

IMAGE | ESOPHAGUS

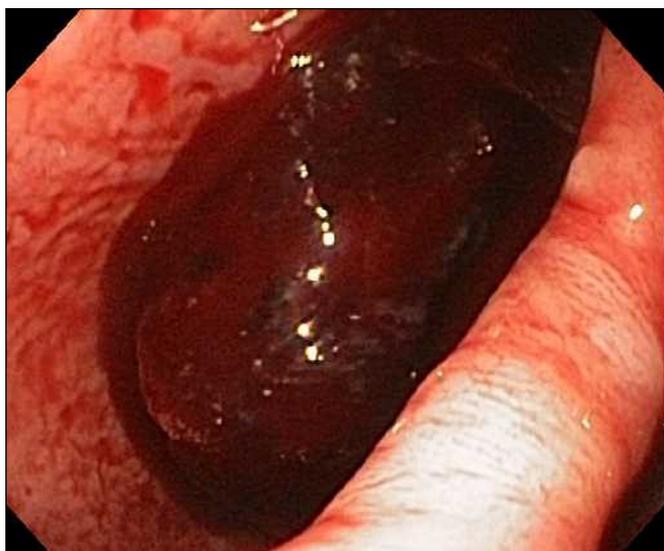
# Bleeding Zenker's Diverticulum Ulcer from Nonsteroidal Anti-Inflammatory Drugs

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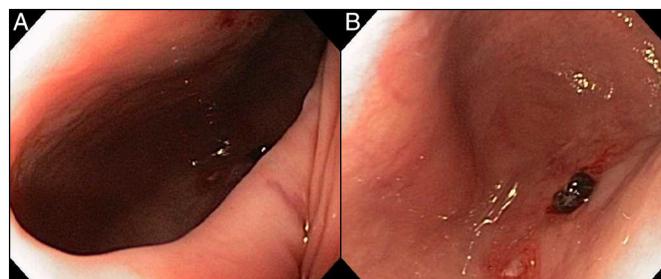
## CASE REPORT

A 70-year-old man presented for hematemesis that began the night prior. He reported several large bloody vomitus originating from his throat with a globus sensation. He was recently started on aspirin and clopidogrel for a transient ischemic attack. On arrival his vitals were stable and his physical exam was unremarkable. He was actively spitting up copious amounts of blood. Lab results showed hemoglobin 12.1 g/dL, hematocrit 36.2%, blood urea nitrogen 28 mg/dL, and international normalized ratio 1.0. A chest X-ray was notable for a superior widened mediastinum with tracheal deviation. Given the ongoing bleeding and the suspicion of a proximal source, an elective intubation was performed to secure the airway for an esophagogastroduodenoscopy. A large Zenker's diverticulum (ZD) was seen 17 cm from the incisors with copious amounts of blood and clot (Figure 1). After clearance, two shallow base ulcers were identified, one with an adherent clot (Figure 2). The clot was irrigated and no further bleeding was observed. There was no stigmata of recent hemorrhage identified in the stomach or the visualized portion of the duodenum. Given the proximal location of the ulcers, the relative stability of the clot, and the uncertainty of the surrounding anatomy, further endoscopic management was deferred and the patient was referred to surgery for discussion of a diverticulectomy. Aspirin and clopidogrel were held and he remained on twice-daily intravenous pantoprazole for a total of 5 days prior to discharge. The patient has remained asymptomatic in follow-up; aspirin was permanently discontinued, clopidogrel was restarted, and the otolaryngologist decided to forego surgical intervention.

A ZD is a false diverticula that develops most commonly in patients 70–80 years old. High intrabolus pressure during swallowing causes herniation of an area of weakness known as Killian's triangle, which leads to the formation of the ZD. The overall prevalence in the general population is between 0.01% and 0.11%.<sup>1</sup> Dysphagia is the most common symptom. Rare



**Figure 1.** Large Zenker's diverticulum with copious blood and fresh clot.



**Figure 2.** (A) Large Zenker's diverticulum with cleared clot and esophageal lumen at the 4 o'clock position. (B) Two shallow base ulcers, one with an adherent clot.

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complications include bleeding, ulcers, and squamous cell carcinoma.

Treatment of uncomplicated ZD includes rigid versus flexible endoscopic transoral diverticulectomy, as well as open surgical cricopharyngeal myotomy, with the former becoming the preferred method given its shorter operative times, shorter hospital stay, and lower complication rates.<sup>2</sup> The overall morbidity and mortality for endoscopic diverticulectomy are 8.7% and 0.2%, respectively, versus 10.5% and 0.6%, respectively, for open surgical diverticulectomy.<sup>2</sup> Treatment of complicated ZD, such as a bleeding ZD ulcer as presented in this case, is less defined due to its rarity. Of the few cases of bleeding ZD ulcers described in the literature, two have been successfully managed with endoscopic clipping of visible ZD vessels.<sup>3</sup>

Aspirin becoming lodged in the diverticulum is thought to be a causative factor. Aspirin is well known to cause direct and indirect mucosal injuries, predisposing the gastrointestinal tract to ulcers and bleeding.<sup>4</sup> Patients who require aspirin therapy should be educated on the risks of bleeding from the gastrointestinal tract, including the rare possibility of having a ZD that is large enough for an aspirin to become lodged in it.

## DISCLOSURES

Author contributions: T. House wrote and revised the article. PD Webb critically revised the manuscript, provided the images, and is the article guarantor.

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Informed consent was obtained for this case report.

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