CASE REPORT

Endometriosis: A Rare Cause of Appendicitis

Sajad Ahmad Salati and Ajaz A. Rather

ABSTRACT

Endometriosis is a relatively common disorder affecting about 15% females in the reproductive age group. It is a well-known cause of infertility but endometriosis presenting as appendicitis is rare. We present a case of a 29 years old nulliparous lady in whom appendectomy was done for appendicitis and histopathological examination of the retrieved specimen revealed endometriosis.

Key words: *Appendicitis. Endometriosis. Histopathology.*

INTRODUCTION

Endometriosis is a common condition in females in which endometrial cells are deposited outside the uterus and are influenced by the hormonal changes like the normal uterine endometrium.[1,2] Gastrointestinal endometriosis is uncommon and endometriosis of appendix causing appendicitis is even rarer. Pre-operative diagnosis of appendicular endometriosis is difficult and diagnosis is made only after histopathological examination of appendix removed for appendicitis. This report describes endometriosis as a cause of appendicitis in a young nulliparous female.

CASE REPORT

A 29 years old nulliparous female presented with acute lower abdominal pain associated with nausea and anorexia of 48 hours duration. The patient was menstruating and had suffered from episodes of lower abdominal and back pain three times in the previous year. Patient had been seen by a general practitioner during the first episode of pain, diagnosed as case of dysmennorhea and advised antispasmodics and mefanamic acid preparation which she took on her own to get symptomatic relief in subsequent episodes. In the present episode also, she had consumed the same medication for 2 days before reporting but did not get relief. The patient had no other past history of significance.

On examination, she had stable vital signs and was afebrile. Abdominal examination showed tenderness and rebound tenderness over the right lower quadrant. Routine blood investigations revealed leucocytosis with shift to the left. Urine analysis was within normal limits. Ultrasonography of abdomen and pelvis showed features of inflammed appendix and no calcified appendicoliths.

The patient was operated upon under general anaesthesia. Laparotomy was performed by right lower quadrant transverse incision and appendectomy was done. The operative findings included grossly inflammed appendix but with no evidence of perforation. There was minimal reactionary fluid. Other pelvic organs including fallopian tubes and ovaries did not show any abnormal feature. There were no perioperative complications and the patient was discharged home in a stable condition on second postoperative day.

Histopathological examination of the retrieved specimen showed appendicitis with features of endometriosis (Figure 1). The patient was satisfied and symptoms free up to one year of regular follow-up.

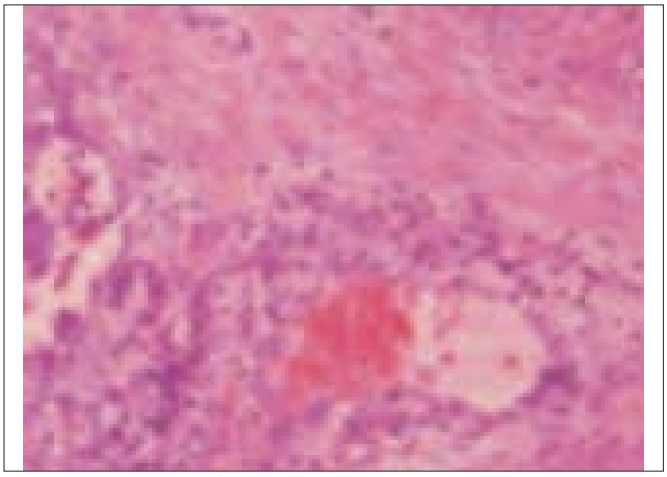

Figure 1: Histopathology slide of appendix specimen showing features of endometriosis.

DISCUSSION

Endometriosis (from endo, "inside", and metra, "womb") is a very common disorder affecting about 15% of the females in the reproductive age group. In this condition,

Department of Surgery, Sheri Kashmir Institute of Medical Sciences, Srinagar, Kashmir.

Correspondence: *Dr. Sajad Ahmad Salati, Assistant Consultant Surgical Specialities, King Fahad Medical City, Riyadh, Saudi Arabia.*
E-mail: docsajad@yahoo.co.in

Received March 15, 2010; accepted March 14, 2011.

endometrial cells are deposited outside the uterine cavity.[2] These ectopically located cells respond to cyclical hormonal changes in the females as the normally located endometrium does.[3] Gastrointestinal endometrial lesions are found in 12% of patients with endometriosis, of which about 72% are in the recto sigmoid region followed by rectovaginal septum (13%), small bowel (7%), and caecum (4%).[3] Appendicular endometriosis is very uncommon, accounting for only 3% of cases with gastrointestinal endometriosis.[4]

As far as the development of endometriosis is concerned, the most widely accepted mechanism is the retrograde menstruation through the fallopian tube into the peritoneum (implantation theory), with subsequent growth of the displaced cells.[5] Involvement of distant sites such as the pericardium or pleura is best explained by the vascular dissemination of endometrial cells. An alternative theory considers the endometriosis of appendix as a direct extension of right ovarian endometriosis though this theory fails to explain the development of isolated appendicular endometriosis.[6]

Endometriosis of appendix is usually asymptomatic but patients may report with complications like perforation, mucocele, appendicular mass mimicking malignancy or chronic or recurrent pain as was the case with this patient.[7] Histopathological analyses is the diagnostic investigation and there is a good correlation between the site and depth of appendiceal wall involvement, the presence of haemorrhage, and symptoms of acute appendicitis.[8] If however, the standard histopathological evaluation by H&E stain fails to demonstrate the endometrial tissue, appendiceal endometriosis can be suspected by marked increase in the number of mast cells in the muscularis propria which is known as catamenial appendicitis.[9]

Concisely, appendicular endometriosis is a rare disorder but a physician needs to be aware of this entity while dealing with abdominal pain in females of child-bearing age group, especially if the female is infertile.

REFERENCES

1. Schenken RS. Endometriosis. In: Scott JR, Disaia PJ, Ham CB, Spellacy WN, editors. Dan forth's obstetrics and gynecology. Philadelphia: *Lippincott- Raven Publishers*; 1999. p. 669.
2. Khoo JJ, Ismail MS, Tiu CC. Endometriosis of the appendix presenting as acute appendicitis. *Singapore Med J* 2004; **45**: 435-6.
3. Khairy GA. Endometriosis of the appendix: a trap for the unwary. *Saudi J Gastroenterol* 2005; **11**:45-7.
4. Prystowsky JB, Stryker SJ, Ujiki GT, Poticha SM. Gastro-intestinal endometriosis: incidence and indications for resection. *Arch Surg* 1988; **123**:855-8.
5. Zondervan KT, Cardon LR, Kennedy SH. The gastrointestinal endometriosis. *Curr Opin Obstet Gynecol* 2001; **13**:126-8.
6. Cuzzo-Kriner MR. Intestinal endometriosis and its complications: case report and review. *Mt Sinai J Med* 1989; **56**:334-7.
7. Al-Oulaqi NS, Hefny AF, Joshi S, Salim K, Abu-Zidan FM. Endometriosis of the appendix. *Afr Health Sci* 2008; **8**:196-8.
8. Mittal VK, Choudhury SP, Cortez JA. Endometriosis of the appendix presenting as acute appendicitis. *Am J Surg* 1981; **142**:519-21.
9. Barrier BF, Frazier SR, Brennaman LM, Taylor JC, Ramshaw BJ. Catamenial appendicitis. *Obstet Gynecol* 2008; **111**:558-61.