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Case report

Unusual cause of gastroparesis

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ABSTRACT

Gastroparesis occurs in diverse clinical settings. The most common etiologies are idiopathic, diabetes, and postsurgical. Rare etiologies include pregnancy, collagen vascular disease, chronic renal insufficiency, and gastric amyloidosis. Symptoms vary and include early satiety, nausea, vomiting, bloating, upper abdominal discomfort, and weight loss. Treatment depends on the underlying cause.

A 53-year-old male was hospitalized in August 2007 for evaluation of a 2-day history of tarry stools against a background of a hemorrhagic stroke and hypertension for 3.5 years for which he received irregular antihypertensive medication. There was no epigastric pain or weight loss. On admission, his physical examination was unremarkable; blood tests showed hemoglobin 15.7 g/dL, hematocrit 47.1%, and leukocyte count 6.8 $\times$ 10^9/L. Esophagogastroduodenoscopy revealed multiple hemorrhagic spots over the antrum (Fig. 1A). He was treated with a proton pump inhibitor. He then developed nausea and non-bilious vomiting. Plain abdominal X-rays showed no small intestinal obstruction but subsequent gastric emptying scintigraphy showed 2-hour retention of a solid-phase meal of 59.2% (normal 17.2 $\pm$ 7.1%) and a half-emptying time of 175.6 minutes (normal 59.1 $\pm$ 16.4 minutes) (Fig. 1B), suggesting markedly delayed gastric emptying. A trial of a prokinetic agent was unsuccessful. Insertion of a duodenal tube led to clinical improvement; the patient's nausea and vomiting recurred when the tube was removed. A second esophagogastroduodenoscopy showed no changes and a biopsy was taken from the location of the gastric antral hemorrhagic spots. The patient then developed multiple organ dysfunction with nephrotic syndrome, congestive heart failure, and moderate restrictive lung disease. Investigation included a renal biopsy.

Histologically, the gastric mucosal and renal biopsies had amyloid deposits in the submucosa and mucosa. Staining with Congo red revealed that the amorphous hyaline material exhibited a characteristic apple-green birefringence under a polarized light microscope (Fig. 1C).

Gastroparesis can occur in many clinical settings. The three most common etiologies are idiopathic, diabetes, and postsurgical. Rare etiologies include pregnancy, collagen vascular disease, chronic renal insufficiency, and gastric amyloidosis. Symptoms vary and include early satiety, nausea, vomiting, bloating, upper abdominal discomfort, and weight loss [1]. Treatment depends on the underlying cause.

Esophagogastroduodenoscopy findings in primary gastric amyloidosis may be non-specific, including erosions, hemorrhagic spots, ulcers, hypertrophic antral folds, pseudotumor

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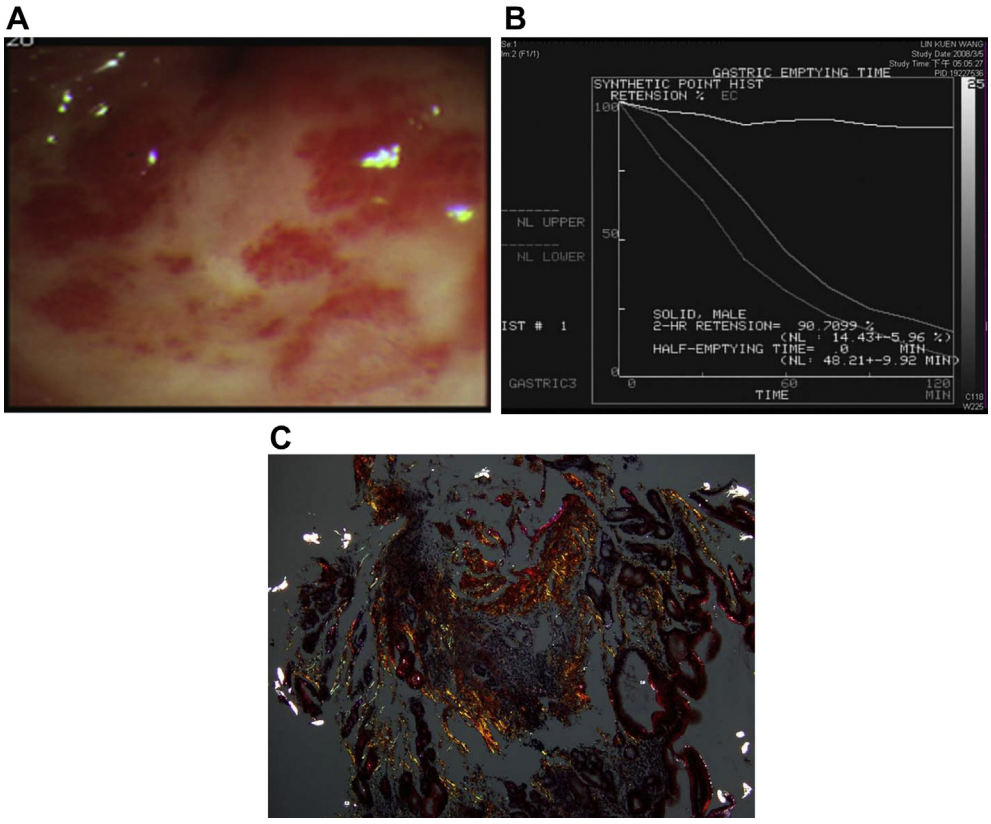

Fig. 1 – (A) Endoscopy revealed multiple hemorrhagic spots over antrum. (B) Gastric emptying scintigraphy showed a marked delay in gastric emptying time. (C) Histology of the gastric mucosa. Staining with Congo red revealed characteristic apple-green birefringence under a polarized light microscope.

formation, and pseudopolyps [2]. Our patient only had hemorrhagic spots over the antrum.

The gastrointestinal tract is commonly involved in systemic amyloidosis, yet gastric amyloidosis is rare. Once amyloidosis is diagnosed, an attempt should be made to treat any underlying chronic disorder such as multiple myeloma or collagen disease [3]. No effective treatment exists for primary systemic amyloidosis, unlike secondary amyloidosis, for which treatment of the underlying disease may lead to resolution of symptoms. The prognosis for primary systemic amyloidosis is usually poor; to the best of our knowledge, there is no effective treatment for gastrointestinal motility associated with primary systemic amyloidosis. Our patient therefore received supportive care with intermittent duodenal tube insertion.

REFERENCES

[1] Ali T, Hansen M, Hamadani M, Harty RF. Gastroparesis. South Med J 2007;100:281–6.
[2] Coughlin GP, Reiner RG, Grant AK. Endoscopic diagnosis of amyloidosis. Gastrointest Endosc 1971;26:154–5.
[3] Wu D, Lou JY, Chen J, Lun F, Liu GJ, Shu XY, et al. A case report of localized gastric amyloidosis. World J Gastroenterol 2003;9:2632–4.