

Radiation Induced Refractory Hemorrhagic Gastropathy Resulting in Transfusion Dependence

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Introduction

- Radiation induced hemorrhagic gastropathy is a rare and often serious complication of targeted external beam radiation therapy with no established management guidelines in medical literature. We present a case of severe radiation induced hemorrhagic gastritis refractory to conventional therapeutic modalities.

Case Description

- Our patient is 54-year-old male with a PMH of esophageal adenocarcinoma status post esophagectomy and chemoradiation. One month later, the patient presented to an outside hospital ED for hematochezia and was found to have a hemoglobin level of 8.5 g/dl.
- Endoscopy revealed ulceration at the gastroesophageal anastomosis with oozing blood which was treated with argon plasma coagulation.
- The patient was readmitted due to outpatient labs showing a hemoglobin of 6.5 g/dl. He underwent four unsuccessful endoscopies with hemospray and APC at the outside hospital.
- He was then transferred to Henry Ford Hospital for escalation of care.
- On presentation vital signs were stable: BP 115/85 mmHg, HR 90 beats/min, and RR 15 breaths/min.
- Labs revealed a hemoglobin of 6.4 g/dl, platelet count of 155,000/L, PT of 12.1s, aPTT of 28.5 s, and INR of 1.1.
- The patient was subsequently started on sucralfate, protonix, and octreotide. Repeat EGD showed findings consistent with radiation induced gastropathy and arteriovenous malformations with diffuse hemorrhaging (Figure 1).
- The patient subsequently underwent six unsuccessful upper endoscopies with argon plasma coagulation, hemospray, and radiofrequency ablation. During his hospital stay he required over 50 units of supportive PRBC transfusions.
- Thoracic Surgery was consulted and recommended ongoing medical management. Experimental treatments including aminocaproic acid, bevacizumab, and prednisolone were implemented with little benefit.
- Gastrectomy was subsequently recommended which the patient refused. He was transferred to a long-term acute care facility in order to continue supportive blood transfusions and seek a second opinion.

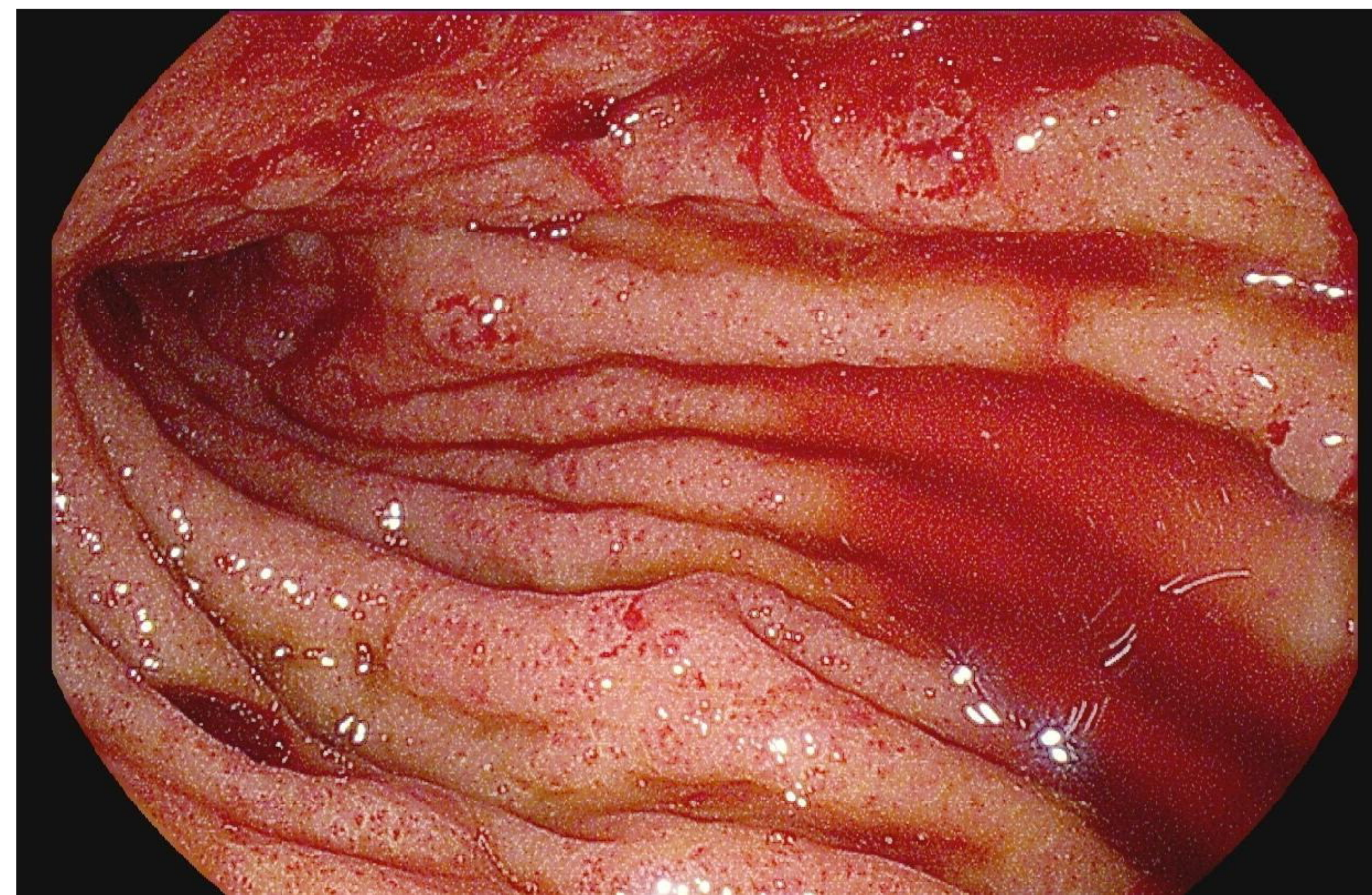


Figure 1. EGD demonstrating diffuse bleeding in the presence of findings consistent with radiation induced gastritis.



Figure 2. Findings of radiation gastritis in the antrum.

Clinical Significance

- Upper GI bleeding resulting from chronic radiation induced gastritis is rare occurrence. Nevertheless, it is generally refractory to conventional treatment and is thus associated with a high mortality rate. This complication usually arises between 2-9 months after the completion of radiation therapy.
- Despite receiving low dose radiation, the patient developed severe hemorrhagic gastropathy. Although gastrointestinal ulceration is common post radiation, the extent of bleeding seen in this patient is uncommon.
- Notably, there are no standard treatment guidelines in place for these cases in medical literature.
- Despite the absence of standardized management guidelines, various treatment approaches have been documented in independent medical case reports and literature with variable documented efficacy. These include argon plasma coagulation, radiofrequency ablation, epsilon-aminocaproic acid, prednisolone, and endoscopic band ligation.
- Further research into potential therapies and establishment of official management guidelines could potentially help prevent unfavorable outcomes such as gastrectomy as in the case of our patient.

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