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Endosalpingiosis in a Young Woman: A Rare Culprit of Nonspecific Abdominal Pain – A Case Report and Literature Review

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ABSTRACT

Endosalpingiosis is a rare, often incidental gynecological finding characterized by the ectopic presence of fallopian tube epithelium outside the tubes. This case report presents a young woman with chronic right-sided abdominal pain, in whom diagnostic laparoscopy revealed a small peritoneal nodule confirmed histologically as endosalpingiosis. The patient's symptoms resolved postoperatively and she remains symptom-free on hormonal therapy at 3- and 6-month follow-up. This case highlights diagnostic challenges, potential pathophysiological mechanisms, and the importance of considering endosalpingiosis in young women with unexplained abdominal pain.

Introduction

Endosalpingiosis is an uncommon benign condition defined by the presence of ciliated tubal-type epithelium outside the fallopian tubes. While often incidental, it may occasionally present with chronic pelvic or abdominal pain. Despite being recognized histologically for decades, its clinical significance remains under-researched. A systematic review of the past decade identified only 15 published cases, 93% in women aged 50 years and above. This report discusses an unusual presentation in a young woman in her early 20s, emphasizing the diagnostic and therapeutic considerations associated with this rare entity [1-6].

Case Presentation

A woman in her early twenties presented on December 23, 2023, with acute right upper quadrant pain radiating to the right iliac fossa, associated with nausea, vomiting, and chills. Her past medical history was unremarkable, and menstrual cycles were regular. She reported persistent dull right-sided abdominal pain over the preceding six months, often exacerbated before or during menstruation. On examination, mild tenderness was noted throughout the right abdomen. Pelvic examination revealed no abnormal discharge or lesions.

Initial laboratory investigations, including full blood count, liver function tests, renal profile, and coagulation screen, were within normal limits, and serum β-hCG was negative. CT abdomen and pelvis showed no abnormalities, while pelvic ultrasound demonstrated a 1.6 cm complex left ovarian cyst. During subsequent presentations, repeat investigations remained normal, and a follow-up CT scan revealed a small appendicolith without active inflammation. Diagnostic laparoscopy and appendectomy were performed due to persistent symptoms and the presence of an appendicolith.

Intraoperatively, the appendix appeared macroscopically normal, but a small cystic nodule was identified on the right lower quadrant peritoneum and excised. Histopathology revealed a round piece of tissue with a cystic space lined by ciliated columnar epithelium, immunohistochemically positive for WT-1 and CDX-2, confirming endosalpingiosis. The appendix showed no evidence of appendicitis.

Differential Diagnosis

Differential diagnoses considered included endometriosis, endocervicosis, peritoneal inclusion cysts, and peritoneal malignancy. Endometriosis was excluded based on the absence of endometrial-type stroma or hemosiderin-laden macrophages on histology.

Investigations

Initial laboratory workup, including full blood count, liver and renal function tests, coagulation profile, and serum β-hCG, yielded normal results. A computed tomography (CT) scan of the abdomen and pelvis showed no acute pathology, while a pelvic ultrasound demonstrated a 1.6 cm complex left ovarian cyst. During subsequent hospital visits, repeat laboratory investigations remained within normal limits, and no new imaging abnormalities were noted.

At the third presentation, repeat CT abdomen and pelvis revealed a small appendicolith at the tip of the appendix without evidence of inflammation. Diagnostic laparoscopy was performed, revealing normal abdominal and pelvic viscera, including a grossly normal appendix. However, a small cystic nodule was observed on the right lower-quadrant parietal peritoneum and excised for analysis.

Histopathology: The specimen consisted of a round piece of tissue with a cystic space lined by ciliated columnar epithelium. Immunohistochemical staining was positive for WT-1 and CDX-2, confirming the diagnosis of **endosalpingiosis**. No features of malignancy were identified, and the appendix was histologically normal.

Outcome and Follow-Up

The patient was referred to the gynecology service for ongoing management. At 4-week follow-up, she reported resolution of pain after starting non-steroidal anti-inflammatory medication. She was subsequently commenced on hormonal therapy, which maintained symptom control. At 3- and 6-month follow-up visits, she remained symptom-free and in good health.

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Discussion

Endosalpingiosis is a benign condition involving the ectopic proliferation of ciliated tubal-type epithelium. Its etiology remains uncertain, with theories including metaplastic transformation, implantation following inflammation, or Müllerian cell rests. Symptoms are often nonspecific, contributing to underdiagnosis and misclassification as endometriosis or chronic pelvic pain syndromes.

Laparoscopy remains the cornerstone of diagnosis, enabling direct visualization and biopsy of suspicious lesions. Histological confirmation through the identification of ciliated columnar epithelium and immunopositivity for WT-1 and CDX-2 distinguishes it from other Müllerian lesions. Although often incidental, emerging evidence suggests that endosalpingiosis may contribute to chronic abdominal or pelvic pain in select patients.

Treatment focuses on symptom relief. Excision of symptomatic lesions may offer improvement, while hormonal therapy, including oral contraceptives or gonadotropin-releasing hormone agonists, may suppress recurrence and alleviate discomfort. Regular follow-up is essential, as long-term data on recurrence and malignant transformation remain limited.

This case underscores that endosalpingiosis should be considered in young women presenting with unexplained chronic abdominal pain, particularly when other investigations are inconclusive.

Conclusions

Endosalpingiosis, though rare and often incidental, may present symptomatically even in young women. A multidisciplinary approach involving surgeons, pathologists, and gynecologists is crucial for accurate diagnosis and management. This case highlights the importance of maintaining diagnostic vigilance for uncommon causes of chronic abdominal pain.

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