The Laparoscopic Management of Endometriosis in Patients with Pelvic Pain

Patrick Yeung Jr, MD

KEYWORDS

• Endometriosis • Excision surgery • Laser surgery • Diagnostic imaging • Pelvic pain • Recurrence

KEY POINTS

- Diagnostic laparoscopy is indicated for women whose quality of life is significantly affected, for whom hormonal suppression has failed (or is contraindicated), or who desire fertility.
- Transvaginal ultrasonographic imaging (which may include evaluation for deep endometriosis) can aid in surgical planning.
- Optimal excision or removal of disease is the best way to reduce recurrence rates, and may also be a way to conserve normal ovaries and avoid surgical menopause, even when hysterectomy or definitive therapy is indicated.
- Early diagnosis and treatment may be the best way to prevent the development of extensive disease and, perhaps, to preserve fertility.

Video of ureterolysis accompanies this article at http://www.obgyn.theclinics.com/

INTRODUCTION

Endometriosis is estimated to be present in 1 of every 10 women.[1,2] It is a condition whereby endometrial glands and stroma (normally found within the endometrial cavity and shed during the menstrual period) are found outside the uterine cavity. Endometriosis is an underdiagnosed and undertreated problem, and multiple studies have shown that it can take an average of up to 12 years to diagnose (especially in teenagers) from the time of onset of symptoms to the diagnosis at laparoscopy.[3–6] This delay in diagnosis can contribute to impaired quality of life and may have implications for fertility.[7–9]

Center for Endometriosis, Division of Minimally Invasive Gynecologic Surgery, Department of Obstetrics, Gynecology & Women's Health, Saint Louis University, 6420 Clayton Road, Suite 290, St Louis, MO 63117, USA
E-mail address: pyeung1@slu.edu

Obstet Gynecol Clin N Am 41 (2014) 371–383
http://dx.doi.org/10.1016/j.ogc.2014.05.002 **obgyn.theclinics.com**
0889-8545/14/$ – see front matter

Laparoscopy is the gold standard for the diagnosis of endometriosis, by visualization of implants characteristic of endometriosis or, better still, by histology of excised lesions.[10] Laparoscopy is also the preferred route for treatment (when possible) of endometriosis because laparoscopy affords the benefits of magnification, illumination, and high-definition optics to better visualize the disease.

Although there is no cure for endometriosis, optimal laparoscopic management can benefit patients with pain (and improve fertility) and improve their quality of life.[11–13] Patients with endometriosis might benefit from early diagnosis and laparoscopic management, before progression of the disease, and providers should know when to operate and when to refer these patients.[8]

ENDOMETRIOSIS AND PAIN

Endometriosis is known to be associated with pain, and should be thought of as part of a comprehensive evaluation for pain.[9] During the adolescent period at least 75% of patients who failed medical treatment were found to have endometriosis.[7] Some algorithms recommend a diagnostic laparoscopy later in the evaluation after all other causes of pain have been ruled out or treated, including interstitial cystitis, vaginismus or myofascial pain, and pudendal neuralgia. Others recommend diagnostic laparoscopy sooner because endometriosis, unlike other causes of pain, can affect fertility, and surgical management for endometriosis may improve or preserve fertility.[9,14]

Although it is known that endometriosis and pain are associated, the exact causal relationship is not clear. Of note, the extent of disease (based on the most widely used revised American Society of Reproductive Medicine [r-ASRM] classification system[15]) does not correlate well with the severity of symptoms.[16] The way that endometriosis is currently classified is based on extent of disease, the presence of endometriomas, and adnexal or cul-de-sac adhesions. Deep endometriosis (or deep infiltrating endometriosis [DIE]) is not a part of the current classification system. However, there is evidence to show that the location of deep endometriosis has some correlation to the location of pain,[17] whereas the location of superficial endometriosis does not.[18] Newer classification systems are being developed to include DIE.[19]

HORMONAL VERSUS SURGICAL MANAGEMENT

Hormonal suppression is often recommended as first-line treatment for pain thought to arise from endometriosis.[10] Hormonal suppression can improve symptoms such as pelvic pain and dysmenorrhea. Empiric therapy with hormonal suppression, including a gonodotropin-releasing hormone agonist (GnRHa) or birth control pills, is often used to control symptoms, as a form of diagnostic trial, and to prevent progression of disease. However, a response to empiric therapy (meaning improvement in symptoms), for example, with a GnRHa, is not diagnostic for the presence of endometriosis.[10] Failure of pain to respond adequately to hormonal suppression should be investigated further for endometriosis.

Hormone suppression may do little to prevent recurrence or progression of the actual disease. A study of 90 patients by Doyle and colleagues[20] in 2009 showed that hormonal suppression given after surgery worsened (10%) or did not change staging or extent of the disease (70%) in 4 of every 5 women. Moreover, studies have shown that the need for hormonal suppression to control pain in earlier years may be a marker for more advanced disease. Studies by Chapron and colleagues[21–23] in 2011 showed that patients with severe endometriosis, when questioned about their adolescent history, had greater school absenteeism and an earlier or extended need for hormonal suppression to control pain in the adolescent years.