

Endometriosis of Appendix: A Case Report and Review of Literature

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Abstract

Introduction: Endometriosis is the appearance of functioning endometrial tissue which is responsive to hormonal changes, in a location outside of the uterine cavity. It is most commonly observed in the adnexa and pelvic peritoneum but may be seen in the gastrointestinal system in 3 - 37% of cases with less than 1% involving the appendix.

Case Presentation: We present here a 33 year old lady who was a known case of endometriosis and presented to the emergency with signs of acute appendicitis and underwent laparoscopic appendectomy.

Conclusion: Our case report illustrates the fact that the general surgeon may be confronted with rarer causes of acute appendicitis and a thorough history should be elicited in women having chronic pelvic pain, menstrual disorders and infertility and a gynecological assessment should be sought if possible.

Keywords: Endometriosis-Abdomen; Acute-Appendicitis; Abdominal Pain; Appendectomy; Gynecology

Introduction

Endometriosis is the appearance of functional endometrial tissue amenable to hormonal changes in a location exterior to the uterine cavity [1]. It is reported to affect up to 10% of women of childbearing age, 70% of women with complaints of chronic pelvic pain and up to 50% of women being managed for infertility [2]. It is most commonly observed in adnexa and pelvic peritoneum but may be seen in the gastrointestinal system in 3 - 37% of all endometriosis cases with < 1% involving the appendix [3]. Clinical presentation of appendiceal endometriosis may be confused with acute appendicitis and is usually confirmed on histopathology reports after an appendectomy.

Case Presentation

A 33 year old lady presented to the emergency department with complaints of severe right lower abdominal pain for 3 days duration associated with nausea, vomiting and low grade fever. She also had been describing passing loose, watery stool 4 episodes a day for the last 2 weeks. On examination, she demonstrated tenderness and guarding at the right iliac fossa with positive rebound tenderness. She was being seen by a gynecologist for the past 4 years due to infertility and had a history of laparoscopic right ovarian cystectomy done for endometriosis 3 years back.

Her vital signs on presentation showed a temperature of 38 degrees, heart rate of 89/min and a Blood pressure reading of 131/76 mmHg. Laboratory investigations showed high inflammatory markers (WBC = 13,100/mm³ with predominant neutrophilia). Urinalysis was normal and pregnancy test was negative. An ultrasound was ordered which revealed a right hemorrhagic ovarian cyst of endometriosis with reactive acute appendicitis/appendicular mass formation (Figure 1 and 2). Consent was taken for surgical exploration. Intra-

operative findings included a hard appendicular mass extending to the base of the appendix with subphrenic collection of blood. Further findings confirmed presence of right hemorrhagic ovarian cyst and subserosal fibroid. The gynecologist was called in who performed right ovarian cystectomy during the same procedure. The specimen was sent for histopathological correlation and confirmed presence of endometrial tissue and stroma in the appendix. The patient fared well post surgery and was routinely discharged the next day with minimal residual pain. She remained well on immediate follow up but presented with vague lower abdominal pain after 6 weeks. An ultrasound was done showing no development of further cyst and patient was duly discharged under gynecology care.



Figure 1: Sonogram of appendix.



Figure 2: Right iliac fossa.

Discussion

Acute appendicitis is one of the most common emergent clinical presentations in general surgery requiring surgical intervention. Although inflammation attributed to luminal obstruction secondary to fecoliths or lymphoid hyperplasia is the most common histopathological correlation, several unusual factors are also described that may result in its pathogenesis out of which endometriosis is also discussed yet very uncommon [4]. Endometriosis is the growth of endometrial tissue outside the uterus. Although it is widely found in the

adnexa and pelvic organs, extragenital sites like the gastrointestinal system, kidneys, lungs may also be involved. Appendiceal endometriosis is rarer still and may not be diagnosed preoperatively; it may present as a case of acute appendiceal inflammation likely due to partial or complete obstruction of the lumen due to the endometrioma [5]. The clinical spectrum may be discussed as four subsets: (1) patients presenting with typical signs and symptoms of acute appendicitis; (2) patients with nonconforming symptoms like vague abdominal pain, melena and nausea; (3) asymptomatic patients; and (4) patients with appendiceal invagination and intussusception [6,7].

Appendiceal endometriosis is frequently observed in cases presenting with ovarian endometriosis which has sparked a debate regarding routine elective appendectomies to be offered to patients undergoing gynecological surgery for endometriosis [8]. Histopathology results describe one half of the specimens involving the body and the other half involving the tip of the appendix. Mucosa is usually spared while glandular tissue and stroma are observed in the muscular and seromuscular layers in two thirds of patients and exclusively in serosa in one third of patients [6,8]. Treatment depends upon the level of involvement of the appendix and may range from laparoscopic appendectomy to ileocectomy and right hemicolectomy. Acute symptoms mostly resolve with surgical intervention and gynecological assessment should also be done on table to evaluate the extent of disease and follow it up postoperatively [9].

Conclusion

Our case report illustrates the fact that the general surgeon may be confronted with rarer causes of acute appendicitis and a thorough history should be elicited in women having chronic pelvic pain, menstrual disorders and infertility and a gynecological assessment should be sought if possible. Although surgery is curative for the emergency presentation, the patient should be guided to follow up with gynecologist as good practice.

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