An Unusual Case of Bleeding in Small Intestine

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QUESTION

A 9-year-old boy presented with a 3-hour history of abdominal pain and hematochezia. The patient had a family history of ulcerous colitis (father). He had been previously healthy, and had a normal appetite, normal bowel function, and stable weight. On physical examination, he was pale, had a non-tender abdomen without signs of organomegaly, normal heart and lung findings, a blood pressure of 105/60 mmHg, a heart rate of 80 beats/minute, axillary body temperature 37°C, blood oxygen saturation 100%, and perianal region normal on inspection. All laboratory tests showed normal values. A few hours later, he vomited twice (without signs of blood in vomited liquid). Empirical treatment with per oral omeprazole 20 mg was started. Meckel scintigraphy with pertechnetate Tc-99m was positive for ectopic gastric mucosa in the bowel. Diagnostic laparoscopy was performed and several lymph nodes were found in the ileocecal junction. An additional lymph-node like structure along the ileum was found, on the mesenterial side of the small intestine, that was not suspected to be Meckel's diverticulum (MD), due to its mesenterial location. No diverticulum on the anti-mesenterial side along the small bowel was found. Gastroscopy and colonoscopy were normal. Wireless capsule endoscopy (CE) after 90% of intestinal passage time showed pathological finding presented in Figure 1.

The patient underwent a second laparoscopy, and the initial lump that was identified at the ileum on the mesenterial side corresponded to the description of the CE and was resected. The macroscopic appearance resembled more an intestinal duplication of the small bowel, due to its mesenterial location.

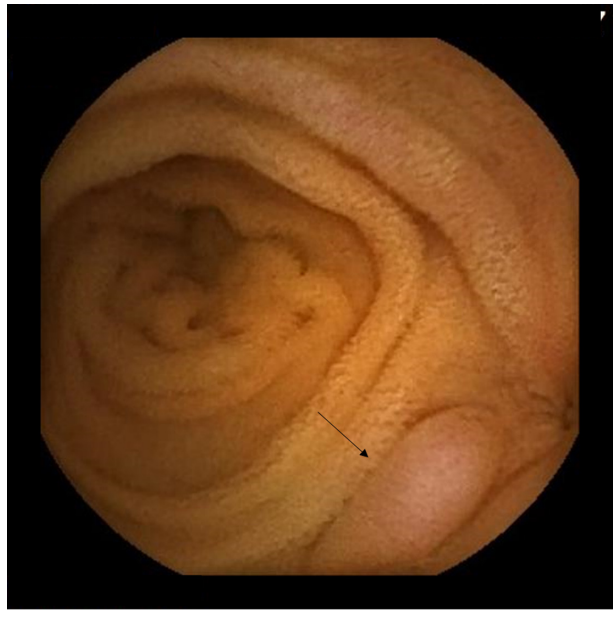

Figure 1. Capsule endoscopic picture after 90% of intestinal passage time.

The macroscopic appearance resembled more an intestinal duplication of the small bowel, due to its mesenterial location. Intraoperative appearance of the structure in the small bowel is showed on Figure 2. Histopathological examinations confirmed the diagnosis of ectopic gastric fundic mucosa in a diverticulum (Figure 3).

The patient was discharged from hospital and followed-up for 6 months, without any complications or further complaints.

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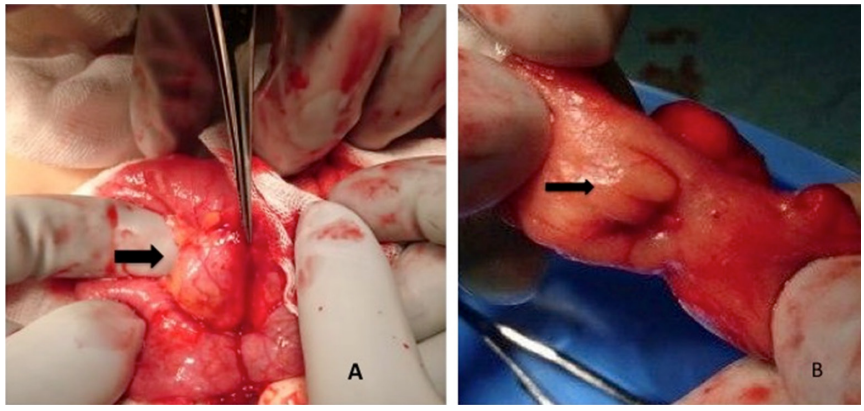

Figure 2. Intraoperative appearance of the structure in the small bowel.

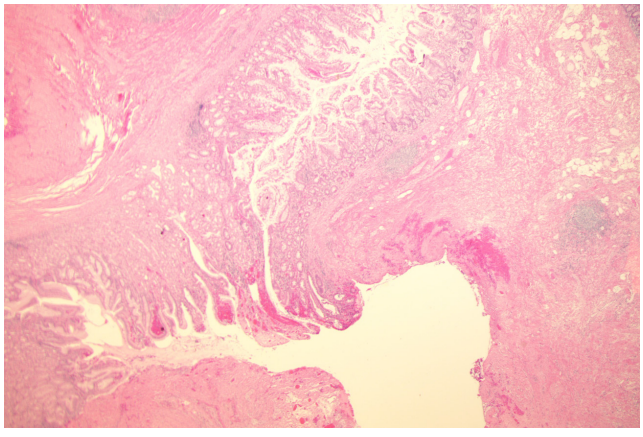

Figure 3. Histopathological examinations confirmed the diagnosis of ectopic gastric fundic mucosa (size 15 × 16 × 13 mm) in a diverticulum. Photo shows the deeper parts of the diverticular throat, just at the transition between the small intestine mucosa and the ectopic gastric fundic mucosa.

Intestinal duplications (ID) and diverticula are rare congenital anomalies that often contain ectopic pancreatic tissue or gastric mucosa. They are mostly (60-80%) diagnosed by 2 years of age and can occur throughout the GI tract, but are most common in the ileum.[1,2] An MD is an antimesenteric outpouching of the ileum, that presents in 50% of cases with ectopic GI mucosa (most commonly ectopic gastric fundic mucosa).[1] Both ID and MD with ectopic gastric fundic mucosa most commonly present with painless GI bleeding,[1] and both conditions can be diagnosed with technetium-99m-pertechnetate imaging, based on the evaluation of technetium-99m uptake by the ectopic gastric fundic mucosa.[3] In contrast to MD, ID are characteristically located on the mesenteric side of the bowel.[2] The first surgery in our case revealed a lymph-node-like structure along the ileum, which did not give rise to suspicions of MD, due to its mesenterial location. No diverticulum on the anti-mesenterial side along the small bowel was found. The surgical decision was simpler to make during the repeat surgical procedure, after the CE finding. It is important to emphasize that even the CE finding was atypical, suggesting an inverted MD.[4] In both cases, bleeding requires surgical resection.[5]

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REFERENCES

1. Bass LM, Wershil BK. Anatomy, histology, embryology, and developmental anomalies of the small and large intestine. In: Feldman M, Friedman LS, eds., Brandt LJ. Gastrointestinal and Liver Disease. 10th ed. Elsevier; 2016, Philadelphia;1665-1668.

2. Brown RL, Azizkhan RG. Gastrointestinal bleeding in infants and children. Meckel's diverticulum and intestinal duplication. Semin Pediatr Surg. 1999;8(4):202-209. [CrossRef]

3. Lin XK, Huang XZ, Bao XZ, et al. Clinical characteristics of Meckel diverticulum in children: A retrospective review of a 15-year single-center experience. Med (Baltim). 2017;96(32):e7760. [CrossRef]
4. Wurm Johansson G, Nemeth A, Nielsen J, Thorlacius H, Toth E. An unusual case of chronic blood loss in the small intestine. Gut. 2011;60(6):773, 813. [CrossRef]
5. Toth E, Lillienau J, Ekelund M, et al. Ulcerated small intestine duplication cyst: unusual source of gastrointestinal bleeding revealed by wireless capsule endoscopy. Gastrointest Endosc. 2006;63(1):192-194. [CrossRef]