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Endometriosis of the Appendix Presenting as Acute Appendicitis: A Case Report

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Abstract: Endometriosis is relatively common, but endometriosis of the appendix is a very rare occurrence. Correct pre-operative diagnosis is uncommon and definitive diagnosis is established by histology of the appendix. We present a case of endometriosis of the appendix that manifested as acute appendicitis in a 42 year-old woman.

Key words: Acute appendicitis, appendix, endometriosis, case report, diagnosis

INTRODUCTION

Endometriosis is defined as the presence of ectopic endometrial tissue outside the lining of the uterine cavity.

However, involvement of the gastrointestinal tract is uncommon and endometriosis of the appendix is an even rarer occurrence (Khoo *et al*., 2004). Endometriosis of the appendix manifesting as acute appendicitis is exceedingly rare (Khoo *et al*., 2004). We report a case of appendiceal endometriosis clinically presenting as acute appendicitis and aim to highlight this rare entity.

CASE REPORT

A 42 year-old Iranian woman was admitted with a 3 day history of right iliac fossa pain. She had no associated symptoms of fever, nausea, vomiting or anorexia. She denied any unusual vaginal discharge. Her menses had been irregular and heavy, with occasional dysmenorrhea. Her last menstruation was four weeks before admission. She was seen regularly in the gynaecology clinic for 1 year for chronic pelvic pain. She had received analgesic drugs for chronic pelvic pain. On admission, she had a low-grade fever of 37.8. Pain was localized to the Mc Burney's point, with tenderness, guarding and rigidity. Vaginal examination did not show any tenderness when the cervix was rocked, nor was there any adnexal mass or pain at the fornices. The white blood cell count was 17,400 mm^{-1} with 79% segmented neutrophil. Urine analysis was normal and serum B-hcG test was negative. The tentative diagnosis was acute appendicitis and an appendectomy was done. At surgery, the peritoneal cavity had patchs of endeometriosis with minimal fluid in the cavity. Intra-operative, the appendix appeared midly congested.

The appendix measured 5.5×1.5 cm at the widest diameter. It was grossly normal and the excised section showed intact mucosal epithelium and a patent lumen.

Histological examination showed several ectopic endometrial glands with stroma in the thickened muscular propria and subserosa at the tip of the appendix.

Some of the endometrial glands were dilated. Minimal fresh heamorrhage was noted with moderate lymphoid hyperplasia in the lamina propria, but no significant acute inflammation was seen in the appendix. The histological diagnosis was appendiceal endometriosis with no microscopical evidence of acute appendicitis. Post-operatively acute abdominal pain of the patient recovered.

DISCUSSION

Isolated endometriosis of appendix is very rare. It is usually asymptomatic, but occasionally causes symptoms such as appendicitis (Overton *et al*., 1973; Mittal *et al*., 1981; Langman *et al*., 1981), perforation (Gini *et al*., 1981; Nakatani *et al*., 1987), intussusception (Mann *et al*., 1984; Sakaguchi *et al*., 1995) obstruction of the lumen with a mucocele-like distal dilatation or acute lower gastrointenstinal occurred in two-thirds of patients, while surface was involved in only one-third mucosa was not involved in their series. Langman *et al*. (1981) ound that the bowel involved in one-third of patients with endometriosis of the appendix. In their series, the endometriosis foci were also found in the muscle, serosa, subserosa. There was no correlation between histological location of the endometriosis and the patients symptoms (Uohara and Kovara, 2001; Langman *et al*., 1981). All patients with appendiceal endometriosis who had a peroperative diagnosis of acute appendicitis recovered after the appendectomy. In our patient, the acute abdominal symptom disappeared completely, but lower

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abdominal recurred. This was probably due to association peritoneal endometriosis. Our patient presented clinically as acute appendicitis with a raised leukocyte count. Although she was seen frequently in the gynaecology clinic for chronic abdominal pain, appendiceal endometriosis was never suspected pre-operatively. Some authors even reported symptoms of abdominal pain with menstruation (Langman *et al*., 1981). Our patient had an abnormal mesentural pattern previously. Gross inspection of the appendix does not give any hint of the disease. The appendix may appear grossly normal (Pittaway, 1983; Mittal *et al*., 1981). The diagnosis of appendiceal endometriosis is based on the histological presence of endometrial glands and stroma, with or without hemorrhage. The presence of recent heamorrhage was thought to be responsible for the acute symptoms. In our patient, there was minimal heamorrhage in the lamina propria of the appendix and this could account for pain in the right iliac fossa. In their series, Mittal *et al*. (1981) found that 56% of endometriosis of the appendix involved the body of the appendix, compared to 44% at the tip. The base was not involved in any of their cases. They also noted that muscular and seromuscular involvement endometriosis is proven as suspected manipulationm (whether medical or surgery) is necessary to treat symptoms. In conclusion, appendiceal endometriosis and almost never correctly diagnosed. It may be suspected when associated with pelvic endometriosis. Definitive diagnosis established by microscopical examination of appendix. Post-operative follow-up with refrreal to gynaecologist may be necessary.

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