acquired cases, bridges due to congenital anomalies have also been reported.

The etiology of the bridge in our patient is not clear. Was there rupture of an esophageal web or ring, a perforated diverticulum, or an ulcer? The surrounding mucosa is smooth without any remnant of web, ring, diverticulum, or ulcer, and these possibilities seem unlikely. The bridge is very elastic and stretched easily, unlike granulation tissue.

It may indicate the presence of muscularis mucosa in the core of the bridge, as in the case described by Mali et al. Because no obvious etiology can be found in this asymptomatic individual, we propose an idiopathic or even congenital mucosal bridge for him. When a mucosal bridge is present in the gastrointestinal tract, does it require removal to free the luminal communication? We suggest that any symptomatic individual with mucosal bridge should be endoscopically dissected in order to diminish the risk of colonization. For the asymptomatic individual, treatment may depend on the experience of the endoscopist and the patient's opinion. Our patient declined endoscopic therapy.

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Endoscopic removal of penetrating foreign bodies from the stomach

To the Editor:

Endoscopic removal of penetrating foreign bodies from the stomach may be hazardous and technically difficult, particularly when both ends of the foreign body have pene-

Figure 1. Penetrating needles in the stomach (a screw and a pin are also demonstrated). The arrow shows the point of penetration of the gastric wall.
trated the stomach wall. We have encountered three such patients who have ingested long sewing needles which have penetrated the wall of the antrum at both their ends (Fig. 1). These foreign bodies were removed endoscopically only after marked distension of the stomach with room air. Antral dilation by air insufflation resulted in the return of one edge of the needle into the gastric lumen (while the opposite edge was still outside the opposite stomach wall). The free edge of the needle was grasped by a polypectomy snare, pulled close to the distal end of the endoscope, and retrieved. There was no leak of air into the peritoneum and there were no complications. We conclude that air inflation of the stomach is safe and effective in removal of needles which have simultaneously penetrated the stomach wall at both ends.

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Esophageal obstruction caused by sucralfate impaction

To the Editor:

Sucralfate is widely used to treat peptic ulcer disease and reflux esophagitis. Obstruction of the esophagus has not been a previously reported drug-related complication. We describe the first case of esophageal obstruction by sucralfate and alert others to this potential complication.

A 48-year-old white woman was admitted to the University of Texas M.D. Anderson Cancer Center with relapse of acute myelomonocytic leukemia. She denied prior heartburn, dysphagia, or esophagitis. Examination revealed a thin woman with oral vesicular lesions suggesting herpes simplex infection. Intravenous etoposide, mitoxantrone, and acyclovir were added to her usual oral medications, 25 mg of spironolactone and 10 mg of medroxyprogesterone acetate three times daily.

Fever and neutropenia developed on hospital day 7, and oral ciprofloxacin was begun. On the 10th hospital day, the patient complained of odynophagia and 1 g of oral sucralfate crushed and suspended in water four times daily along with intravenous ranitidine and 500,000 units of oral nystatin suspension every 3 hours were started as empiric therapy. Because of difficulty swallowing tablets, intravenous ceftazidime was substituted for ciprofloxacin. No oral barium studies were performed.

On hospital day 13, the patient became unable to swallow water. Upper gastrointestinal panendoscopy (Olympus GIF-V10 panendoscope) revealed total esophageal obstruction at 35 cm by a putty-like, light pink foreign body surrounded by otherwise normal esophageal mucosa. The mass was partially fragmented by water irrigation and analysis of the aspirated fluid (Marion Laboratories, Kansas City, Mo.) revealed that the precipitate was composed of sucralfate. Because of thrombocytopenia and neutropenia, total extraction of the large obstructing mass was not attempted.

Sucralfate and all oral medications and feedings were discontinued. Repeat endoscopy 3 days later revealed a patent esophageal lumen with mild distal esophageal erythema but no stricture, ring, ulceration, exudate, or erosion. The patient's diet was then advanced to solid food over the next 3 days, without subsequent dysphagia. She is currently able to swallow without difficulty.

Sucralfate's topical mechanism of action without significant absorption and freedom from interactions with other drugs has led to its popularity.1 The drug is commonly used to treat peptic ulcer disease, reflux esophagitis, gastritis, and nonspecific dyspepsia.2,3 Because it lacks the side effects of H2 antagonists, some clinicians prefer sucralfate for initial therapy of dyspepsia and esophageal reflux. A multicenter trial of sucralfate suspension demonstrated efficacy in reflux esophagitis; however, patients with strictures and dysphagia were excluded.3 Gastric outlet obstruction caused by a sucralfate gastric bezoar has been described. A putty-like mass was found and disintegrated endoscopically in a patient also receiving crushed sucralfate with multiple oral medications.4

No underlying structural abnormalities were detected in our patient or the case of the gastric bezoar. Thus, partial or complete mechanical obstruction was not causative. Dysmotility was unlikely in both cases because spontaneous recovery occurred following endoscopic disintegration and discontinuation of sucralfate. Sucralfate can, however, delay gastric emptying, although this is usually asymptomatic.5 The possibility of a ciprofloxacin-induced esophageal erosion as an inciting factor remains, but no evidence of this could be detected at endoscopy.

Severely ill patients receiving crushed sucralfate suspension in combination with multiple additional oral medications are at risk for esophageal obstruction and gastric bezoar formation. Endoscopic disintegration with water and discontinuation of sucralfate is curative. We therefore advise caution in the use of sucralfate in patients with dysphagia or potentially obstructive gastrointestinal illnesses.

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