
Photoclinic



Figure 1. Small bowel series



Figure 2. Small bowel series



Figure 3. Double balloon enteroscopy.

A 54-year-old gentleman was referred to our gastrointestinal (GI) clinic. The chief complaint was a black tarry stool since two months prior to the admission. He was well up to two years ago, when he developed fatigue and weakness. He was managed with the impression of alpha-thalassemia during these two years. He had no abdominal pain, nausea and vomiting, weight loss, fever, constipation, or diarrhea during this period. He was a smoker and

an opium user. Physical examination was unremarkable. Laboratory results were as follows: white blood cell count: $10 \times 10^9/L$ hemoglobin: 7.4 g/dL, mean corpuscular volume: 66 fL, platelet count: $26610^9/L$, prothrombin time: 12.9 s, INR: 1.1, albumin: 4.1 g/dL, blood urea nitrogen: 12 mg/dL, creatinine: 0.8 mg/dL, sodium: 135 mEq/L, potassium: 4.1 mEq/L, calcium: 9.2 mg/dL, triglyceride: 127 mg/dL, cholesterol: 148 mg/dL, stool examination: unremarkable, serum iron: 15 $\mu g/dL$, and total iron-binding capacity: 500 $\mu g/dL$.

Upper GI endoscopy and full colonoscopy were normal. Images from small bowel series (Figures 1 and 2) and double balloon enteroscopy (Figure 3), are shown above.

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What is Your Diagnosis?
See the next page for the diagnosis

Photoclinic Diagnosis:	Ileal Duplication Cyst
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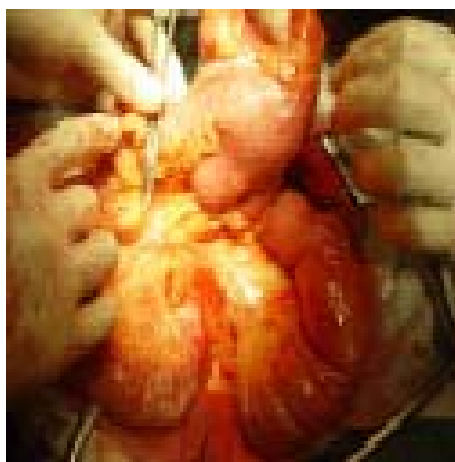


Figure 4. Ileal duplication cyst before resection.



Figure 5. Ulcer in the base of ileal duplication cyst.



Figure 6. Duplication cyst after resection.

Duplication of intestinal tract is a rare congenital anomaly consisting of well-formed tubular or spherical structures firmly attached to the intestine on the mesenteric side of the lumen. Lined with intestinal mucosa, it shares a common wall and mesenteric blood supply with the adjacent intestine, but usually does not communicate with the gut lumen. Most affected patients present within the first year of life.^{1, 2} Duplications are slightly commoner in males.³

Ileal duplication can be classified into localized duplication, duplication associated with spinal cord and vertebral malformation, and duplication of the colon.

Localized duplications are common in the ileum and jejunum. Some theories explain duplication as a defect in recanalization of the

intestinal lumen after the solid stage of embryological development.⁴ Its complications include perforation, intussusception, bowel obstruction because of adjacent pressure or mass effect, volvulus, and associated malignancy.⁵

The symptoms depend on the size, location, and mucosal lining of the cyst. The patients may present with abdominal pain, vomiting, palpable mass, or acute GI hemorrhage. Intestinal duplication in the thorax may present with respiratory distress.

Because of nonspecific findings, a preoperative diagnosis based on radiography is unlikely. Upper GI study and barium enema demonstrate filling defect or rarely a communication between the cyst and normal bowel.⁶ Any type of GI mucosa including gastric mucosa may be found. Heterotopic gastric mucosa is found in 29 – 60%

of cases. Melena occurs in 20 – 35% of patients, but perforation is uncommon.^{2, 6} In those patients who present with melena the diagnosis is rarely suspected unless a duplicated segment is found on an ultrasound or barium study. When the disease is suspected, a Technetium 99m study helps to identify the ectopic gastric mucosa within the duplication. However, it may not be possible to be distinguished from ectopic mucosa in a Meckel's diverticulum, another cause of melena.

Short duplications are best treated by resection and primary end to end anastomoses. If complete excision is impossible, long duplications may be separately excised while preserving normal gut. The treatment of choice for enteric duplication cysts is surgical excision.⁵

In the case reported here, the patient had severe anemia with melena. Upper GI endoscopy and full colonoscopy were normal. Double balloon enteroscopy showed multiple ulcers in the ileum and biopsies from these lesions were reported as normal changes. The ileal duplication cyst was found in small bowel series. The pictures are shown in Figures A and B. The patient was finally operated to excise the lesion, which was located at 30 cm apart from ileocecal valve (Figure 4). The duplication cyst was resected (Figure 5) and an end

to end anastomosis was done. An ulcer was found in the duplication cyst (Figure 6).

The patient had an uneventful course after resection of the duplication cyst and his anemia was cured.

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