GASTRODUODENAL FISTULA DUE TO PEPTIC ULCER: CASE REPORT


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ABSTRACT
Gastroduodenal fistula, a short accessory canal extending from the distal stomach to the duodenal bulb, is a rare condition. To date, about 100 cases have been reported in the literature. Presumably, the intramural penetration of an ulcer in the antrum creates adhesions between the stomach and duodenum. We present an unusual case of perforation of a giant gastric ulcer at the angular notch into the duodenum with formation of a large, persistent fistula.

KEY WORDS: Gastroduodenal fistula, peptic ulcer, NSAID

INTRODUCTION
Gastroduodenal fistula, which creates a short accessory canal extending from distal stomach to the duodenal bulb, is a rare condition (1-6). Although some gastroduodenal fistula cases have been reported to be congenital (7,8), most authors believe that it is an acquired lesion, which develops secondary to the perforation of benign antral ulcer into the lumen of the duodenum (1-3). We present an unusual case of perforation of a giant gastric ulcer at angular notch into the duodenum with formation of a large, persistent fistula.

CASE
A 60 year-old man with hematemesis and melena was admitted on Dec 2003. He had a 10-year history of intermittent epigastric pain with a burning nature and no radiation. He had been followed as schizophrenia for 30 years. Hence, he had been taking several different antipsychotic drugs during this time. Additionally, he ingested a lot of analgesics (nonsteroidal anti-inflammatory drugs) for abdominal pain by himself in the last ten years. On admission, his blood pressure was 100/60 mmHg and pulse rate was 96/min. Hypochromic-microcytic anemia was evident; haemoglobin: 6.8 g/dL; hematocrit: 23.7%, MCV: 72.1 fl. Emergency upper endoscopy revealed a large ulcerative lesion (2.5 cm) at the angular notch of the stomach. A channel extending from the lesser curvature to the duodenal bulb was recognized in the lesion. Endoscope passed through the channel into the duodenal bulb. This channel considered as the origin of the gastrointestinal bleeding. Bulbus was observed as edematous (Figure 1, 2, 3). Hence, passage to distal of the bulbus was very hard. Histopathologic evaluation of multiple biopsies showed benign ulcer with chronic inflammation. Barium meal study also demonstrated a fistula tract between lesser curvature of stomach and superior portion of the duodenal bulb (Figure 4). Proton pump inhibitors and blood transfusion were administered for treatment.

DISCUSSION
Since the first description of gastroduodenal fistula (GDF), which is known as double pylorus by Mohr in 1842, about 100 cases have been reported in the literature (2.5). The incidence of GDF is not well characterized. The prevalence is reported around 0.02% to 0.4% with an approximately 2:1 male-female ratio (2,10,11). This probably reflects an underreporting and under diagnosing of GDF rather than a true low incidence (5). While a GDF may occasionally be congenital in origin (7,8), the acquired nature of this condition has also been well demonstrated by serial endoscopic and/or barium meal studies that have revealed the development of the fistula subsequent to an antral or duodenal ulcer (1-3,9). Presumably, intramural penetration of the ulcer creates adhesions between the stomach and duodenum, which eventually leads to fistulous
Figure 1: A large ulcerative lesion at the angular notch of the stomach

Figure 2: A channel extending from the lesser curvature to the duodenal bulb

Figure 3: A view from duodenal bulb through the gastroduodenal fistula to stomach

Figure 4: Barium meal study; a fistula tract between lesser curvature of stomach and superior portion of the duodenal bulb

communication. In the present case, endoscopic evaluation revealed a fistula between lesser curvature of stomach and duodenal bulb.

The differential diagnosis of GDF is not extensive. Several authors have mentioned possible confusion with Crohn disease (12,13). However, most fistulae involving the duodenum in Crohn’s disease have originated from the ileal disease (14). Thus far, there have been no reported cases of Crohn’s disease presenting as GDF. GDF cases due to malignancy have also been reported and biopsy is very important in the diagnosis of these cases (4,6). In this case, neither malignancy nor granuloma has been detected histopathologically.

In a prospective study, severe complications of
gastroduodenal perforation were noted in 52 of 52293 patients (approximately 0.1%) treated with NSAIDs for prolonged period in the UK (15). Analyzing the predisposing factors for perforation of the digestive tract in 76 patients revealed that the percentage of patients receiving NSAIDs in the group with perforation (71%) was significantly higher than that in age-matched control group without perforation (27%) (16).

Chronic NSAID usage history of the patient with epigastric pain more than ten years lent us to assume that NSAID caused to ulcer development in the lesser curvature of the stomach that also penetrates to the bulbus subsequent to deepening. History of schizophrenia also could lead to unintentional to the chronic NSAID ingestion and subsequent fistula development.

The clinical presentation is commonly with epigastric pain and overt or occult gastrointestinal bleeding. Symptoms of gastric outlet obstruction may be a feature during the development of the fistula. Symptoms may abate with the formation of the double pylorus (5,10). Treatment primarily has been conservative medical management. Surgery has only been reported in a few patients (10).

References