Prolapsed hyperplastic gastric polyp causing pancreatitis: case report

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Abstract
A huge hyperplastic gastric polyp prolapsed into the duodenum. The compression and obstruction of the ampulla of Vater by this polyp caused acute pancreatitis. An overview of imaging findings, general considerations about hyperplastic gastric polyps, and a review of the literature are provided.

Key words: Gastrointestinal tract, computed tomography—Stomach, neoplasms—Stomach, polyps—Pancreatitis, etiology.

Gastric polyps are rare lesions. Most of these lesions are small and asymptomatic and found incidentally during radiologic or endoscopic examinations. Their association with malignancy is a matter of concern. A less recognized source of morbidity is intermittent gastric outlet obstruction, which can occur when a pedunculated polyp, usually antral, prolapses into the pylorus. We describe a huge, pedunculated, hyperplastic gastric polyp that prolapsed into the duodenum and caused acute pancreatitis.

Case report
A 57-year-old female with vague upper abdominal discomfort had an upper gastrointestinal series. A huge polypoid mass, slightly movable, was found in the gastric fundus. A week later, the patient came to the emergency room with acute abdominal pain, severe nausea, and vomiting. Clinical findings and laboratory tests yielded a diagnosis of acute pancreatitis.

Abdominal computed tomography showed a huge, sessile polypoid lesion attached to the gastric fundus (Fig. 1A). The lesion had prolapsed through the pylorus into the third portion of the duodenum, causing duodenal dilatation. The mass obstructed the ampulla of Vater, causing dilatation of the common bile duct and main pancreatic duct (Fig. 1B), and extended to the proximal third portion of the duodenum (Fig. 1C). Endoscopically guided biopsy confirmed the diagnosis of hyperplastic polyp. At surgery, the polyp was attached to the gastric fundus, 5 mm from the gastroesophageal junction. Other smaller polyps were found in the fundic gastric mucosa. Because of the wide base and size of the polyp, gastrectomy was performed.

The lesion was a pedunculated, broadly based, 13-cm polyp located at the fundus (Fig. 2). Many small polypoid lesions surrounded it. Histologically, the lesions consisted of markedly hyperplastic and elongated foveolae with intralumenal infolding and branching and no atypia. The stroma was edematous and focally infiltrated by plasma cells and lymphocytes.

Discussion
Gastric polyps are relatively rare lesions. Their incidence in unselected populations is less than 3% [1–3]. They appear with equal frequency in both sexes and in all age groups but predominately in the elderly [2]. Of the two main histologic types, hyperplastic polyps are up to 10 times more common than adenomatous polyps [2]. Much less frequent are leiomyomas, retention polyps, and hamartomas; hamartomas are usually associated with polyposis syndromes [3].

Hyperplastic or regenerative gastric polyps are non-neoplastic lesions, usually multiple, and randomly lo-
cated. They have been related to chronic active gastritis and concurrent *Heliobacter pylori* infection [4]. Polyp regression has been reported in 40% of patients who underwent antibiotic eradication of *H. pylori* [4]. The potential for malignant transformation of hyperplastic gastric polyps is approximately 2% (certainly lower than that of adenomatous polyps, which is 20–40%), and its implication regarding treatment is a matter of concern [2, 5–7]. Other studies have identified increased risk of gastric carcinoma at sites remote from the hyperplastic polyp [7]. Hyperplastic polyps should be endoscopically or surgically resected and requires complete examination of the entire stomach. Patients with giant hyperplastic polyps (≥3 cm in largest diameter) are more likely to be symptomatic than those with smaller hyperplastic polyps [1].

Hyperplastic polyps typically appear radiologically as smooth, rounded nodules, usually smaller than 1 cm in diameter [1, 3]. Double-contrast radiographic series are highly sensitive in detecting gastric polyps compared with flexible endoscopy [2, 3].

Giant hyperplastic polyps represent about 2% of all hyperplastic polyps [1]. Their pathophysiology is uncertain. These lesions usually are the result of a coalescence of a focal cluster of small hyperplastic polyps, leading to a conglomerate mass [1]. These lesions are seen as smooth, ovoid, slightly lobulated or multilobulated masses in the gastric antrum [1].

Most gastric tumors that pass through the pylorus are benign [8], although there are rare cases of migrating gastric carcinomas. Only a few cases of antral hyperplastic polyps prolapsing through the pylorus and causing gastric outlet obstruction have been reported [1, 2, 5, 8–10]. Other complications such hypergastrinemia and gastroduodenal intussusception are very rare [5, 9, 11].

Acute pancreatitis secondary to obstruction of the pancreatic duct at the ampulla of Vater has been documented in familial adenomatosis coli patients, in normal hosts with benign adenomas of the duodenal papilla, and in patients with periampullary carcinoma [8]. To our

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**Fig. 1.** Contrast-enhanced abdominal computed tomography. A A gastric intraluminal polypoid soft tissue mass with nodular and irregular surface occupies most of the gastric lumen. B The prolapsed polyp fills the distended duodenum, causing biliary ductal (long arrow) and pancreatic ductal (short arrow) stasis. The former measures 8.7 mm and the latter 3.7 mm in diameter. C The polyp’s tip reaches the third duodenal portion.

**Fig. 2.** Resected gastric intraluminal polypoid soft tissue mass shows the 13-cm polyp with nodular and irregular surface attached to the gastric fundus.