Answer

Appendiceal Endometriosis

Endometriosis is the state of benign endometrial tissue invading nonuterine tissue. Estimates of the incidence of endometriosis vary widely, with studies reporting prevalence rates between 4% and 50% of menstruating women.[1] The most common pelvic sites of endometriosis are the ovaries, uterine ligaments, rectovaginal and vesicovaginal septae, pelvic peritoneum, cervix, labia, and vagina. The gastrointestinal tract is the most common site of extrapelvic disease and is involved in 5% to 15% of all cases of endometriosis.[2] The most common sites of gastrointestinal involvement, in descending order, are the rectum and sigmoid colon, followed by the proximal colon, the appendix, the cecum, the small intestine, and the rectum.[3] Intestinal endometriosis may present as constipation and diarrhea, indigestion, nausea, vomiting, daily cramping, and rectal pain unrelated to menstrual periods.[4] Therefore, the clinical history may be suggestive, but periodicity of symptoms may not always be present and the patient could present with acute, partial, or chronic intestinal obstruction.

Endometriosis of the appendix may vary in its presentation. It may be entirely asymptomatic and an incidental finding on pelvic surgery for other indications may present as cyclic and chronic RLQ pain, melena, lower intestinal hemorrhage, intussusception of the appendix, or mimic acute appendicitis.

Endometriosis of the appendix was first described in 1860 by Carl Von Rokitansky.[5] The diagnosis of appendiceal endometriosis is definitively established histologically. In our case, hematoxylin and eosin stains of the normal-appearing proximal appendix showed appendiceal tissue with glands and goblet cells. In contrast, slides of the enlarged, dilated area of the appendix revealed endometrial stromal tissue and endometrial glands, without intestinal glands or goblet cells, consistent with endometriosis of the appendix. Intraoperatively, endometrial implants typically appear grossly as black-blue lesions (powder burn implants).[6] Atypically, implants can also appear grossly as clear papules, red polyps, red-brown vesicles, and white opacifications.

Prystowsky et al[7] described 1573 patients with endometrial diagnosis on laparoscopy or laparotomy from 1974 to 1985 at a single institution. In this series, 15 patients had appendiceal endometriosis, but none had symptoms suggestive of appendicitis on clinical examination or history of it. Panganigan and Cornog[8] reported 31 cases of appendiceal endometriosis at a single institution from 1940 to 1970. Most cases were asymptomatic, incidental findings during pelvic surgery. Although microscopic endometriosis in the wall of the appendix is not uncommonly identified as an incidental finding when the appendix is resected for other reasons, clinically significant appendiceal endometriosis presenting as acute appendicitis is rarely reported in the literature and consists primarily of case reports and small case series.[9-12]

Our patient presented with symptoms of acute appendicitis, but she also had a confounding history of cyclic abdominal pain and a previous CT examination 5 years prior that revealed a similar enlarged appendix. Following her appendectomy, her symptoms resolved.

In conclusion, appendiceal endometriosis mimicking acute appendicitis can clinically be a diagnostic challenge, and it should be included in the differential when evaluating women presenting with symptoms of RLQ pain confounded with a history of cyclic abdominal pain. Diagnosis is histologically established, and early diagnosis and intervention by the astute clinician can lead to resolution of years of frustrating symptoms.

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