

Advancements in Endometriosis Treatments

Research Prompt

"What are the most promising treatments for endometriosis?"

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Search Results

Understanding Endometriosis

Search terms:

- *Causes of endometriosis*
- *Definition of endometriosis*
- *Symptoms of endometriosis*

Causes of endometriosis

Relevant Excerpt	Citation Source
... The etiology of the disease remains unclear. It is believed that a variety of immunological, genetic, hormonal, and environmental factors may be responsible for the development of endometriosis. Surgical confirmation of the presence of endometrial tissue outside the uterus is necessary for the diagnosis of endometriosis....	The influence of selected food ingredients on the reduction of the risk of endometriosis: a literature review (semanticscholar.org)

Symptoms of endometriosis

Relevant Excerpt	Citation Source
Primary symptoms of endometriosis are endometriosis-related pain and infertility. The conventional treatment of endometriosis involves surgery and hormonal drugs, with short term benefits and high rates of rates of symptom recurrence (or return).In China, treatment of endometriosis using CHM is routine....	Cochrane Review Brief: Chinese Herbal Medicine for Endometriosis (semanticscholar.org)
... 14 A significant finding by Dr. Dan Martin was that microscopic endometriosis was present in normal appearing peritoneum in a high percentage of patients . 10, 15 Symptoms of endometriosis are pelvic pain, dysmenorrhea, dyspareunia, dyschezia (pain with defecation) and infertility. 6 The pain of endometriosis appears to be inversely proportional to the amount of disease found by laparoseopy....	HELICA *-A Revolutionary New Surgical Treatment for Early Stage Endometriosis (semanticscholar.org)

Relevant Excerpt	Citation Source
<p>... Results: A total of 3319 women completed the survey, of which 328 were diagnosed with endometriosis (9.9%). The symptoms of endometriosis most often indicated by the general population were infertility and dysmenorrhea. In contrast, those least frequently indicated were painful defecation and dysuria....</p>	<p>Awareness of Endometriosis Symptoms—A Cross Sectional Survey among Polish Women (semanticscholar.org)</p>
<p>Estimates of prevalence are between 2-10% of the female population and in up to 50% of women with fertility issues [1]. The most commonly reported symptom of endometriosis is pain, be it dysmenorrhea, pelvic pain unrelated to menstruation or dyspareunia and while deep infiltrating endometriosis can be diagnosed on ultrasound or magnetic resonance imaging, superficial or peritoneal endometriosis cannot [2]. The most recent European Society of Human Reproduction and Embryology (ESHRE) guidelines, published in 2014, outlining the recommended management of endometriosis, advise that when diagnosed on laparoscopy, clinicians should treat endometriosis and that excision of the lesions is preferred...</p>	<p>An eight-year retrospective analysis of laparoscopic surgery for endometriosis, outcomes and complications in a large multicenter unit (semanticscholar.org)</p>
<p>Endometriosis mainly manifests as dysmenorrhea, abdominal pain, and infertility. Currently, medical therapy and surgical treatment are usually used for endometriosis treatment....</p>	<p>Applications of nanomaterials in endometriosis treatment (semanticscholar.org)</p>

Current Treatment Options for Endometriosis

- [Pain Management](#)
- [Hormonal Therapies](#)
- [Surgical Interventions](#)

Pain Management

Search terms:

- *Medications for endometriosis pain*
- *Non-pharmacological pain management for endometriosis*

Medications for endometriosis pain

Relevant Excerpt	Citation Source
Chronic pelvic pain causes disability and distress with a very high economic impact. In the last decades, an impressive amount of pharmacological agents have been tested for the treatment of endometriosis-associated pelvic pain. However, only a few of these have been introduced into clinical practice....	Medical Treatments for Endometriosis-Associated Pelvic Pain (semanticscholar.org)
... Although more data on long-term therapy with progestins are needed, treatment of endometriosis with progestins may be feasible in women with metabolic or cardiovascular contraindications to estroprogestin. The other medications for the treatment of pain associated with endometriosis are less appropriate for long term administration because of side effects (danazol and GnRH analogues), costs (aromatase inhibitors and GnRH agonists) or necessity of complex regimens of associations (GnRH agonists and add back therapy or aromatase inhibitors plus progestins). Expert opinion: Progestins and estroprogestins are safe drugs to use in the long term....	Safety of medical treatments for endometriosis (semanticscholar.org)
... The annual cost of therapy compares favorably with other available medications. Progestins and estroprogestins represent the first-line medications for the treatment of endometriosis associated pain.	Safety of medical treatments for endometriosis (semanticscholar.org)

Non-pharmacological pain management for endometriosis

Relevant Excerpt	Citation Source
<p>... A systematic review of the data was conducted. Results: This review included several, non-hormonal emerging drug therapies for endometriosis-associated pelvic pain. Based on our results, we divided well-founded studies into three subgroups: antiangiogenic agents, immunomodulators, and natural components...</p>	<p>State of the art, new treatment strategies, and emerging drugs for non-hormonal treatment of endometriosis: a systematic review of randomized control trials (semanticscholar.org)</p>
<p>While surgery, pain medications and hormonal treatments are the mainstays of treating endometriosis, patients are increasing seeking complementary therapies to help them cope with their symptoms in everyday life. Too often, clinicians caring for women with endometriosis are at a loss when it comes to discussing or recommending such alternative therapies, as they are not part of typical western medical training....</p>	<p>O-155 What strategies help patients cope with endometriosis in everyday life: a doctor's perspective (semanticscholar.org)</p>

Hormonal Therapies

Search terms:

- *Birth control pills for endometriosis*
- *Gonadotropin-releasing hormone (GnRH) agonists for endometriosis*

Gonadotropin-releasing hormone (GnRH) agonists for endometriosis

Relevant Excerpt	Citation Source
GnRh agonists are drugs used in various gynecological pathologies, among which is endometriosis. They act by stimulating GnRh receptors in the pituitary gland....	GnRh agonists as precipitating components of psychiatric pathology. A case report. (semanticscholar.org)
... After 1.5 years, the patient remained asymptomatic, the treatment improving the quality of life. In selected cases, GnRH agonists remains an effective treatment for recurrent symptoms of endometriosis, especially if administered early after surgical therapy.	The use of GnRH agonists in deep endometriosis after conservative surgery - case report (semanticscholar.org)
... In this review, we examined the role of GnRH in endometriosis, outlining the specific actions of GnRH and GnRH receptors (GnRHRs). The innovative use of GnRH analogs and antagonists in the treatment of endometriosis is also discussed.	Gonadotropin-Releasing Hormone (GnRH)/GnRH Receptors and Their Role in the Treatment of Endometriosis (semanticscholar.org)
We report a case of stage IV endometriosis treated with gonadotropin-releasing hormone (GnRH) agonist after conservative surgery. An 18-year-old nulliparous woman was admitted in our clinic with a history of severe chronic pelvic pain, dysmenorrhea, dyspareunia and dysuria....	The use of GnRH agonists in deep endometriosis after conservative surgery - case report (semanticscholar.org)
Adjuvant hormonal treatments have been suggested and approved in order to delay recurrence in symptoms and endometriotic lesions. The current review analyzes the impact of postoperative gonadotropin-releasing hormone agonists administration on the recurrence rate of endometriosis. We selected randomized controlled trials on this topic....	Use of GnRH analogue in the endometriosis recurrence after surgery (semanticscholar.org)

Surgical Interventions

Search terms:

- *Excision surgery for endometriosis*
- *Laparoscopic surgery for endometriosis*

Laparoscopic surgery for endometriosis

Relevant Excerpt	Citation Source
Endometriosis can be diagnosed by the medical practitioners with the help of traditional scanning procedures. Laparoscopic surgery is the authentic method for identifying the advanced stages of endometriosis. The statistical approach is a state-of-art method for identifying the various stages of endometriosis using laparoscopic images....	Symptoms based endometriosis prediction using machine learning (semanticscholar.org)
Surgery is considered the gold standard for diagnosis and treatment. In this study, we aim to describe the clinical outcomes of women who undergo laparoscopic surgery for endometriosis. Materials and Methods: In this cohort study, a total of 174 women who referred to Farmaniyeh Hospital, Tehran, Iran from August 2015 to December 2017 with surgical diagnoses of endometriosis stages III and IV enrolled....	The Clinical Outcome of Laparoscopic Surgery for Endometriosis on Pain, Ovarian Reserve, and Cancer Antigen 125 (CA-125): A Cohort Study (semanticscholar.org)
The study aims to evaluate whether laparoscopic surgery combined with oral contraceptive or herbs were more effective than laparoscopic alone in improving fecundity and pelvic pain in women with minimal/mild endometriosis. Methods A randomized controlled trial (RCT) was conducted in 156 infertile women with minimal/mild endometriosis....	Post-laparoscopic oral contraceptive combined with herbs in treatment of infertility and pain associated with minimal or mild endometriosis : a prospective randomized controlled trial (semanticscholar.org)
... In total, 113 women with suspected preoperative advanced endometriosis were enrolled in this study. A total of 90 women with advanced endometriosis underwent laparoscopic surgery. Fourteen patients with EFI score of ≤ 3 and 3 of them who had bilateral tubal occlusion were also excluded....	Outcomes between non-IVF and IVF treatment after laparoscopic conservative surgery of advanced endometriosis with

Relevant Excerpt	Citation Source
	Endometriosis Fertility Index score >3. (semanticscholar.org)
<p>... The magnetic resonance imaging (MRI) of the abdomen highlighted three endometriotic nodules, one of which was described as full thickness on the right hemi-diaphragm. The patient underwent a robot-assisted laparoscopic endometriosis surgery as a joint procedure between the gynaecology and general surgery teams. The falciform ligament was completely divided to obtain full views of the endometriotic lesions on the diaphragm....</p>	Surgical Treatment of Catamenial Chest Pain: Excision of diaphragmatic endometriosis during robot-assisted laparoscopic surgery (semanticscholar.org)

Emerging and Promising Treatments

- [Immunotherapy](#)
- [Targeted Therapies](#)
- [Alternative and Complementary Treatments](#)

Immunotherapy

Search terms:

- *Immune modulators for endometriosis*
- *Immunotherapy for endometriosis*

Immune modulators for endometriosis

Relevant Excerpt	Citation Source
... However, information regarding the clinical application of immunotherapy in the treatment of endometriosis is very limited. This article aimed to review the effects of existing immunomodulators on the development of endometriosis, including immune cell regulators and immune factor regulators. These immunomodulators clinically or experimentally inhibit the pathogenesis and development of endometriosis lesions by acting on the immune cells, immune factors, or immune-related signaling pathways....	Immunotherapy: A promising novel endometriosis therapy (semanticscholar.org)
... This endometriotic tissue development is dependent on estrogen produced primarily by the ovaries and partially by the endometriotic tissue itself and, therefore, hormonal management is traditionally used. In light of the body of evidence suggesting an immunological component to the pathophysiology of endometriosis, the anti-inflammatory agent pentoxifylline has been proposed as an alternative therapeutic agent. A Cochrane systematic review and meta analysis was performed....	O-134 Cochrane review on the effect of pentoxifylline for endometriosis (semanticscholar.org)

Immunotherapy for endometriosis

Relevant Excerpt	Citation Source
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... These immunomodulators clinically or experimentally inhibit the pathogenesis and development of endometriosis lesions by acting on the immune cells, immune

[Immunotherapy: A promising novel](#)

Relevant Excerpt	Citation Source
factors, or immune-related signaling pathways. Thus, immunotherapy is probably a novel and effective clinical treatment choice for endometriosis....	endometriosis therapy (semanticscholar.org)
... Accumulating evidence suggests that the onset and development of endometriosis are closely related to the abnormal function of the female autoimmune system, especially the function of some immune cells such as the aggregation of neutrophils, abnormal differentiation of macrophages, decreased cytotoxicity of NK cells, and abnormal function of T- and B-cell lines. Therefore, immunotherapy is probably a novel therapeutic strategy for endometriosis besides surgery and hormone therapy. However, information regarding the clinical application of immunotherapy in the treatment of endometriosis is very limited....	Immunotherapy: A promising novel endometriosis therapy (semanticscholar.org)
... It is also proposed that so-called unexplained infertility may in many cases represent a precursor stage of endometriosis, since immunological abnormalities in both of these conditions are so similar. Large-scale, prospective, multicentre clinical trials of immunotherapy in unexplained infertility and endometriosis appear to be indicated at this time if endometriosis is to lose its importance as one of the major contributors to female infertility.	Endometriosis: a new approach is needed. (semanticscholar.org)
... NK cells are responsible for the surveillance and apoptosis of ectopic cells. Expanding the arsenal of endometriosis treatment by immunotherapy is promising due to the significant contribution of immunological factors and the limitations of current treatment methods.	Immunology and Immunotherapy of Endometriosis (semanticscholar.org)
... This article aimed to review the effects of existing immunomodulators on the development of endometriosis, including immune cell regulators and immune factor regulators. These immunomodulators clinically or experimentally inhibit the pathogenesis and development of endometriosis lesions by acting on the immune cells, immune factors, or immune-related signaling pathways. Thus, immunotherapy is probably a novel and effective clinical treatment choice for endometriosis....	Immunotherapy: A promising novel endometriosis therapy (semanticscholar.org)

Targeted Therapies

Search terms:

- *Anti-angiogenic agents for endometriosis*
- *Targeted therapies for endometriosis*

Anti-angiogenic agents for endometriosis

Relevant Excerpt	Citation Source
... In summary, antiangiogenic agents inhibited the growth of explants in an in vivo model of endometriosis by disrupting the vascular supply, and this effect is likely to apply to the human disease. These findings suggest that antiangiogenic agents may provide a novel therapeutic approach for the treatment of endometriosis.	Antiangiogenic Agents Are Effective Inhibitors of Endometriosis (semanticscholar.org)
... Microvessel density determined using the counting of CD31 and CD105p microvessels and the vascular endothelial growth factor (VEGF) and soluble tyrosinekinase receptor expressions were statistically modified by the use of bevacizumab and sorafenib but not by the retinoic acid administration. The results of this study are in line with the previous investigations showing that the administration of antiangiogenic agents (TNP470, endostatin, anginex, and anti-human VEGF antibody) significantly decreases the angiogenic response of induced endometriosis, thus reducing the establishment, maintenance, and progression of these endometriosis-like lesions in animal models. However, the most common aim of treating endometriosis is not preventing the development of new endometriotic lesions....	Antiangiogenic Drugs in the Treatment of Endometriosis (semanticscholar.org)
... Several open-label studies show that aromatase inhibitors are effective in reducing lesion size and alleviating pelvic pain in patients with endometriosis refractory to other treatment modalities. Literature reviewed shows that the antiangiogenic agents seem to be more beneficial in treating early-stage disease, and some research has been done on vascular disrupting agents (VDAs) to potentially treat advanced endometriosis. Vascular disrupting agents, currently in phase I and II clinical trials for cancer treatments, operate by inducing apoptosis of endothelial cells in existing blood vessels....	Newer treatment modalities in endometriosis: systematic review (semanticscholar.org)
... The representative of functional VEGF polymorphisms, -2578A/C, +405G/C, -460T/C and +936C/T, have an effect upon VEGF gene promoter activity and result in an increase of VEGF levels. And several experiments show the management of antiangiogenic agents, such as antihuman vascular endothelial growth factor (anti-hVEGF), can effectively inhibit the development of endometriosis...	The Role of Vascular Endothelial Growth Factor in Pathogenesis and Treatment of Endometriosis (semanticscholar.org)
... Antiangiogenic agents prevent VEGF from binding to its receptors on the endothelial cell surface, which inhibits vessel development. Antiangiogenic agents have been found to be effective in treating several gynecologic diseases, such as	Antiangiogenic Agents in Natural Products for the Treatment of

Relevant Excerpt	Citation Source
endometriosis and uterine fibroids. Natural products with respect to finding new compounds with antiangiogenic effects are interested....	Gynecologic Disorders (semanticscholar.org)

Targeted therapies for endometriosis

Relevant Excerpt	Citation Source
... Especially in patients with chronic pelvic pain that needs long-term or repeated treatment,GnRHa and add back therapy have more important position. In addition,aromatase inhibitors and immunotherapy are in development,which are expected to be potent therapies of refractory endometriosis.	Medical treatment for refractory endometriosis. (semanticscholar.org)

Alternative and Complementary Treatments

Search terms:

- *Acupuncture for endometriosis*
- *Herbal remedies for endometriosis*

Acupuncture for endometriosis

Relevant Excerpt	Citation Source
Acupuncture could be an effective treatment for endometriosis and may relieve pain. Our aim in the present study was to determine the effectiveness of acupuncture as a treatment for endometriosis-related pain....	Effects of acupuncture for the treatment of endometriosis-related pain: A systematic review and meta-analysis (semanticscholar.org)
Numerous studies have reported that acupuncture has a distinct effect when treating the discomfort caused by endometriosis. The primary advantages include various treatment methods, simple administration, minimal adverse reactions, and having no impact on the intrauterine environment....	The role of acupuncture in the treatment of women with pain in endometriosis (semanticscholar.org)
... A comprehensive meta-analysis statistical software will be used to conduct all analyses. Results: This study will assess the role of acupuncture when it is used to treat pain arising from endometriosis. Conclusion: The conclusions presented in the metanalysis will present a scientific-based theoretical framework and a standardized clinical guidance for treating endometriosis-related pain....	The role of acupuncture in the treatment of women with pain in endometriosis (semanticscholar.org)
Acupuncture could be an effective treatment for endometriosis and may relieve pain. Our aim in the present study was to determine the effectiveness of acupuncture as a treatment for endometriosis-related pain. Methods In December 2016, six databases were searched for randomised controlled trials that determined the effectiveness of acupuncture in the treatment of endometriosis-related pain....	Effects of acupuncture for the treatment of endometriosis-related pain: A systematic review and meta-analysis (semanticscholar.org)
... Results: During the follow-up period, 35 acupuncture users and 94 non-users developed endometriosis, with incidence rates of 2.36 and 4.91 per 1,000 person-years, respectively. Acupuncture use was associated with a 55% lower endometriosis risk (adjusted HR, 0.45; 95% confidence interval, 0.31–0.65). Those	The Relationship of Acupuncture Use to the Endometriosis Risk in Females With Rheumatoid Arthritis: Real-World Evidence

Relevant Excerpt	Citation Source
who received high intensity acupuncture (≥15 packages) had the greatest benefit....	From Population-Based Health Claims (semanticscholar.org)

Herbal remedies for endometriosis

Relevant Excerpt	Citation Source
<p>Herein, we present a systematic review of clinical and experimental data on the use of medicinal herbs in the treatment of endometriosis. Although there is a general lack of evidence from clinical studies on the potential efficacy of medicinal herbs for the treatment of endometriosis-associated symptoms, our review highlights the anti-inflammatory and pain-alleviating mechanisms of action of herbal remedies. Medicinal herbs and their active components exhibit cytokine-suppressive, COX-2-inhibiting, antioxidant, sedative and pain-alleviating properties....</p>	Evolution of medical treatment for endometriosis: back to the roots? (semanticscholar.org)