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# Methamphetamine Granuloma Presenting as a Gastric Mass

**Diana E. Peterman, MD[1], Luminita Rezeanu, MD[1], William Bolton, MD[1], James Stephenson, MD[1], and Sharon Ben-Or, MD[1]**

Illicit drug use is increasing with an estimated 964 000 people in the United States having a methamphetamine use disorder in 2017 compared to 684 000 people in 2016.[1] One recent finding related to methamphetamine use is the association between methamphetamine use and peptic ulcer disease.[2,3] We report a case of a patient who presented with symptoms concerning for esophageal perforation who was found to have a gastric methamphetamine granuloma.

A 54-year-old male presented with 1 day of chest pain, chills, fever, and lethargy. He reported choking on chicken the evening before presentation with a subsequent episode of emesis. He continued to have epigastric pain and chest pressure with globus pharyngeus and further vomiting produced small amounts of mucus and blood. His past medical history included hepatitis B and C, hypertension, alcohol use, and tobacco use. His medications included bisoprolol-hydrochlorothiazide and citalopram. On presentation to the Emergency Department, the patient had a temperature of 101.9 °F and leukocytosis of 33.4 K/microL. His initial blood pressure was 93/58, but he became normotensive after intravenous fluid administration. On exam, he was ill-appearing, but his abdomen was soft and minimally tender. A computed tomography angiogram of the chest demonstrated distal esophageal and gastric wall thickening with no pneumoperitoneum or pneumomediastinum. Due to a concern for Mallory Weiss tear or esophageal perforation, an esophagram was obtained, which showed no evidence of perforation.

An esophagogastroduodenoscopy was performed to evaluate the esophageal and gastric thickening. This demonstrated a mass concerning for neoplasm with an associated ulcer in the proximal stomach (Figure 1A). Multiple biopsies were taken, which demonstrated mucosal ulceration with birefringent crystalline material consistent with methamphetamine on the mucosa and admixed within fibrinopurulent exudate (Figure 1B). No neoplastic process was identified.

The patient was started on pantoprazole for gastric ulcer treatment and was discharged. At his follow-up appointment, the patient endorsed methamphetamine use, but stopped in order to undergo further assessment. Six weeks following his initial presentation, repeat endoscopy showed a stellate scar at the site of the previous ulceration without evidence of tumor (Figure 1C). Endoscopic ultrasound was also performed which showed no evidence of gastric mass.

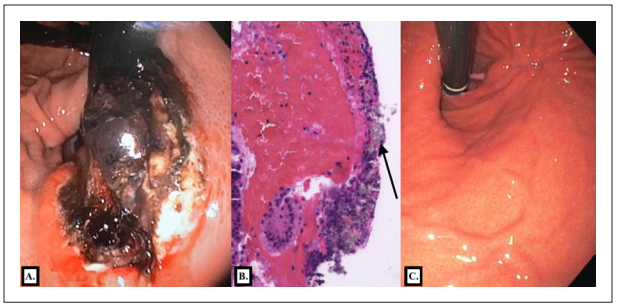


**Figure 1.** (A) Gastric mass (lesser curve near gastroesophageal junction) (B) Hematoxylin and eosin slide of biopsy showing mildly birefringent crystals (arrow) consistent with methamphetamine granuloma (C) Stellate scar seen during endoscopy 6 weeks after initial esophagogastroduodenoscopy.

With the increase in methamphetamine use in the United States, it can be predicted that the incidence of medical complications associated with its use will rise as well. This suggests there will be an increase in cases such as this patient who presented with symptoms of possible esophageal perforation and was found to have a gastric methamphetamine granuloma and peptic ulcer.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

[1]Prisma Health-Upstate, Greenville, SC, 29605, USA

**Corresponding Author:**
Diana E. Peterman, MD, Prisma Health-Upstate, 701 Grove Rd., Greenville, SC 29605, USA.
Email: diana.peterman@prismahealth.org

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