Educational Topic 38: Endometriosis

Rationale: Endometriosis may result in pelvic pain, infertility and menstrual dysfunction.

Intended Learning Outcomes:

A student should be able to:

• Describe theories of the pathogenesis of endometriosis.
• List the most common sites of endometriosis
• Describe the symptoms and physical examination findings in a patient with endometriosis.
• Describe the diagnosis and management options of endometriosis.

TEACHING CASE

CASE: A 28-year-old woman G0P0 woman is seen because of the inability to conceive for the past two years. She has never used oral contraceptives and she and her husband have not used any form of birth control for over two years. Her menarche occurred at the age of 12 and her menses became very painful in her late teens. She has had chronic cyclical pelvic pain, which has progressively worsened over the years. This pain is incapacitating at times. She describes the location of the pain to be in the lower abdomen and pelvis that radiates into the lower back. In addition to the pain, her menstrual periods have become increasingly frequent and heavy. She experiences deep dyspareunia that began with her first sexual partner and has continued with her husband. She denies any non-cyclical vaginal bleeding, discharge and weight loss. She states that her 22-year-old younger sister has always had very painful menses.

On physical examination the patient looks her age. She is 138 lbs and is 5’6”. Her BP is 110/76 mm Hg with a heart rate of 85 bpm. Her head and neck examination is negative. Cardiac and respiratory systems are also normal. Examination of the abdomen reveals that it is flat with no scars. On palpation she has generalized tenderness of the lower abdomen. There are no signs suggesting evidence of a surgical abdomen and she has no costo-vertebral angle tenderness. The pelvic exam showed a fixed, retroverted uterus. The uterosacral ligaments on both sides are nodular. A 5 cm right adnexal mass is palpated and tender.

Transvaginal ultrasound of the pelvis showed a 5.5 cm cystic mass with low-level echoes in the right ovary. The left ovary was reported as normal. The uterus is retroverted and is of normal size and contour. There is no evidence of fibroids and the endometrial lining is normal.
COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:

Competencies addressed:
- Patient Care
- Medical Knowledge
- Systems-Based Practice

1. What symptoms does this patient present with that would lead to a suspicion of endometriosis?
   - Infertility
   - Dysmenorrhea
   - Cyclic lower abdominal and pelvic pain
   - Back pain
   - Dyspareunia
   - Possible family history
   
   **Key Learning Point:** Endometriosis can manifest in many ways. Patients may have no symptoms to significant symptoms and sequelae.

2. Describe the physical findings for this patient that helps confirm a possible diagnosis of endometriosis?
   - Tender nodular uterosacral ligaments on pelvic and rectovaginal exam
   - Fixed, retroflexed uterus
   - Ovarian mass
   
   **Key Learning Point:** Endometriosis can manifest in many ways. Patients may present from the range of no physical findings to fixed locked non-mobile pelvic structures. The most common sites of endometriosis are the ovaries, uterine ligaments, and recto and vesicovaginal septae.

3. After discussing the possibility of endometriosis, the patient asks, “How did I get this disease?” How do you answer the patient?
   - Attachment and implantation of endometrial glands and stroma to peritoneal tissue from retrograde menstrual flow
   - Hematogenous and lymphatic spread
   - Stem cells from bone marrow
   - Coelomic metaplasia
   
   **Key Learning Point:** Retrograde menstrual flow is the most likely pathogenesis of endometriosis.

4. What alternative diagnoses would you consider in this patient?
   - Chronic pelvic pain—consider chronic pelvic inflammatory disease, adhesions, gastrointestinal conditions, interstitial cystitis.
   - Dysmenorrhea—consider causes of primary and secondary dysmenorrhea
   - Dyspareunia—consider chronic pelvic inflammatory disease, or ovarian cysts.
   
   **Key Learning Point:** Many conditions both gynecologic and non-gynecologic can present similar to endometriosis with the reverse also being true.

5. How is the diagnosis of endometriosis made?

Copyright © 2014 by Association of Professors of Gynecology and Obstetrics (APGO).
For permissions: apgoadmin@apgo.org
• History and physical exam are first steps due to variety of presentations
• Direct visualization is needed for establishing a diagnosis
• Tissue biopsy makes definitive diagnosis
• Pelvic sonogram cannot make diagnosis, but can exclude other conditions

Key Learning Point: Endometriosis is a tissue diagnosis that requires a biopsy. A presumptive diagnosis is made based on history and physical examination.

6. What protocols are used to stage endometriosis?

• The revised American Fertility Society’s (AFS) staging system is generally used to stage endometriosis in the infertile patient. In the AFS system, points are assigned for size and depth of implants and for the severity of adhesions in various locations. Stages I through IV are assigned on the basis of points. Management of endometriosis can be guided by the stage of disease and the desire for fertility.
• The American Society of Reproductive Medicine (ASRM) protocol correlates fertility potential with a quantified stage of disease. The staging includes the color of lesions, the percentage of surface involved and a detailed description of endometriomas.

Key Learning Point: Systematic protocols are used in staging the severity of endometriosis.

7. What are the treatment options for a patient with a diagnosis of endometriosis?

• Depends on presenting symptoms and severity, location and severity, desire for future childbearing, age, and possible gastrointestinal or urinary tract involvement
• Expectant management may be considered for patients with minimal symptoms and disease and/or patients who are trying to conceive
• Medical therapy includes NSAID’s, combined estrogen and progestin contraceptives, progestins alone, danazol (17-alpha ethinyl testosterone derivative), and gonadotropin-releasing hormone (GnRH)
• Surgical management ranges from conservative options such as removal of endometriomas and destruction of endometriotic implants to definitive approaches such as hysterectomy with bilateral salpingo-oophorectomy

Key Learning Point: The management of endometriosis is dependent on a number of factors including wish for fertility preservation, symptom severity, and the location of endometriosis.

REFERENCES

