

Recurrent and Subacute Intestinal Obstruction and Ileocecal Stricture due to Endometriosis: Case Series

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Abstract

Gastrointestinal involvement of endometriosis has been found in 6%- 10% of reproductive age group women and exclusive localization on the ileum is very rare (1%-7%). Endometriosis is characterized by the presence of endometrial tissue consisting of glands and/or stroma located outside the uterus. When the terminal ileum is affected by endometriosis, the entity distinction from other diseases of the ileocecal region is difficult in terms of clinical presentation, symptomatology and radiological appearance. Histological assessment after resection of the involved small bowel segment in the three patients shows a final diagnosis of ileal endometriosis with confirmation by Immunohistochemistry which shows ER, PR and CD10 positive.

Keyword: Endometriosis; Ileum

INTRODUCTION

Endometriosis is a painful chronic disease occurring in 6 to 10% of reproductive age group women.¹⁻³ In previous data prevalence of endometriosis is 1%-20% in asymptomatic women, 10%-25% in infertile patients and 60%-70% in women with chronic pelvic pain.⁴ No high-precision

imaging test for ileal endometriosis. Diagnosis of ileal endometriosis is usually made incidentally during surgery for other endometriosis sites or following direct complications of ileal involvement: bowel obstruction, ileocecal intussusception or perforation.⁵ Endometriosis can be divided into intra and extraperitoneal sites. Order of frequency in decreasing pattern is as follows the intra-peritoneal locations include ovaries (30%), uterosacral and large ligaments (18%-24%), fallopian tubes (20%), pelvic peritoneum, pouch of Douglas, and gastrointestinal (GI) tract. Extraperitoneal locations include cervical portio (0.5%), vagina and rectovaginal septum, round ligament and inguinal hernia sac (0.3%-0.6%), navel (1%), abdominal scars after gynaecological surgery (1.5%) and caesarian section (0.5%). Endometriosis rarely affects extra-abdominal organs such as the lungs, urinary system, skin and the central nervous system.⁶⁻⁹ Gastrointestinal involvement of endometriosis is found most commonly in the

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sigmoid colon, rectum and terminal ileum in 3%-37% of women.¹⁰

CASE REPORT

A 27 year old patient come to visit hospital with a complaint of abdominal pain for since 1 week associated with vomiting and diarrhea. Mantoux test is positive and suspecting Koch's disease. A colonoscopic biopsy done from terminal ileum shows non-specific inflammation. Ultrasound abdomen shows no significant abnormality. All

investigation is within normal limit at that time. Same patient come to visit after 5 month with the colicky abdominal pain since 2 days. X-ray abdomen showed dilated small bowel loops with multiple air fluid levels. She was admitted for further management.

CT abdomen showed marked clumping of proximal mild ileal loops in the midline lower abdomen and upper pelvis causing dilatation of distal jejunal and proximal ileal loops short segment of closed loop bowel obstruction. Immediately surgery was planned.

Gross: Received a segment of ileum measuring 13 cm with attached appendix measuring 3.5 cm in length. A stricture is identified measuring 1 cm in length at a distance of 1.5 cm from distal resected end and 10.5 cm from proximal resected end. (Figure 1A)



Fig. 1A: Gross Image, Stricture Measuring 1 cm in length.

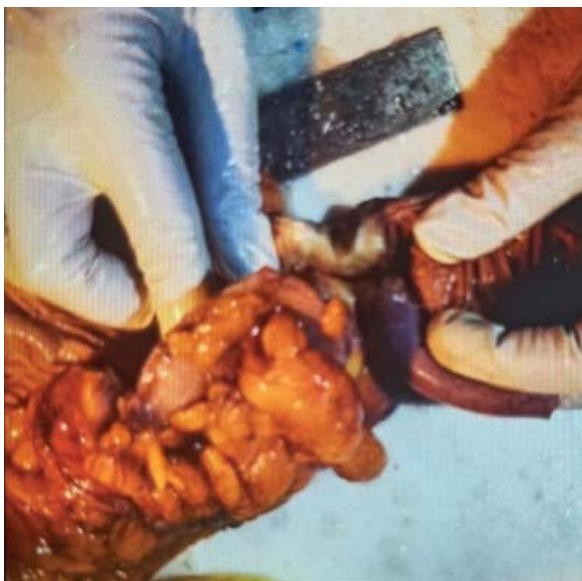


Fig. 1C: Gross Image, Multiple stricture each measuring 0.8 to 1.2 cm



Fig. 1B: Gross Image, Grey White lesions in Ileocaecal region

Microscopy show benign stricture with focal fibromuscularisation of submucosa. Focal thickening of muscularis along with foci of endometrial gland surrounded by endometrial stroma. Features are suggestive of endometriosis. Focally adjacent intestinal wall also show foci of endometriosis. (Figure 2A)

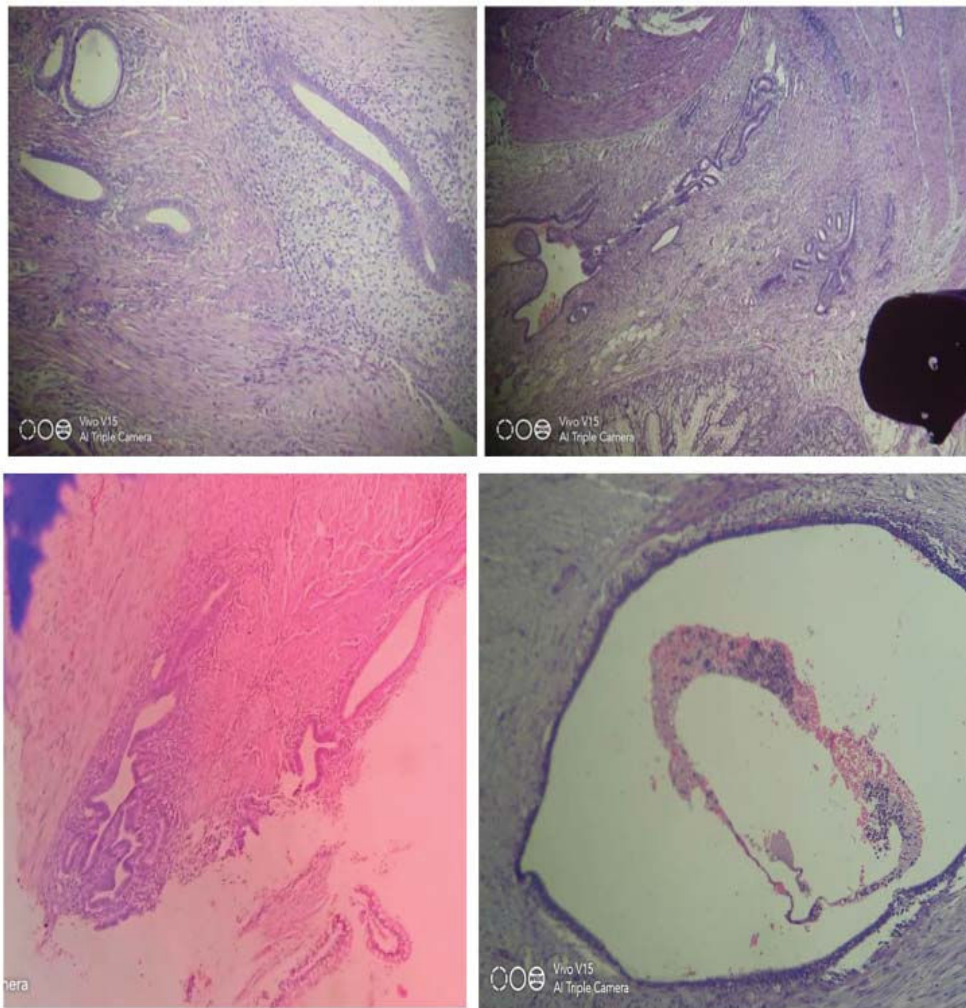


Fig. 2: Microscopy image (H& E) - focal thickening of muscularis along with foci of endometrial glands surrounded by endometrial stroma. 2A 2B 2C 2D

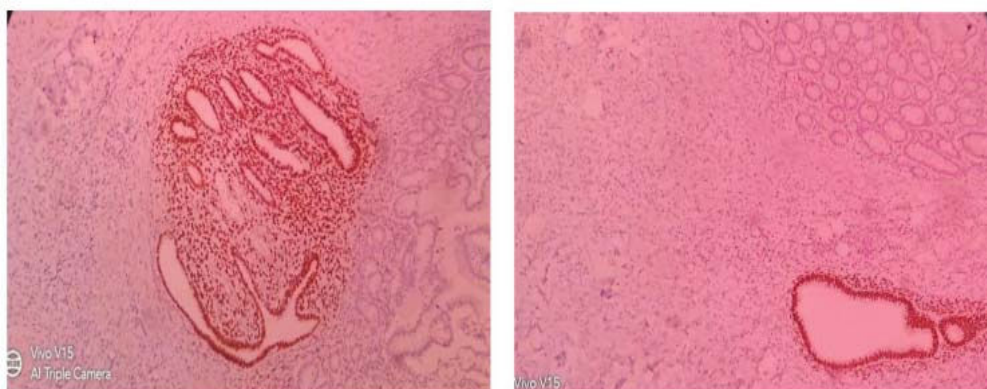


Fig. 2: IHC Image -show ER and PR nuclear positivity in endometrial cells.

Immunohistochemistry was performed with ER, PR, CD10, CDX-2 and Ki-67. ER and PR show nuclear positivity in endometrial epithelial cell and

CD 10 show cytoplasmic positivity in endometrial stromal cells and Ki-67 is 5%. So IHC favours endometriosis.

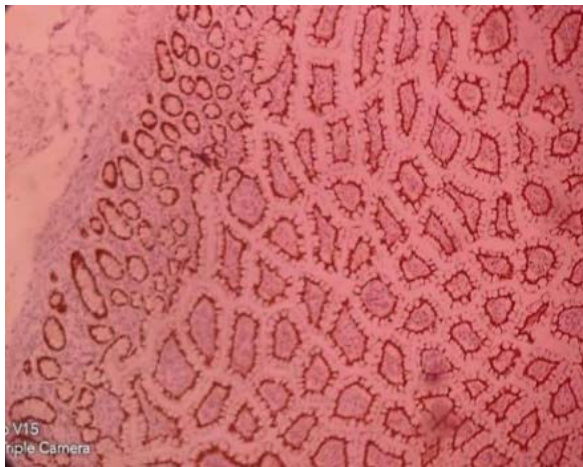


Fig. 3: CDX-2 Nuclear positive in intestinal epithelium



Fig. 3: CD 10 cytoplasmic positive in endometrial stromal cells

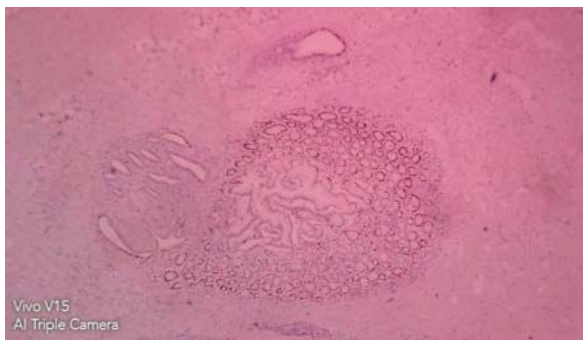


Fig. 3: Ki-67% positivity- 5%

Second Patient 45 year female presented with diffuse abdominal colicky pain for since 10 days associated with vomiting. No history of GI bleeds loss of appetite or loss of weight. All investigation within normal limit. CECT abdomen shows 3.8 x 2.8cm mass lesion in the right iliac fossa at terminal ileum. Intra operative findings are tumor present near IC junction puckering present? NET? GIST.

Grossly received right hemicolectomy measuring 30 cm in length a circumscribed grey white lesion identified in IC junction measuring 3x2.8x2.5cm. (Refer figure 1B) Microscopy shows feature of ileal endometriosis with foci of endometrial glands and stroma in muscularis propia. (Refer 2B) IHC shows ER, PR and CD10 positivity.

Third case 30 year female present with complaints of pain abdomen, multiple episodes of non-bilious vomiting during morning. No history of loose stools. Other physical and systemic examinations were normal. Mild leucocytosis seen. CECT abdomen shows distal small bowel stricture. Received an ileocecal resection specimen measuring 13 cm in length. External surface shows multiple strictures varying in sizes from 0.8 to 1.2 cm (Refer 1C). Microscopy reveal foci of endometriosis in

muscularis propia (Refer 2C, 2D) IHC reveal ER,PR and CD10 positivity.

DISCUSSION

Endometriosis is a common disease of unknown etiology. Sampson's retrograde menstruation theory is the most widely accepted theory for the pathogenesis of endometriosis. Endometrial tissue refluxes through the fallopian tubes, implanting on the serosal surface of abdominal and pelvic organs which commonly occurs during menstruation. However, many other theories and factors, immunological, genetic and familial, could be involved in the pathogenesis of this disease.¹⁰ If endometriosis involves the small and large intestines it leads to acute and chronic symptomology of diseases. Many mimickers of the disease is present. Clinical differential diagnosis of endometriosis includes diverticulitis, appendicitis, Crohn's disease, tubo ovarian abscess, ileocaecal Koch's, irritable bowel syndrome, carcinoma and lymphoma. Small bowel involvement is seen in 5-18% of patients of intestinal endometriosis but nodular endometriosis involving the entire wall of the terminal ileum and resulting in complete obstruction is extremely rare.^{11,13}

Usually patients of GI endometriosis present with relapsing bouts of abdominal pain, abdominal distention, tenesmus, constipation and diarrhea and infertility. Rectal bleeding and pain during defecation may also occur.⁴ Microscopically endometriotic foci were composed of aggregates of small, often widely spaced endometrioid glands embedded within a variable amount of endometrial stroma. Localized fibrosis of the bowel wall, strictures, and small or large bowel obstruction

occur if endometriosis infiltrates the muscularis propria.⁴ Immunohistochemically, CD10 positivity indicates endometrial stroma is a strong marker of endometriosis and can be used in the differential diagnosis.¹²

Exact diagnosis of cases with no symptoms is very difficult before surgery, and ultrasound, CT, and magnetic resonance imaging (MRI) may be of limited benefit. Endoscopic biopsies usually yield insufficient tissue for a definitive pathologic diagnosis as endometriosis involves the deep layers of the bowel wall. Diagnostic laparoscopy is the gold standard in detecting lesions.¹¹ Histopathological examination remains a gold standard for diagnosis. Pathologist plays a key role in diagnosis of endometriosis especially in women of reproductive age group. Awareness of this entity is very important and put as differential diagnosis always in reproductive age group who presented with vague gastrointestinal symptoms.

In most cases surgery is the choice of treatment for intestinal endometriosis. For patient without symptoms of obstruction, hormone therapy with danazol or gonadotrophin releasing hormone (GnRH) analogs may be considered, while medical therapy is only a temporary treatment.⁴ Symptoms improve with medical therapy but not resolved completely and relapse occur after cessation of medical therapy and have many side effects.¹⁴ Women present with pain, bleeding, changes in bowel habits and acute intestinal obstruction surgical treatment should be indicated with resection of small bowel segment.⁴

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