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Surgical treatment of different types of endometriosis: Comparison of major society guidelines and preferred clinical algorithms

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A B S T R A C T

Treatment options for patients with different types of endometriosis – superficial, ovarian, or deep – vary depending on the clinical presentation. New findings in the recent years regarding the role of preoperative imaging, efficacy of medical therapy, and effect of surgery on ovarian reserve have changed the way we understand the disease and subsequently the way we treat our patients. Practicing clinicians frequently refer to published recommendations from major societies for treatment guidelines. This paper aims to present and compare the varying major society guidelines on the indications and best surgical treatment approach for the management of the different types of endometriosis. We also present our preferred surgical treatment algorithm given the evidence in the literature and our cumulative 30-year clinical experience in a large tertiary referral center.

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Introduction

Endometriosis is a chronic inflammatory disease, defined by the presence of ectopic endometrial tissue. It affects 2–10% of women of reproductive age, 20–50% of infertile women, and 30–80% of women with chronic pelvic pain. This disease can be asymptomatic or associated with several symptoms such as dysmenorrhea, chronic pelvic pain, dyspareunia, infertility, as well as cyclic urinary and intestinal symptoms according to the location of the disease. The most common location of endometriosis is the pelvis, but distant endometriosis tissue can also be found [1–5].

Diagnostic laparoscopy with pathological confirmation has been considered to be the gold standard for the diagnosis of endometriosis [6–10]. However, noninvasive diagnosis with methods such as transvaginal ultrasound (TVUS) with or without bowel preparation and magnetic resonance imaging (MRI) have been gaining a greater role in the diagnosis of endometriosis outside of surgery [6,8,10].

Endometriosis is classified as superficial (or peritoneal), ovarian (endometrioma), and deep (defined as infiltrating lesions greater than 5 mm in depth) [11,12]. The clinical presentations of each of the disease types vary between patients and treatment recommendations are generally based according to symptoms and fertility status.

Our understanding of endometriosis has changed significantly in the recent years, with the growing body of evidence in the literature on the role of preoperative imaging, efficacy of medical therapy, perioperative outcomes of different surgical approaches, and their effect on ovarian reserve. Medical practitioners often depend on major gynecologic societies for practice and treatment guidelines. This paper aims to present and compare the varying major society guidelines on the indications and best surgical treatment approach for the management of the different types of endometriosis. We also present our preferred surgical treatment algorithm given the evidence in the literature and our cumulative 30-year clinical experience in a large tertiary referral center.

Methods

A literature search was conducted for the last 10 years' published society guidelines for the surgical treatment of patients with endometriosis. The five main international societies in the field of endometriosis, reproductive medicine, and gynecology worldwide, which were chosen to represent the leading countries in the treatment of this condition, include the European Society of Human Reproduction and Embryology (ESHRE, 2014) [6], The American College of Obstetricians and Gynecologists (ACOG, 2010) [7], American Society for Reproductive Medicine (ASRM, 2012) [8], The Society of Obstetricians and Gynaecologists of Canada (SOGC, 2010) [9], and Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO, 2014) [10]. The society recommendations were compared and presented systematically according to the three different types of endometriosis and main clinical presentations of infertility and pain.

Results and discussion

The most recent surgical recommendations from the major gynecologic societies ESHRE, ACOG, ASRM, SOGC, and FEBRASGO were published between 2010 and 2014. The treatment guidelines, divided according to the types of endometriosis and clinical presentation of pain and infertility, are summarized.

Superficial endometriosis

Pain

ESHRE, ACOG, SGC, ASRM, and FEBRASGO [6–10] agree that the gold standard for the diagnosis of endometriosis is laparoscopy with histological confirmation. As yet, none of the society guidelines mention the role of imaging in the preoperative diagnosis of the superficial disease. All mentioned societies recommend that laparotomy and laparoscopy are both effective, with the latter modality associated with less postoperative pain, shorter hospital stay, and better cosmetic outcome. All societies agree that when superficial endometriosis is identified at laparoscopy, surgical resection is

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