

## CLINICAL VIGNETTE

### Bile Gastritis

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Bile gastritis is often talked about but rarely diagnosed as the primary cause of symptoms. Especially today, when so few gastric surgeries are performed, the disorder is becoming more and more uncommon.

#### *Case Report*

The patient is an 83-year-old female complaining of more than 10 years of severe substernal burning pain. The pain extends all the way up to her throat. The symptoms have become slowly progressive and now have been interfering with her day-to-day living. Prior attempts at using various proton pump inhibitor drugs including omeprazole, rabeprazole and esomeprazole were unsuccessful. There was no associated symptom of nausea or vomiting. There were no symptoms of chronic cough, dysphagia or change in her voice. The symptoms do not wake the patient from sleep. Food neither improves nor worsens the symptoms. Pertinent to the history is the fact that the patient had a vagotomy and partial gastrectomy for bleeding peptic ulcer disease approximately 30 years ago. There have been no associated symptoms of dumping, early satiety or anorexia which are common sequela of gastrectomy. She has several chronic medical problems, including hypertension, coronary vascular disease and osteoporosis. Medications included aspirin, omeprazole, enalapril, raloxifene, and diltiazem. Physical examination revealed a well-developed, well-nourished elderly female with normal vital signs. The entire examination was normal including the abdomen which was soft and nontender. No masses were found and there were normal bowel sounds.

Endoscopy was performed. The findings in the esophagus revealed mild diffuse erythema in the distal third. The fundus and the body of the stomach were normal. In the mid-ody of the stomach was a Bilroth I anastomosis. The mucosa proximal to it was edematous, erythematous and mildly friable. Biopsies were taken.

Following the endoscopy, a presumptive diagnosis of bile gastritis and bile esophagitis was made. The

patient was placed on sucralfate liquid. Within a few days, the patient stated that she was finally symptom-free for the first time in 10 years.

#### *Discussion*

Bile reflux gastritis can be a disabling postgastrectomy condition characterized by abdominal pain, bilious vomiting, and weight loss. The syndrome appears to be caused by free enterogastric reflux of bile and other proximal small bowel constituents.<sup>1</sup> The effects of bile salts on gastric mucosa appear to be similar to the effects of nonsteroidal anti-inflammatory drugs.<sup>2</sup> Both will break down the gastric mucosal barrier thus increasing the risk of inflammation, ulcer development and associated symptoms of pain and bleeding.<sup>3</sup> Nonsteroidal anti-inflammatory drugs will inhibit mucosal cyclooxygenase activity, which is the main rate-limiting step in the production of prostaglandins- a primary mucosal barrier against the effects of acid on the mucosal cell.<sup>4</sup> The same effects have been shown in animal models using bile as the irritant.<sup>5</sup> With mucosal barrier disruption there is a back diffusion of hydrogen ions and the subsequent destruction of the mucosal cell.

There is a wide range of presentation in patients with bile gastritis. Most commonly it is asymptomatic and is a coincidental finding on endoscopy. The other extreme is the development of severe nausea, bilious vomiting, abdominal pain, anorexia and weight loss. It is most commonly seen in patients with prior gastric surgery. This is especially true of a Bilroth II operation or a gastro-jejunostomy. Both of these procedures allow bile to pass the anastomosis with increased chance of reflux into the stomach. Without a prior history of surgery, the diagnosis is less likely but still can be present. There must be clear evidence of bile reflux either on endoscopy or nuclear scanning.

Treatment options are limited in symptomatic patients with bile reflux. This particular patient had a good response to Sucralfate; however, this is the exception rather than the rule. Most patients do not have good long-term responses to this or any other medication including H2 blockers, proton pump inhibitors, cholestamine and ursodeoxycholic acid. Even prostaglandin 2 has not been shown to have a beneficial effect once bile gastritis has developed. Ultimately, the only definitive treatment is Roux-en-Y surgery.

Bile gastritis is a disorder that should be thought of when patients present with a prior history of gastric surgery and the symptom complex described.

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Submitted August 26, 2006