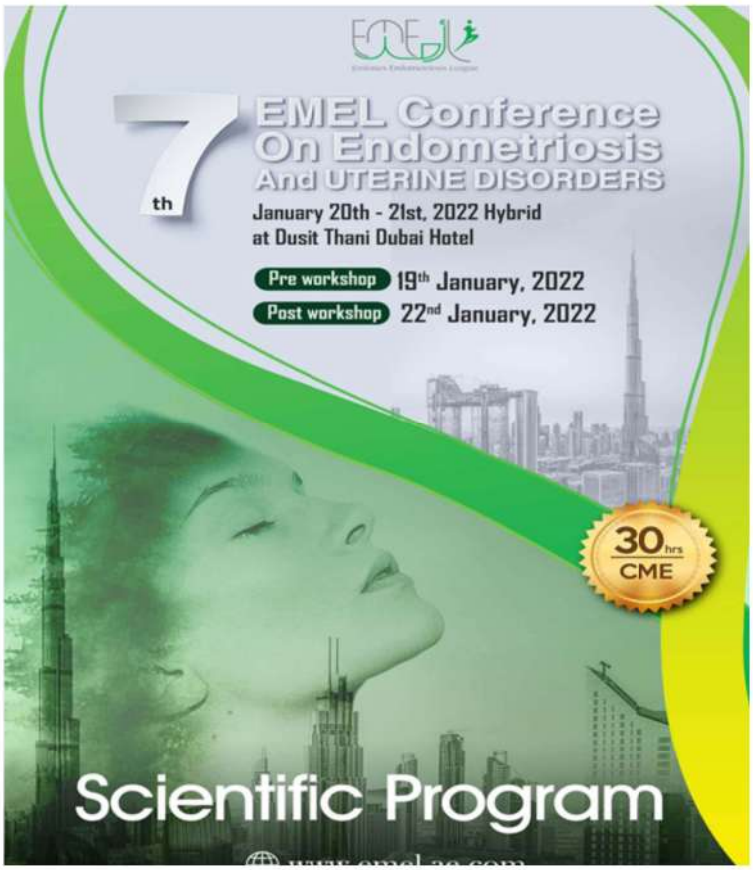
6th EEC - France

The 6th European Endometriosis Congress, which is planned to be held in Bordeaux, France in December this year, has been postponed to 16-17 June 2022.

SEUD 2021

The 7th Congress of Endometriosis and Uterine Pathologies is planned to be held in Stockholm, Sweden in December this year.

EMEL 2022



7th EMEL Conference on Endometriosis and Uterine Disorders will be held on January 20-21, 2022 in Dubai. Prof. Engin Oral, MD., Prof. Taner Usta MD., and Prof. Ahmet Kale, MD. will be both presenting and performing live surgery in this conference.

D INTERVIEW WITH AN 'ENDO SPECIALIST'

Ghassan Loutfi
Interviewer: Ezgi Darici

Turkish Endometriosis & Adenomyosis Society (EAD): Thank you very much for accepting our invitation for this interview.
Ghassan Loutfi: Thank you, it's a privilege to always work with the Turkish Endometriosis and Adenomyosis Society, and I'm happy to be with you today.

EAD: Can you please briefly introduce yourself?
GL: Sure. I'm Dr. Ghassan Loutfi, I work as an obstetrics and gynaecology specialist in Dubai. I'm the head of the Department of Women's Health at the Saudi German Hospital in Dubai where I currently work. I am the president of the Emirate's Endometriosis League which has been active since 2014. My work is mainly concentrated on minimally invasive surgery and endometriosis. I am Lebanese in origin, but before coming to Dubai I lived and worked all my life in Scandinavia, mainly in Finland and Sweden.

EAD: You have been dealing with endometriosis for many years. How did your journey with endometriosis start?
GL: I started working on endometriosis in Stockholm, Sweden. We worked in the minimally invasive surgery unit in the early 2000s. I was involved in early studies examining the division or presence of nerve cell fibres in peritoneal fluid and endometrial samples in endometriosis patients. Since then, I had a special interest in the surgical treatment of the disease. After coming to Dubai in 2010, I saw that this disease was generally unknown by the patients and the doctors. That's why I started working towards raising awareness for endometriosis especially among patients. I started talking to my colleagues about how we can achieve a stronger communication between doctors and patients regarding the management of endometriosis. We received very good support from the medical industry in 2012, which has accelerated the process of working with the medical community in Dubai and the United Arab Emirates (UAE) on a larger scale. And then in 2013, while I was working in Latifa Hospital, which was a governmental hospital, we opened the first endometriosis care unit in the UAE. This clinic became a point of contact for all endometriosis patients and was the first of its kind in the region. We published data on the prevalence of endometriosis, albeit on a small scale, and the process culminated in the establishment of a voluntary society, the Emirates Endometriosis League, in 2014. First,we collaborated with the European Endometriosis League. And gradually with the help of Dr. Hisham Arab, we started establishing better connections with regional and international societies including the SEUD and the WES. So, from then, until now, I think there has been very good progress in establishing the knowledge and awareness on endometriosis in the UAE. There is now much greater activity and interest among physicians in diagnosing patients with endometriosis and referring them to the appropriate clinics. Although much has been accomplished in this decade, there is still much to be done.

EAD: In your opinion what is the most challenging part of the disease; diagnosis or treatment?
GL: The diagnosis, of course. When we first started working with the physicians, they often did not show any interest in this issue or dismissed endometriosis. And I think it's the general rule that the physicians who don't know the disease cannot recognize or identify it. As a result, many doctors today show great interest in diagnosing endometriosis; we are trying to prevent overdiagnosis and prevent every patient with pelvic pain from being evaluated as having endometriosis. But I think the real challenge is to diagnose endometriosis without any surgical intervention or the need for more than one operation.

EAD: What do you think is the most important part of assessment and examination of a patient with endometriosis?
GL: The most important part is the history of symptoms. This is not just my opinion, there is a well-discussed consensus on this issue internationally, and a reference was published at the WES Congress in Sao Paolo on the importance of chronology of symptoms in diagnosis. I think this is still in the development phase. So, WES, SEUD, and EEL are trying to create symptom-based questionnaires that physicians can use to diagnose endometriosis.

EAD: You are one of the pioneers in endometriosis surgery. Can you please give us some tips about how to avoid complications during the surgery?
GL: Sure, that's a good question. There are complications that we call expected and acceptable complications that occur during surgery, and there are complications that occur due to inadequate preparation before endometriosis surgery. If the surgeon knows the patient well, knows exactly what type of deep endometriosis the patient has and is well prepared, knows the extent of invasion, knows whether it is a single focus or multifocal, adnexal, whether there is urinary system or bowel involvement, or knows whether the patient has a desire for fertility, can evaluate the patient with a multidisciplinary team consisting of a colorectal surgeon and an urologist presurgically. The patient should be well informed about the planned surgery and a detailed consent should be obtained. The second thing that gives you the opportunity to do the surgery more consciously is knowing

where to start and when to stop. Most of the complications that occur during deep endometriosis surgery are simply due to not knowing enough about the patient. For example, when we do not know the extent of the organs involved and if we perform excision on the bowel or the bladder damage patient consent and cause damage, this becomes a complication rather than being a part of the treatment. Legal complications, for example infection or leakage of the intestinal anastomosis after surgery, are related to the nature of the disease. Such complications occur depending on the severity of the disease and, of course, the skills of the surgeons. These days, however, if we prepare well for the surgery and prepare the patient for the nature of the surgery and inform about the postoperative complications and if we do the preparations adequately (perform a pre-surgical colonoscopy, good imaging etc.) the rest depends on the experience and skills of the surgeon.

EAD: Do you use ultrasound or MRI prior to surgery?
GL: That's also a good question. When we work in the private sector, of course, there is the problem of insurance coverage, which is limited for some patients. Therefore, we have to limit our diagnostic investigations. However, we have highly skilled sonographers in our imaging unit who can perform both contrast-enhanced MRI and transvaginal or transrectal pelvic dynamic ultrasound. They published an article on intraoperative mapping before surgery for endometriosis, showing that the sensitivity and specificity of the results are very high, sometimes even better than MRI. Therefore, we make patient-based selection. In my opinion, if you have a well-trained specialist doing the imaging, who evaluates meticulously the posterior, anterior compartments, relevant organs, ligaments, intestines, etc., during imaging, ultrasound is a much more effective, cost-effective and sensitive tool. For this, of course, appropriate training is essential.

EAD: Do you have any suggestions for our young friends who want to specialize in the field of endometriosis?
GL: Definitely, I think I'll always go back to the importance of taking an anamnesis, by which I mean you have to listen to your patient, especially when it comes to endometriosis. We often say that we should treat the patient, not the disease, which I think is very true for endometriosis today. With our endometriosis patients, we learn better how to map the disease and document the symptoms, why the patient comes to the doctor and treat the patient accordingly, with the availability of medical treatment options, the use of good surgical techniques, and the respect of the patient's expectations and wishes. I will give an example, if a patient with endometriosis has intestinal involvement which may be documented by ultrasound or MRI, and if she has mild symptoms, she can benefit from medical treatment. If she is not at risk for disease progression, we do not have to do radical surgery on this patient, we can medically treat her. On the other hand, if the patient has pain that limits her daily activities or prevents her from living a normal life, then we should look for organ involvement and perform a complete surgery if necessary.
What I mean by complete surgery is that we should prepare the patient before the operation and ensure that the surgery we perform is the first and the last surgery of the patient, so that the patient does not come back with a lesion that will require surgery two years later. I will give a very sad example; I think just before COVID-19, a 53-year-old patient came to me with 22 previous surgeries, with uterus and ovaries removed. She was in menopause and still had three lesions: one of the lesions was in the cervix, one in the iliac vein and one in the intestine, and unfortunately, she had to undergo another surgery for the 23rd time. This is an extreme example of course, but it illustrates the importance for a surgeon dealing with endometriosis to understand the morphology of the disease. Because we know for sure that endometriosis is progressive and very aggressive, so surgery should be planned thoroughly as if it were cancer surgery. Today, surgery should be performed as complete surgery, every lesion should be removed and appropriate medical treatment should be recommended to the patient. Because from my experience with my colleagues, I can say that doctors, some of whom are internationally known, who do amazing endometriosis surgery, do not believe in medical treatment. Unfortunately, they only treat patients surgically and send patients after surgery without creating a lifelong plan, and the patient comes back with the same disease 2 years later. We need to implement treatments for long-term management, so that patients do not have to seek for new treatment options.

EAD: And for our last question, as the president of Emirates Endometriosis League, can you please tell us about your future projects in endometriosis?
GL: Yes, of course. Well, first we are going to have 7th EMEL conference together with our Turkish colleagues, Engin Oral and Taner Usta. This conference will take place on January 19-22 and many international speakers will particioate in this conference. There are going to be at least four workshops. Taner Usta will attend with direct broadcast from Istanbul performing live surgery, and the other live broadcast will be from Moscow. In addition, we will conduct a workshop with the participation of experts in adenomyosis and deep endometriosis imaging, and another workshop on scientific data and management options on chronic pelvic pain. Later on this year, depending on the COVID-related circumstances, we will organize EndoMarch activities to raise awareness for patients. In this context, brochures, stands and information events are organized in the UAE. We will also participate in some regional activities with our colleagues in Saudi Arabia. These are our plans short-term endometriosis related plans.

EAD: Thank you very much for your time and for your valuable contribution.

E ARTICLES ON ENDOMETRIOSIS FROM OUR COUNTRY FROM THE LAST THREE MONTHS

1. The deep infiltrating endometriosis tissue has lower T-cadherin, E-cadherin, progesterone receptor and oestrogen receptor than endometrioma tissue.

Biyik I, Kalkan U, Simsek S. Taiwan J Obstet Gynecol. 2021 Nov;60(6):1059-1065. doi: 10.1016/j.tjog.2021.09.017.

Objective: To compare the T-cadherin, E-cadherin, PR and ER staining levels of deep infiltrating endometriosis (DIE) tissue, ovarian endometriomas and normal endometrial tissues.

Materials and methods: DIE tissue of 24 cases, endometrioma of 30 cases and normal endometrial tissues of 30 cases were examined. T-cadherin, E-cadherin, ER-α and PR-α staining levels of DIE, endometrioma tissues and endometrial tissues were compared immunohistochemically. H-score was calculated to compare the expression of T-cadherin, E-cadherin, ER-α, PR-α in IHC staining based on the percentage of cells stained at each intensity level.

Results: T-cadherin, E-cadherin, ER and PR H-score were found lowest in DIE tissue and the highest in endometrial tissue ($p < 0.0001$, <0.0001, <0.0001 and < 0.0001, respectively). In correlation analysis, a positive correlation was found between T-cadherin, E-cadherin, PR and ER H-score ($p < 0.0001$ for each). No correlation was found between age, body mass index (BMI), visual analog scale (VAS) score, CA125, endometrioma size and the severity of dysmenorrhea, dyspareunia and dystonia ($p > 0.05$).

Conclusion: T-cadherin, E-cadherin, ER and PR H-score were found lowest in DIE tissue, the highest in endometrium tissue. The finding of lower expression of PR-α in endometriotic nodule in our study may be related to decrease in progesterone effect which could not inhibit the decrease in the expression of T-cadherin and E-cadherin, thus the invasiveness of DIE tissue. These findings suggest that DIE tissue and ovarian endometrioma tissues have a different biology.

2. . The Relationship between Decorin and VEGF in Endometriosis.

Aydin GA, Ayvaci H, Koc N, Tarhan N, Demirci O. J Coll Physicians Surg Pak. 2021 Nov;31(11):1285-1290. doi: 10.29271/jcpsp.2021.11.1285.

Objective: To evaluate immunohistochemical (IHC) staining of decorin and vascular endothelial growth factor (VEGF) of ovarian and endometrial tissues in patients with and without endometriosis.

Study Design: Descriptive study.

Place and duration of study: Department of Obstetrics and Gynecology, ZeynepKamil Training and Research Hospital, Istanbul, Turkey, between Istanbul, TurkeyJanuary 2018 and June 2019.

Methodology: Thirty patients, who underwent total abdominal hysterectomy (TAH) + bilateral salpingo-oophorectomy (BSO)/unilateral salpingo-oophorectomy (USO) and were in the proliferative phase of menstrual cycle, were included. The study population consisted of 20 patients (patient group) with an endometrioma and the control group consisted of 10 patients who were operated for benign gynecological pathologies. The ovarian and endometrial tissue specimens were collected from the archives. IHC staining was performed using decorin and VEGF.

Results: Decorin analysis showed a significantly higher intensity of staining in both endometrial and ovarian tissues in control group than patient group. Patients with endometriosis had a lower intensity of staining of decorin and a higher intensity of staining of VEGF compared to control group. There was a negative, statistically significant concordance between VEGF and decorin staining of endometrial tissues of both groups (concordance rate -0.560, $p=0.001$). There was a negative, statistically significant concordance between VEGF and decorin staining of ovarian tissues of both groups (concordance rate -0.564, $p<0.001$).

Conclusion: Angiogenesis plays a critical role in endometriosis and interaction between decorin and VEGF, which suggests that decorin may be a promising molecule for the treatment of endometriosis.

3. A potential role of Sirtuin3 and its target enzyme activities in patients with ovarian endometrioma.

Kaleler İ, Acikgoz AS, Gezer A, Uslu E. Gynecol Endocrinol. 2021 Nov;37(11):1035-1040. doi: 10.1080/09513590.2021.1975674. Epub 2021 Sep 13.

Objective: Sirtuin3 (SIRT3) is a NAD+-dependent major mitochondrial deacetylase. In this study, we aimed to investigate SIRT3 levels and their target enzyme activities, including glutamate dehydrogenase (GDH), succinate dehydrogenase (SDH), and manganese superoxide dismutase (MnSOD), also to determine the antioxidant capacity and oxidative stress in tissue, mitochondria and serum samples in ovarian endometrioma patients.

Methods: We collected serum and endometrioma tissue samples from 30 patients. In the control group, we collected serum and eutopic endometrial tissue samples from 26 women without endometriosis.

Results: SIRT3 levels were significantly decreased in endometrioma tissue samples compared to the control group. There was no statistically significant difference in SIRT3 levels between patient and control serum samples. Furthermore, there was a decrease in GDH and SDH enzyme activities in both endometrioma tissue homogenate and mitochondria. MnSOD activity was decreased in tissue homogenate but increased in mitochondria and there was no difference in serum. While total SOD activity was decreased, CuZnSOD activity was increased in both tissue and serum samples. Besides these, total antioxidant capacity and advanced oxidation protein products (AOPP) levels were decreased in endometrioma tissue and mitochondria, but there was no difference in serum.

Conclusions: Our results suggested that decreased levels of SIRT3 in endometrioma may be an important factor in the weakening of mitochondrial energy metabolism and antioxidant defense in endometriosis. We think that SIRT3 deficiency may be an important factor underlying the pathogenesis of endometriosis. More detailed studies are needed to reveal the relationship between SIRT3 and metabolism and oxidative stress in ovarian endometrioma.

4. Dienogest reduces endometrioma volume and endometriosis-related pain symptoms.

Uludag SZ, Demirtas E, Sahin Y, Aygen EM. J Obstet Gynaecol. 2021 Nov;41(8):1246-1251. doi: 10.1080/01443615.2020.1867962. Epub 2021 Feb 25.

This study aimed to evaluate the efficacy and adverse effects of dienogest for the treatment of endometriomas. Dienogest (2 mg/day) was administered to patients with endometrioma continuously through the 6-month study period. The patients were prospectively examined on the efficacy and side effects at baseline, at third months, and sixth months of the treatment. Twenty-four out of 30 patients were able to complete the study. The mean volume of the endometrioma decreased significantly from 112.63 ± 161.31 cm^3 at baseline to 65.47 ± 95.69 cm^3 at a 6-month follow-up (-41%) ($p = .005$). The VAS score for pelvic pain decreased significantly from 7.50 to 3.00 ($p < .001$) at the sixth months of treatment. The most common side effects were menstrual irregularities. Laboratory parameters did not change during the study. Dienogest considered being effective for 6 months of use in decreasing the size of endometrioma, reducing endometriosis-associated pain with a favourable safety and tolerability profile.

Impact statement

What is already known on this subject? Laparoscopic excisional surgery for endometrioma is currently the most valid approach in the treatment of endometriomas. However, there are concerns about ovarian reserve damage during surgery.

What do the results of this study add? Dienogest considered being effective in decreasing the size of endometrioma, reducing endometriosis-associated pain with a favourable safety and tolerability profile. Long-term use of dienogest in younger patients with endometriomas who are yet to give birth may reduce the possibility of surgery by reducing the size of the endometriomas and may preserve ovarian reserve.

What are the implications of these findings for clinical practice and/or further research? Dienogest may reduce the incidence of infectious complications such as pelvic abscess after oocyte retrieval and the surgical procedures in infertile patients with endometrioma.

5.The effect of dydrogesterone on sexual function in endometriosis.

Yalçın Bahat P, Yücel B, Yuksel Ozgor B, Kadiroğulları P, Topbas Selçuki NF, Çakmak K, Üreyen Özdemir E. J Obstet Gynaecol. 2021 Sep 28:1-4. doi: 10.1080/01443615.2021.1958765.

Endometriosis is an oestrogen-dependent chronic disease, which is commonly regarded as a disease of reproductive-aged women. We aimed to evaluate the sexual function with Female Sexual Function Index (FSFI) in women with endometriosis who received dydrogesterone for 6 months. A total of 79 women with endometriomas were recruited in the study group and received 10 mg dydrogesterone tablets orally for 6 months. FSFI and visual analog scale (VAS) scores for each patient before and after treatment were recorded. When before treatment VAS scores and after treatment VAS scores (5.7 ± 1.27, 3.97 ± 1.01, respectively) were compared, a significant decrease was observed ($p = .001$). A significant increase in mean orgasm scores (3.23 ± 0.6 vs. 3.57 ± 0.65, $p = .01$) and means satisfaction scores (3.85 ± 0.48 vs. 4.10 ± 0.38, $p < .001$) were observed. In addition, means desire scores were also significantly

higher following treatment (p = .01). In conclusion, this study showed that FSFI scores were increased after 6 months of dydrogesterone treatment in patients with endometriosis. Desire, satisfaction, orgasm and pain scores improved significantly, and sexual dysfunction decreased after treatment.

Impact statement

What is already known on this subject? Endometriosis is a chronic inflammatory disease associated with severe dysmenorrhoea, pelvic pain, dyspareunia, painful gastrointestinal symptoms and sub-fertility are among the symptoms. These symptoms can be responsible for a significant decrease in the quality of life scores of the patients. Dydrogesterone is a synthetic progesterone derivative, which suppresses oestrogen levels and ovulation. Dydrogesterone's effect on pain relief in endometriosis patients has already been shown, but it's role on the sexual dysfunction observed in women with endometriosis has not yet been questioned.

What do the results of this study add? To the best of our knowledge this is the first study showing the effects of dydrogesterone on sexual function in patients with endometriosis.

What are the implications of these findings for clinical practice and/or further research? Dydrogesterone can safely be used in medical treatment of endometriosis not only for pain relief but also patients with additional complaints such as sexual dysfunction can benefit from this treatment. Future studies with larger cohorts and long-term follow-ups are needed to validate our results.

6. The relationship between endometriosis and diet.

Osmanlıoğlu Ş, Sanlier N. Hum Fertil (Camb). 2021 Oct 27:1-16. doi: 10.1080/14647273.2021.1995900.

Endometriosis is an oestrogen dependent, benign, chronic inflammatory disease characterised by ectopic endometrial implants. Current medical practices for the treatment of the disease are associated with several side effects over long periods, making the effect of diet on endometriosis an important aspect. To alleviate this need, we review related literature to identify the association between nutrients and endometriosis and to find the probable therapeutic effects of the nutrients and foods on endometriosis. Despite variations among the findings, several of the prior studies point to an inverse relationship between endometriosis and the consumption of fruits, vegetables, dairy products, and omega-3 fatty acids. Another common finding among the studies is the increased risk of endometriosis with higher consumption of trans-unsaturated fatty acids and red meat. Due to the limited size of the samples in existing literature, however, significance of the association between diet and endometriosis is not conclusive. Further research is needed to better identify the role of diet on endometriosis.

7. The effect of carbamazepine, which increases oestrogen destruction, on the endometriotic implants; an experimental rat model.

Bulbul M, Nacar MC, Aydin Turk B, Karacor T, Onderci M, Parlar A, Kirici P, Ucar C. J Obstet Gynaecol. 2021 Sep 28:1-7. doi: 10.1080/01443615.2021.1953453.

We planned this experimental study to investigate the effect of carbamazepine (CMZ) on the endometriotic implants. Rats were randomised into four groups after endometriosis surgery. Drinking water was given to the sham group, 0.2 mg/kg oestradiol valerate (EV) to the EV group, 100 mg/kg/day CMZ to the CMZ group, and 0.2 mg/kg EV and 100 mg/kg/day CMZ to the EV-CMZ group. The endometrium of the rats using CMZ stained more intensely with cytochrome P450-3A4 (CYP3A4) enzyme. No endometrial hyperplasia was found in these rats. Endometriotic implants weight was found to be higher in these rats. There was no difference between the groups in terms of staining of the endometriotic implants with CYP3A4 enzyme. Endometriotic implants were less stained with the CYP3A4 enzyme than the endometrium. According to our results, CMZ does not increase the destruction of oestrogen in the endometriotic implants, unlike the endometrium. It may even cause the lesion to enlarge.

Impact statement

What is already known on this subject? Endometriosis is an oestrogen-dependent, progressive disease. Carbamazepine (CMZ) is known to increase oestrogen degradation by activating the cytochrome P450-3A4 (CYP3A4) enzyme. CMZ can be used in the treatment of endometriosis because it increases oestrogen breakdown in tissues.

What do the results of this study add? CMZ can protect the endometrium against hyperplasia by increasing the amount of CYP3A4 enzyme in the endometrium. This effect could not be demonstrated in the endometriotic implants. The presence of CYP3A4 enzyme less in the endometriotic implants than in the endometrium may explain this situation. In addition, the fact that CMZ does not increase the enzyme in the endometriotic implants may contribute to this situation.

What are the implications of these findings for clinical practice and/or further research? CMZ may not be a suitable alternative in the treatment of endometriosis. However, it may protect against endometrial hyperplasia

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