

A Rare Case of Descending Colon Endometriosis

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Abstract: Endometriosis is the presence of functional endometrial glands and stroma outside the uterine cavity, most commonly affecting the ovaries, uterosacral ligaments, and rectosigmoid colon. Descending colon involvement is exceptionally rare, likely due to coelomic metaplasia. We present a 40-year-old woman with cyclical left flank pain and menorrhagia. MRI revealed adenomyosis and a T1 hyperintense lesion along the descending colon wall, further characterized on CT as a heterogeneously enhancing serosal lesion. Surgical excision confirmed endometriotic involvement. This case highlights the importance of considering bowel endometriosis in reproductive-age women with cyclical abdominal pain and atypical bowel lesions.

Keywords: Endometriosis, coelomic theory, descending colon, adenomyosis, bowel endometriosis, chronic pelvic pain

1. Introduction

Endometriosis affects 10–15% of women of reproductive age and up to 70% with chronic pelvic pain (1). Common locations include the ovaries, uterosacral ligaments, and pouch of Douglas, explained by retrograde menstruation; **Sampson's theory** (2,3). Rare extraperitoneal sites such as the descending colon are attributed to **coelomic metaplasia**, wherein mesothelial cells transform into endometrial tissue (4). Only two such cases have been reported worldwide (5).

2. Case Report

A 40-year-old nulliparous woman presented with dull, cyclical left flank pain for four years, worsening during menstruation, and associated with menorrhagia. She had known endometriosis and adenomyosis. Examination revealed left flank tenderness and a bulky uterus. Laboratory findings showed mild anemia.

MRI demonstrated a bulky, retroflexed uterus with fundal adenomyoma and right ovarian endometriotic cysts. A poorly defined T1 hyperintense lesion (2.9 × 2.5 cm) with fat stranding was seen along the medial wall of the descending colon. **Contrast-enhanced CT** showed a heterogeneously enhancing soft-tissue lesion (2.5 × 1.6 cm) on the serosal surface of the descending colon (attenuation ≈ 40 HU) without luminal narrowing, consistent with endometriotic involvement.

Despite medical therapy, symptoms persisted, and the patient underwent **total hysterectomy, bilateral salpingectomy, ovarian preservation, and short-segment descending colon resection with anastomosis**.

Histopathology confirmed necrotizing granulomatous inflammation consistent with endometriosis.

3. Discussion

Bowel endometriosis involves ectopic endometrial glands within the intestinal wall or mesentery, most often affecting the rectosigmoid region due to pelvic proximity and retrograde implantation (5). Descending colon involvement is rare, attributed to **coelomic metaplasia** (4,6).

Clinical features vary from asymptomatic to cyclical gastrointestinal complaints including pain, altered bowel habits, or rectal bleeding; often mimicking **diverticulitis, IBD, or colorectal carcinoma** (7,8).

MRI remains the imaging modality of choice for evaluating pelvic endometriosis, while **CT** assists in assessing bowel wall involvement and pericolic extension (9,10). In this case, MRI suggested a paracolic lesion but CT provided better lesion delineation, guiding surgical planning.

4. Conclusion

Descending colon endometriosis is exceptionally rare and can mimic other gastrointestinal conditions. Radiologists should consider this diagnosis in women of reproductive age presenting with cyclical abdominal pain and bowel wall thickening, particularly when symptoms correlate with the menstrual cycle.

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Figures

Figure A -T1 axial image shows ill-defined T1 hyperintense soft tissue lesion in left paracolic gutter adjoining descending colon.

Figure B- Coronal T1 image shows ill-defined T1 hyperintense soft tissue lesion.

Figure C- T2 coronal images shows fundal adenomyoma and endometriotic cysts in right ovary.

Figure D- T2 sagittal image shows fundal adenomyoma and pedunculated polyp.

Figure E-Contrast enhanced CT axial section shows nodular heterogeneously enhancing soft tissue lesion seen involving serosal surface of descending colon

Figure F- Bulky uterus with heterogeneous enhancement of myometrium- adenomyotic.

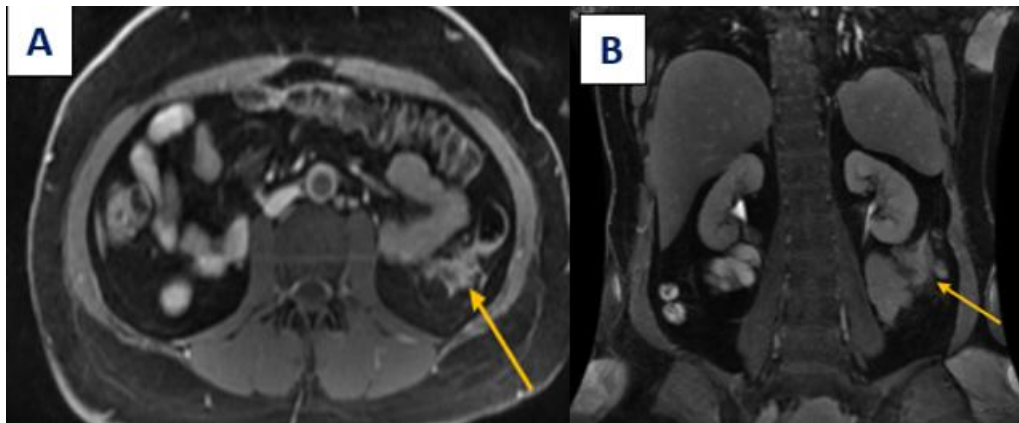


Figure A: T1 axial image shows ill-defined T1 hyperintense soft tissue lesion in left paracolic gutter adjoining descending colon (yellow arrow), B- Coronal T1 image shows ill-defined T1 hyperintense soft tissue lesion (yellow arrow).

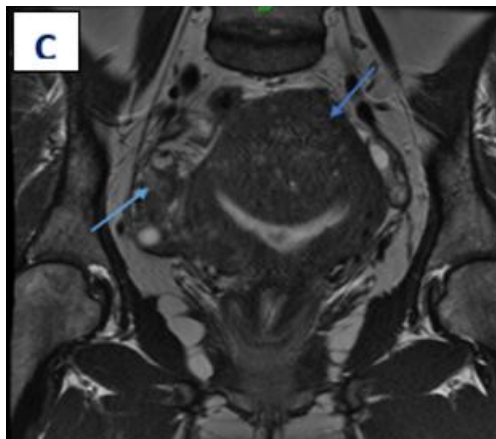


Figure C: T2 coronal images shows fundal adenomyoma (dark blue arrow) and endometriotic cysts (light blue arrow) in right ovary



Figure D: T2 sagittal image shows fundal adenomyoma (dark blue arrow) and pedunculated polyp (green arrow)

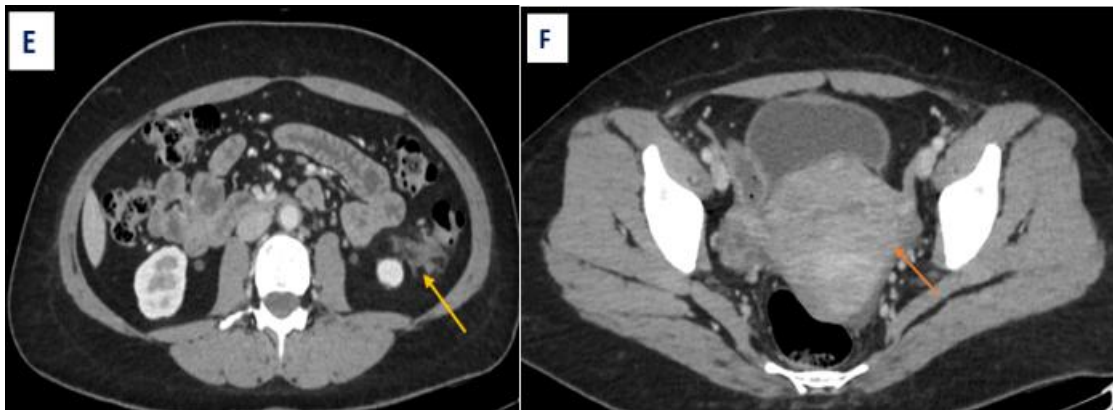


Figure E: Contrast enhanced CT axial section shows nodular heterogeneously enhancing soft tissue lesion seen involving serosal surface of descending colon (yellow arrow). **Figure F-** Bulky uterus with heterogeneous enhancement of myometrium-adenomyotic (red arrow).