Bizarre gastric ulcer related to betel quid use: report of two cases

A 47-year-old gentleman, who had chewed 20 betel quids daily for 25 years, presented with a 3-day history of melena. Esophagogastroduodenoscopy (EGD) disclosed an ulcerated tumor 3 cm in size in the antrum (Fig. 1). Biopsy of the tumor revealed acute and chronic inflammation. The patient quit chewing betel quids. Because of a strong suspicion of malignancy, EGD was repeated 5 days later. It showed ulcers, from 0.5 to 2 cm in diameter, in the antrum. Biopsy again disclosed acute and chronic inflammation. Hence, betel-quid-related gastric injury was suspected. EGD 1 month later showed only a scar in the antrum (Fig. 2) and the histology again proved benign.

Another 44-year-old gentleman, who had chewed 20 betel quids daily for 20 years, presented having produced coffee-ground vomitus for 1 day. EGD showed ulcers from 0.2 to 3 cm in diameter in the antrum (Fig. 3). Biopsy showed acute and chronic inflammation. *Helicobacter pylori* was found. Endoscopic ultrasound revealed thickening of the antrum. The mucosa and submucosa planes were blurred, but the muscularis propria was intact (Fig. 4). The patient quit chewing betel quids and underwent *Helicobacter pylori* eradication therapy. EGD 2 months later revealed two tiny healing ulcers in the antrum (Fig. 5). Biopsy disclosed chronic inflammatory cells in the lamina propria. EGD 3 months later showed only erythematous changes of the antral mucosa (Fig. 6).

Betel quid consumption results in gastric ulcers in animal studies [1,2]; this is the first report of betel-quid-induced ulcer in human patients. There is no laboratory marker, endoscopic finding, or pathologic feature pathognomonic of betel-quid-induced ulcer. Image studies aid little in the diagnosis. In areas where betel quid chewing is endemic, patients with gastric ulcer or suspected cancer should be asked whether they have a habit of betel quid use. These two cases show that betel-quid-related gastric ulcer can be bizarre in appearance and repeated biopsy is mandatory.

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