

ENDOMETRIOSIS: DIAGNOSTIC CHALLENGES AND ADVANCES IN TREATMENT OPTIONS

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Abstract

Endometriosis is a common gynaecological condition affecting a significant proportion of reproductive-age individuals. Despite its prevalence, diagnostic delays remain widespread. This article discusses the key diagnostic challenges and highlights current advances in medical and surgical management of the disease.

Keywords. Endometriosis; Diagnosis; Laparoscopy; Biomarkers; Hormonal therapy; Chronic pelvic pain; Infertility.

Introduction

Endometriosis has been clinically defined as the presence of endometrial-like tissue outside the uterine cavity. It is a chronic, oestrogen-dependent inflammatory disorder that often results in dysmenorrhea, chronic pelvic pain, and infertility. Although millions of women are affected globally, diagnosis is frequently delayed, sometimes by up to 7–10 years, due to non-specific symptoms and limited awareness.

The diagnosis of endometriosis is primarily hindered by the absence of reliable non-invasive tests. Patients often present with overlapping symptoms such as pelvic pain, gastrointestinal discomfort, and fatigue. As these symptoms may mimic other conditions, misdiagnosis or delayed diagnosis is common.

Imaging techniques such as transvaginal ultrasound and magnetic resonance imaging (MRI) have been employed to detect ovarian endometriomas and deep infiltrating lesions, yet these modalities cannot consistently detect superficial peritoneal disease. Surgical visualisation via diagnostic laparoscopy remains the definitive method, though its invasiveness and associated costs restrict widespread use.

Recent research has investigated the potential of serum biomarkers (e.g., CA-125, microRNAs) to facilitate early detection; however, no biomarker to date has demonstrated sufficient sensitivity or specificity to replace laparoscopy in clinical settings.

Endometriosis treatment has traditionally included hormonal therapies aimed at suppressing ovulation and reducing endometrial activity. Combined oral contraceptives, progestins, and gonadotropin-releasing hormone (GnRH) agonists have shown efficacy in symptom management. However, side effects and recurrence following discontinuation remain concerns.

Surgical excision or ablation of lesions via laparoscopy is commonly utilised in moderate to severe cases. While surgery may improve pain and fertility outcomes, recurrence rates remain high. As a result, long-term hormonal suppression is often recommended post-operatively.

More recently, new pharmacological agents have been introduced. Selective progesterone receptor modulators (SPRMs), aromatase inhibitors, and oral GnRH antagonists represent promising





alternatives for patients with refractory symptoms. Additionally, a multidisciplinary care model—incorporating physiotherapy, dietary counselling, and psychological support—is increasingly recognized as essential for comprehensive disease management.

Conclusion

Endometriosis presents complex diagnostic and therapeutic challenges. Despite progress in both imaging and pharmacotherapy, delayed diagnosis continues to impact patient quality of life. Future advancements are expected through improved awareness, development of non-invasive diagnostic tools, and individualised treatment strategies.

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