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# Gastroduodenal intussusception as a first manifestation of gastric gastrointestinal stromal tumor

*Gastrointestinal stromal tümörün ilk bulgusu olarak gastroduodenal intussusepsiyon*

*To the Editor,*

Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract. Common manifestations include bleeding, anemia or mass effect of the tumor (1-3). Intussusception as a first manifestation of gastric GIST is extremely rare.

A 62-year-old female presented with a three-day history of worsening epigastric pain associated with anorexia and passage of melenic stool. The epigastric pain had been intermittent and was associated with early satiety, vomiting of partially digested food and gradual weight loss. She had been treated in the previous 12 months with acid suppression that was recently increased without effect. Apart from melenic stool, examinations were otherwise unremarkable. Investigations showed severe microcytic anemia (hemoglobin 5.2 g/dl [NR: 12.0-16.0], mean corpuscular volume 64.2 fL [NR: 80-96]). An upper gastrointestinal endoscopy showed mild esophagitis and marked gastritis with a distorted antrum. The pylorus was narrowed, and upon entering the duodenum, a mass was seen to stretch into the second part of the duodenum. On retro-flexion, a large polyp was seen (Figure 1) inside the duodenum.

A computed tomography scan demonstrated a large broad stalked polyp arising from the stomach and extending through the pylorus into the second part of the duodenum (Figure 2). Due to the size and manifestations, the patient was referred for surgical intervention. Intraoperatively, a large spherical tumor arising from the posterior wall of the distal body of the stomach had intussuscepted into the duodenum. The intussusception was reduced and a Billroth II was done. The polypoidal sub-

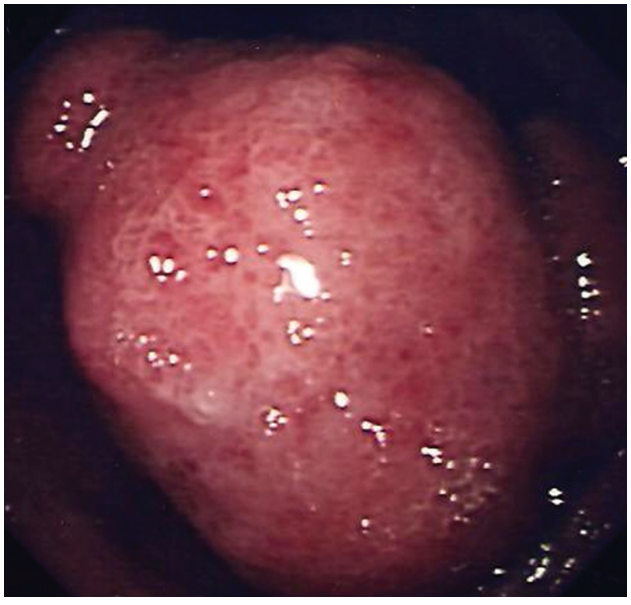

**Figure 1.** Retroflexed view inside a capacious duodenum showing a large polyp.

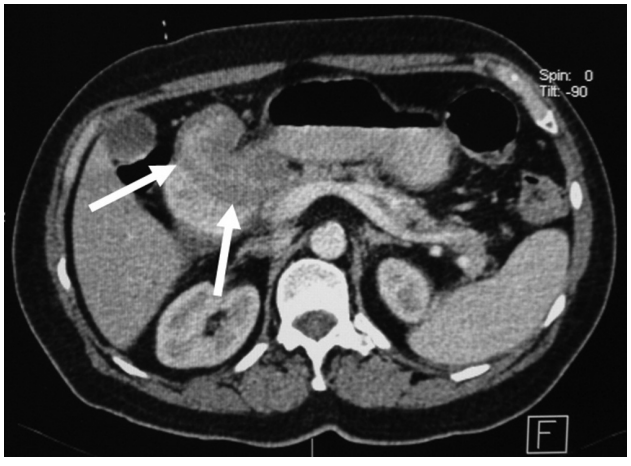


**Figure 2.** Axial computed tomography scan showing intussusception of the gastric polyp (arrows) into the duodenum.

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**Figure 3.** Resected specimen showing most of the polyp invaginated inside the stomach and the cut surface showing hemorrhagic foci.

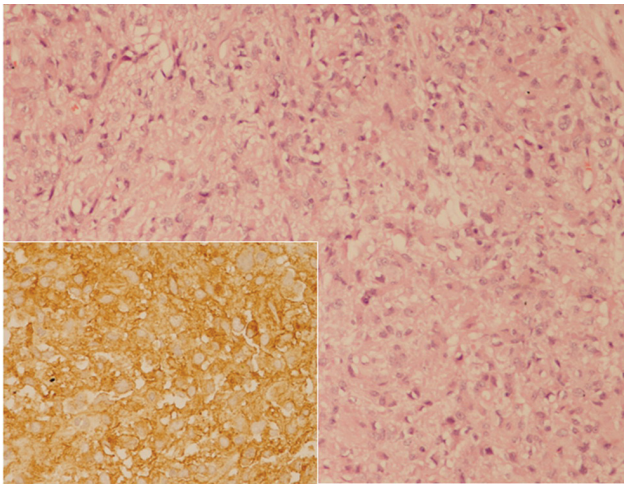

**Figure 4.** Histology showing large round epithelioid-like cells in an edematous stroma with few mitotic figures, and insert showing positive staining for c-kit (CD 117) (ck-kit stain, 40x).

mucosal tumor measured 5.2 x 3.5 x 3.2 cm and was covered with an intact nodular mucosa (Figure 3). Microscopically, the lesion arose from the muscularis propria and consisted of sheets of spindles cells (Figure 4). Immunostainings were positive for CD 177 (c-kit), CD 34 and smooth muscle actin, consistent with GIST. There were 6 mitoses per 50 high-power field. Based on the tumor size and mitoses count, the tumor was classified as high risk based on the National Institutes of Health and Armed Forces Institute of Pathology (AFIP) classifications (3,4). Based on the AFIP classification, the tumor was categorized as group 6a with a 55% risk of progression and metastases. The patient was referred to the National Cancer Center and started on imatinib mesylate 400 mg daily (Gleevec®, Novartis, USA). She remained well without evidence of recurrence or further gastrointestinal complaints.

Surprisingly, despite one-third of gastric GISTs being found in the antrum, gastric obstructive symptoms are uncommon. To date, there have been only two reported cases of gastric GIST presenting with gastroduodenal intussusception (5,6). One case presented acutely with gastroduodenal intussusception that was also complicated by biliary obstruction and acute pancreatitis (5). Interestingly, the tumor was located in the fundus and was managed with combined endoscopic and laparoscopic wedge resection. The other case was an 84-year-old male who presented with a six-week history of intermittent colicky abdominal pain, nausea and vomiting. The tumor was located in the antrum and was successfully managed with Billroth II resection (6). In our case, the tumor was located in the proximal antrum, and she had been having intermittent epigastric discomfort associated with nausea and vomiting, suggestive of intermittent gastric outlet obstruction. This culminated with the eventual presentation of gastroduodenal intussusception.

In conclusion, we report an interesting case of gastroduodenal intussusception as a first manifestation of gastric GIST.

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