

Appendicitis Mimicry of a Rare Case of Early Diagnosed Dolichocolon, a Case Report

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Background

- **Chronic constipation:** affects 4-16% of the population in developed countries
- **Dolichocolon:** inborn anatomical variant closely linked to chronic constipation; incidence of 1.9-28.5%.
- **Dolichos:** δολιχός, is Greek for "long"
- **Diagnosis:** radiographically with a colon transit study and a barium enema.
- **Surgical management:** resection of the redundant portion and return to normal physiologic length and position.

Dolichocolon Diagnostic Criteria

1. Abdominal pain + distension + constipation
2. Sigmoid loop rising over the line between iliac
3. Transverse colon below the line between iliac crests
4. Extra loops at the hepatic and splenic flexures

Objective

To educate the surgical community on dolichocolon, an underreported etiology of chronic constipation, and illuminate the importance of early diagnosis to prevent misdiagnosis and ultimately improve patient morbidity of the constellation effects of chronic constipation.

Figures

Figures A,B. CT abdomen/pelvis on admission; large fecal load

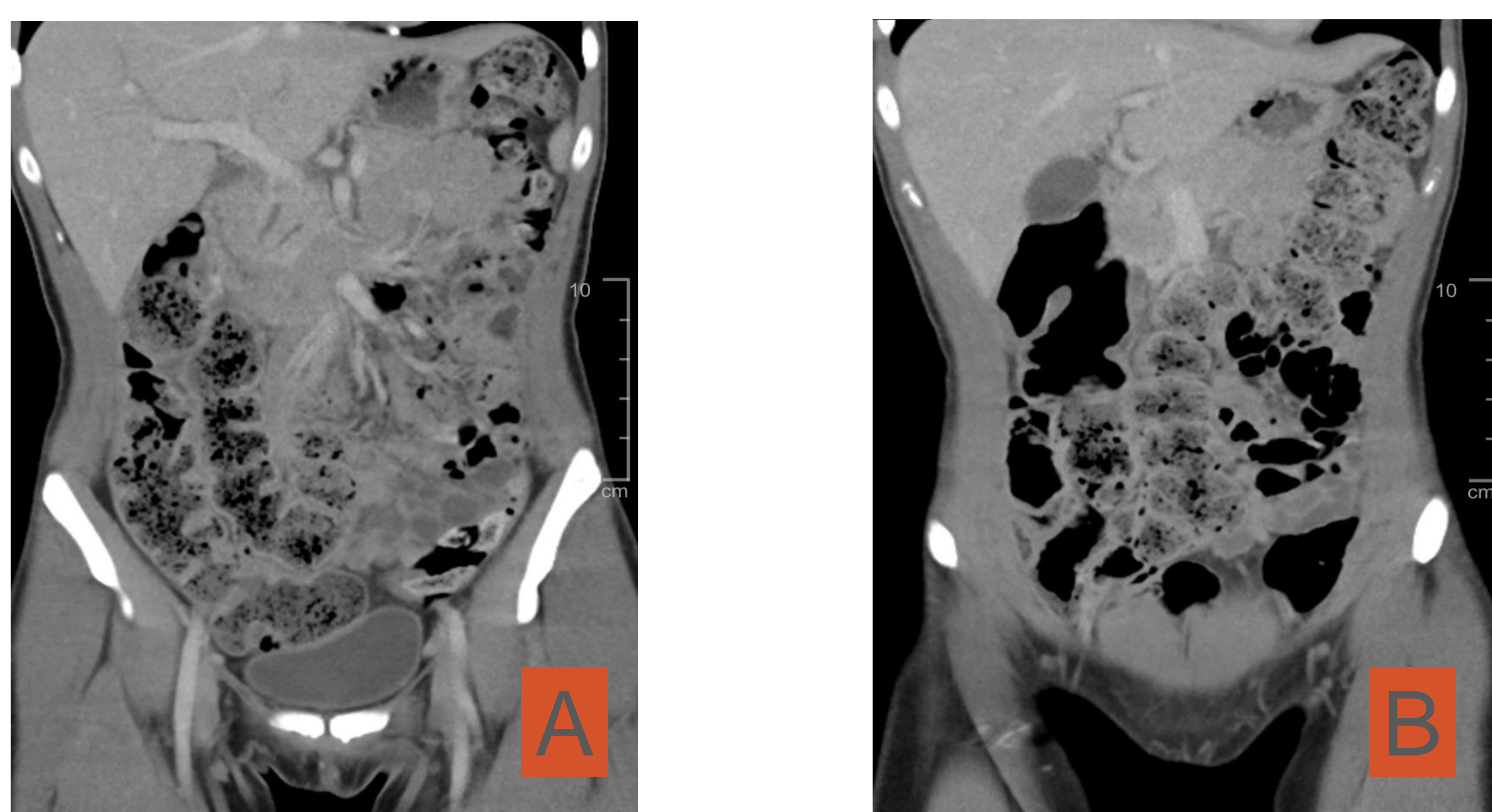


Figure C. Intraoperative subtotal colectomy; 95cm resected segment, on stretch

Case Report

23-year-old- female presented with acute right lower quadrant abdominal pain with associated nausea, fever, and malaise. Physical exam was notable for positive **McBurney's point** and **Rovsing sign**.

CT abdomen/pelvis depicted high stool burden with dilated and redundant colon, and normal appearing appendix. CBC notable for leukocytosis of 14.

Despite antibiotics, IV fluids, multimodal pain medication, and NPO status, abdominal pain was unchanged, and due to physical examination consistent with **appendicitis**, patient underwent **laparoscopic appendectomy** on hospital day 2.

The patient underwent a laparoscopic appendectomy with normal appendix during operation, but on intraoperative inspection, it was apparent that there was **significant length and dilation of the ascending and transverse colon**. On further discussion with the patient postoperatively, she revealed a **chronic history of constipation** with no improvement with numerous medical therapies.

On follow up, patient underwent additional CT imaging and colonoscopy in which only the splenic flexure could be reached due to significant length excess. Patient was agreeable to elective intervention 2 weeks post appendectomy and underwent laparoscopic hand assisted **subtotal colectomy for dolichocolon attributing to her chronic constipation**. The resected bowel length was measured 80 cm in length (2.5 feet); on stretch another 15 cm (6 inches) of length obtained).

Patient's post operative course was uncomplicated, and on follow up patient reports significant improvement in her constipation symptoms.



Figure D. CT barium enema with air contrast; no obstruction/mass

Discussion

- **Objective measures:** Colon transit time and total fecal loading
- **Associated appendicitis:** Reports of appendicitis mimicry have been documented in literature, and only rarely are accurately dictated as dolichocolon with associated manifestations including volvulus, as it is often overlooked.
- **Pediatric considerations:** Volvulus, megacolon, obstruction, and constipation attributable to undiagnosed congenital dolichocolon.
- **Surgical interventions:** Subtotal colectomy can lead to improvement in constipation, quality of life, and reduction in dolichocolon complications.
- **Future considerations:** Cellular evidence of later sub-compensated stages of dolichocolon have been described based on morphological signs of atrophy and sclerosis changes of the colon neuromuscular apparatus.
- Proposed endocrine pathologies such as growth hormone (GH) and insulin-like-growth-factor (IGF-1) as catalysts, having irreversible effects of colonic collagen synthesis in acromegaly, correlating to dolichocolon.

Conclusion

Precise definitions and etiologies are hypothesized regarding dolichocolon, yet with little confirmatory or diagnostic consensus. Further discussion should be made on the development of dolichocolon classification so that it becomes more widely identified and diagnosed so that proper surgical and medical management can be established.

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