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A rare clinical presentation of heterotopic gastric mucosa of the jejunum: A case report and review of the literature☆

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ABSTRACT

Heterotopic gastric mucosa (HGM) of the small bowel is a congenital disorder with a variable clinical presentation. Reported manifestations are gastrointestinal bleeding, intestinal obstruction or perforation, penetration into adjacent organs, and fistulization. Rarely, failure to thrive (FTT) is the clinical manifestation of HGM. We present the case of a baby girl with FTT due to chronic abdominal pain associated with recurrent episodes of abdominal distention, vomiting, and diarrhea. The cause was found to be HGM in the jejunum. The purpose of this paper is to describe this unusual clinical presentation of jejunal HGM.

Chronic abdominal pain and food intolerance in a child are common symptoms in many medical and surgical conditions, including infectious, allergic, inflammatory, neoplastic, mechanical, and motility disorders. We present the case of a baby girl with frequent episodes of abdominal pain, abdominal distention, vomiting, and diarrhea that resulted in failure to thrive (FTT). The cause of these symptoms was HGM in the jejunum.

1. Case report

A one-year-old girl presented with episodes of irritability, abdominal distention, vomiting, and diarrhea. Her past medical and family histories were unremarkable. The episodes lasted from a few days to weeks and required frequent admissions to a tertiary care hospital; an extensive workup did not reveal a definitive diagnosis. Infectious, allergic, immune, inflammatory, neoplastic, and mechanical obstructive causes were ruled out. The diagnosis of exclusion was chronic intestinal pseudo-obstruction syndrome (CIPO). During the episodes, the patient was treated with bowel rest and total parenteral nutrition. Oral elemental formula was tolerated between the episodes. The only medication prescribed was metoclopramide. At the age of four years the patient was referred to our institution for a second opinion.

At our hospital, laboratory tests completed included complete blood count, serum electrolytes including calcium, magnesium and phosphate, serum glucose, creatinine, liver transaminases, coagulation profiles, sickle cell screen, reticulocyte count, zinc protoporphyrin, serum proteins, erythrocyte sedimentation rate (ESR), and antinuclear and anti-smooth-muscle antibody screen. All results were within normal limits except for a mild anemia, low albumin, and slightly elevated ESR. An infectious workup was negative including blood, urine, and stool cultures including for ova and parasites. A urinalysis was unremarkable and stool for occult blood was negative. An abdominal ultrasound did not reveal any abnormalities. An upper gastrointestinal (GI) contrast study with a small bowel follow through showed a dilated hypomotile segment of proximal jejunum followed by a short narrowed segment consistent with episodes of transient spasm. In both segments, there was marked mucosal irregularity and ulceration (Fig. 1). A computerized tomography (CT) scan of the abdomen with IV and oral contrast confirmed the findings from the upper GI contrast study and revealed several enlarged mesenteric lymph nodes (Fig. 2). Upper and lower GI endoscopy with multiple biopsies from the esophagus, stomach, duodenum, colon, and rectum revealed no pathological abnormalities.

A multidisciplinary meeting was conducted, including members from the pediatric specialties of gastroenterology, infectious

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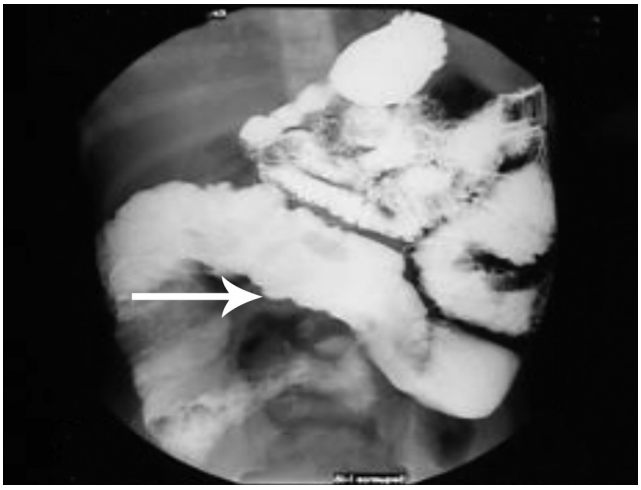

Fig. 1. Upper GI contrast study with a follow through, showing a dilated jejunal segment followed by a transiently narrowed segment. There is marked mucosal irregularity with ulceration (arrow).

disease, immunology, hematology-oncology, radiology and surgery. The conclusion was to proceed with surgical exploration, because of the lack of a definitive diagnosis and the possibility of bowel lymphoma. A laparoscopic approach was attempted but aborted due to intra-abdominal adhesions. Laparotomy revealed a dilated segment of proximal jejunum of 38 cm length and several enlarged mesenteric lymph nodes. The dilated segment was followed by an 8-cm narrowed segment with thickened walls (Fig. 3). The dilated proximal segment, distal thickened segment and the enlarged mesenteric lymph nodes were resected en-bloc (Fig. 4). Bowel continuity was restored with an end-to-end jejuno-jejunal anastomosis.

Tissue studies of the resected dilated segment revealed normal small bowel mucosa with multiple areas of HGM (Figs. 5 and 6). Multiple small ulcers were seen in the dilated segment. In the narrowed segment there was normal small bowel mucosa, no gastric mucosa, but multiple ulcers and significant scarring. Both ends of the resected jejunal segment contained normal intestinal mucosa and were free of HGM. Mesenteric lymph nodes showed reactive follicular hyperplasia.

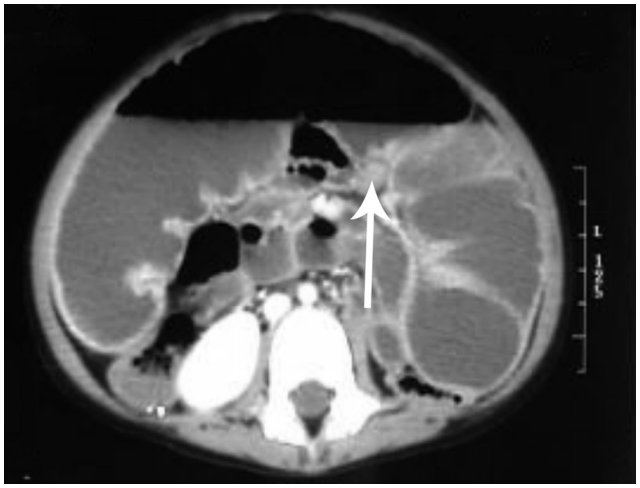

Fig. 2. CT image of the abdomen showing segmental jejunal dilatation with thickened mesentery and enlarged mesenteric lymph nodes (arrow).

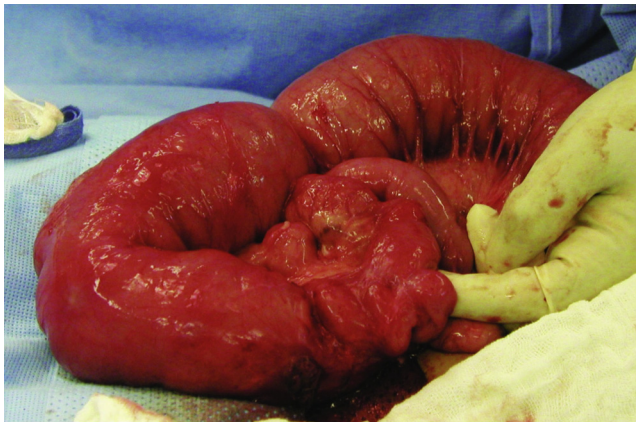

Fig. 3. Dilated jejunal segment followed by a narrow segment with thick walls.

Following the pathology report, a ^{99m}Tc pertechnetate scan was performed to identify possible residual HGM in the abdomen and pelvis; the scan did not show any abnormal uptake.

Postoperatively, the patient was followed for three years. She is free of symptoms, tolerates a regular diet, and has reached acceptable growth parameters.

2. Discussion

Our patient's initial presentation was very suggestive of an infectious process, the most common culprit in our community. An extensive initial workup did not reveal any infectious, allergic, immunologic, inflammatory, neoplastic, or mechanical causes. CIPO was the diagnosis of exclusion and thus the patient was managed at an outside institution for 3 years. However, she suffered from ongoing episodes and progressive FTT. At our hospital, repeated radiological assessments revealed the process to be localized to a segment of proximal jejunum consistent with a segmental bowel dilatation. Mucosal irregularity noted on the contrast GI study in the involved jejunal segment was interpreted as mucosal changes due to chronic stasis of intraluminal contents in the dilated hypomotile segment. Local mesenteric lymphadenopathy was assumed to be reactive, although the possibility of bowel lymphoma was

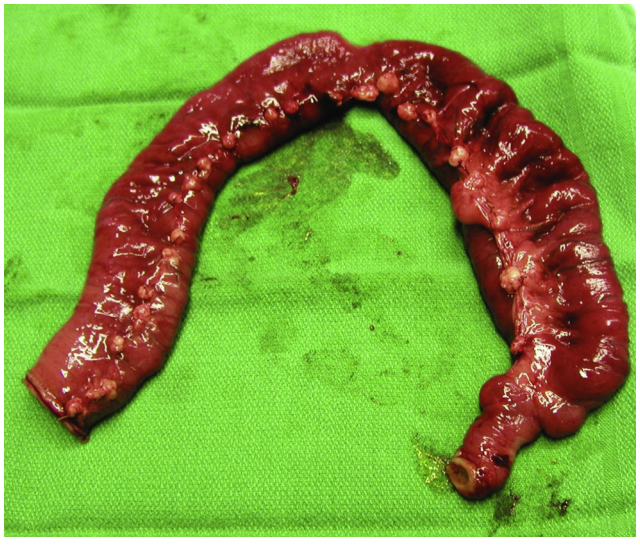

Fig. 4. The resected segment of the jejunum.