GASTRIC AMYLOIDOSIS PRESENTING AS UPPER GASTROINTESTINAL BLEEDING

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Case

A 74-year-old male with coronary artery disease presented to the hospital with chest pain and shortness of breath and later was discovered to have melanotic stools and anemia with a hemoglobin of 8.9g/dL. An upper endoscopy demonstrated congested, mosaic patterned gastric mucosa with adherent clots, easy friability, and oozing (Figures 1A and 1B). This was initially thought to be secondary to portal hypertensive gastropathy, however laboratory work-up and imaging did not reveal any evidence of cirrhosis or portal hypertension. With recurrent bleeding, repeat endoscopy was performed with similar findings. Duodenal biopsies were then performed which revealed apple-green birefringence after congo red staining consistent with the diagnosis of amyloidosis later specified as alpha light chain (AL) amyloidosis by liquid chromatography (Figures 1C and 1D). Oncology was consulted and performed a bone marrow biopsy which was notable for a plasma cell dyscrasia with focal amyloid deposition and 4-5% plasma cells by CD138 immunostaining. The patient was started on Daratumumab, Cyclophosphamide, and Bortezomib however the patient only tolerated a short course before being readmitted for a recurrent upper gastrointestinal bleed and is being evaluated for an elective partial gastrectomy given his recurrence of symptoms.

Discussion

The association of AL amyloidosis and a plasma cell dyscrasia is well known as studies show that around 80% of patients with AL amyloidosis have an underlying plasma cell line dysfunction.[1] What was unique to this case was the initial presentation of AL amyloidosis and subsequent underlying plasma cell dyscrasia as isolated recurrent gastric hemorrhage which is a rare disease process.[2] The diagnosis can be easily overlooked in patients who have not been diagnosed previously with amyloidosis or have an underlying plasma cell dyscrasia. Amyloidosis should also be considered in patients with unexplained persistent bleeding after cold biopsy or cold snare excision. This case serves as a reminder to keep a wide differential including systemic pathologies when initial workup is unrevealing.

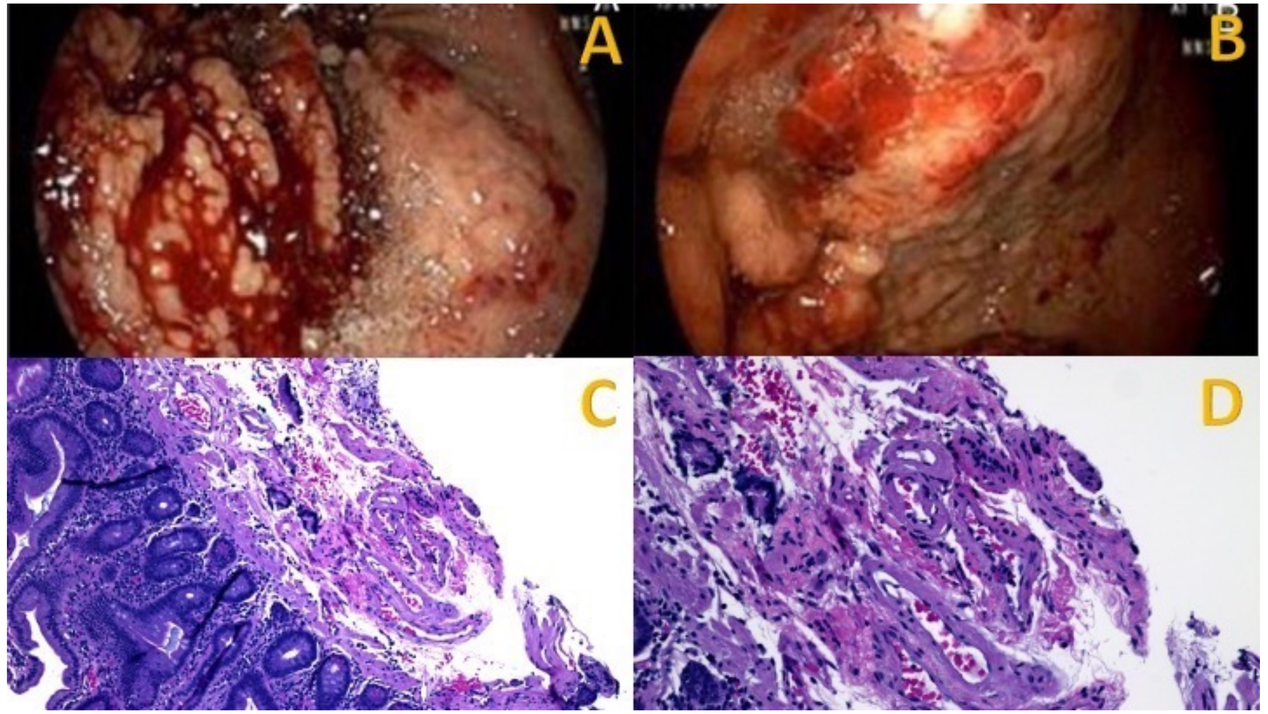
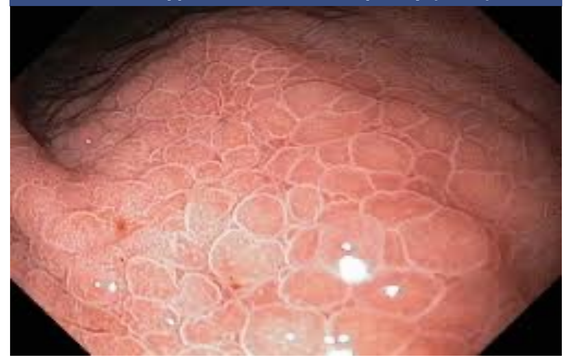


Figure 1: (A) Bleeding gastric mucosa seen on upper endoscopy. (B) Mosaic pattern of gastric mucosa seen on upper endoscopy. (C) Longitudinal section of duodenal mucosa seen on hematoxylin and eosin stain at 10x view. (D) Longitudinal section of duodenal mucosa seen on hematoxylin and eosin stain at 20x view.

Portal Hypertensive Gastropathy (PHG)



What else Mimics PHG?

1. NSAID vs H. pylori induced gastritis
2. Primary gastric malignancy vs malignant gastric ulcer
3. Gastric varices
4. Gastric antrum vascular ectasia (GAVE)
5. Arterial vascular malformations (AVM)
6. Dieulafoy's Lesion
7. Radiation gastropathy
8. Post surgical anastomosis
9. Foreign body vs caustic material
10. Amyloidosis

Gastric Amyloidosis

- **Cause**: infiltrative process that involves the mucosa layers and/or neuromuscular bundles.
- **Manifestations**: dysmotility, malabsorption (diarrhea, weight loss), or gastrointestinal bleeding. You should suspect this condition in patients known to have amyloidosis or when other organ systems are involved (proteinuria, restrictive cardiomyopathy, neuropathy, or carpel tunnel syndrome)
- **Diagnosis**: requires tissue biopsy with positive staining of amyloid by congo red stain
- **Treatment**: Address GI complications and treat cause

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