Not Your Usual Gastritis - A Case Of Iron Deficiency Anemia Leading To A Rare Diagnosis Of Collagenous Gastritis

Sadaf Afraz DO[1], Pablo Bejarano MD[2], Effa Zahid MD[3], Kanwarpreet Tandon MD[4], Adalberto Gonzalez MD[4], Asad ur Rahman MD[4]

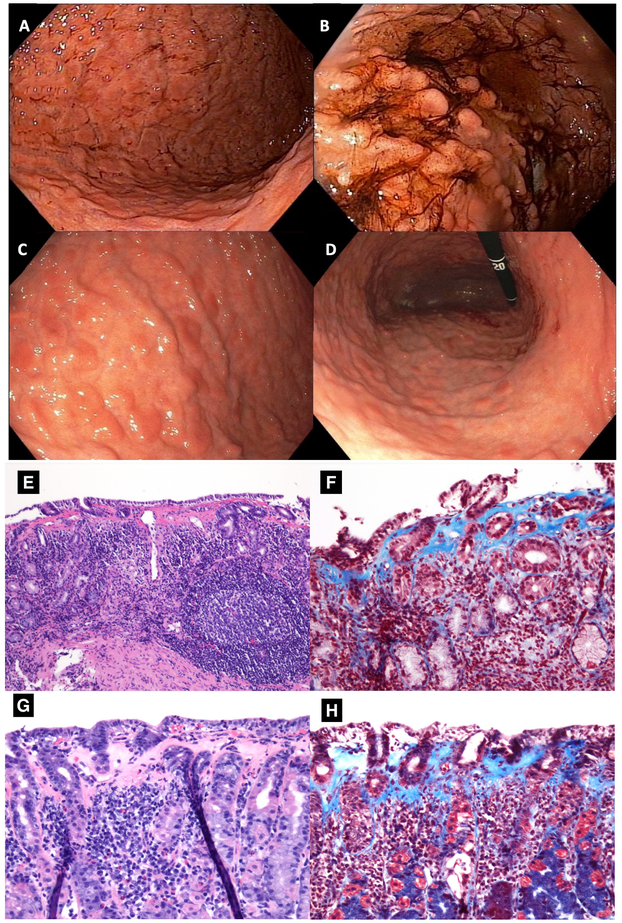
[1]Department of Internal Medicine, Cleveland Clinic Florida, Weston, FL
[2]Department of Pathology, Cleveland Clinic Florida, Weston, FL
[3]Services Institute of Medical Sciences, Lahore, Pakistan
[4]Department of Gastroenterology and Hepatology, Digestive Disease Institute, Cleveland Clinic Florida, Weston, FL

Background

- Collagenous gastritis (CG) is a rare disease characterized by deposition of subepithelial collagen in the gastric mucosa with concomitant inflammatory infiltrate in the lamina propria on histopathology.
- We report a rare case of CG in a young adult who was treated successfully with topical open capsule budesonide.

Case Description

- An 18-year-old male presented to the clinic for evaluation of iron deficiency anemia associated with exertional dyspnea, fatigue and intermittent episodes of melena.
- Initial studies were significant for hemoglobin of 5 g/dl, serum ferritin 3 ng/mL, serum iron 19 mcg/dL, and iron saturation of 6%.
- Prior to our evaluation, he had undergone EGD which was reported as having “gastritis” with negative Helicobacter pylori histopathology testing.
- The patient had required intravenous iron and packed red cell transfusions in the past.
- We pursued repeat endoscopic evaluation. EGD showed hematin in the stomach with diffuse nodularity and friability in the stomach (1A and 1B). No distinct ulcers were seen. Colonoscopy and video capsule endoscopy did not demonstrate any other abnormalities.
- Biopsies from the stomach revealed thickening of subepithelial collagen plate associated with chronic inflammation consistent with collagenous gastritis (1E). Trichrome stain highlighted the thickened collagen plate and CD117 stain showed scattered mast cells without clustering (1F).
- Treatment with topical budesonide 9 mg daily, esomeprazole and iron supplementation were subsequently started.
- Repeat upper endoscopy after three months showed nodularity in the mucosa of the gastric body without oozing of blood or cobble stoning seen in prior endoscopy (Figure 1C and 1D).
- Histopathology analysis confirmed prior findings of chronic gastritis and stable thickening of collagen plate without progression (Figure 1G and 1H).
- Repeat labs demonstrated hematological improvement with hemoglobin of 13.8 g/dl, serum ferritin 11 ng/mL, serum iron 72 mcg/dL, and iron saturation of 23% at three months follow-up.
- Moving forward, we will gradually reduce the dose of budesonide and monitor hematologic parameters.



Discussion

- CG can be further characterized to two distinct phenotypes seen in children and adults.
- In young patients, the disease often occurs in isolation and presents with symptoms of abdominal pain and anemia.
- Endoscopic features include nodular patterns, mucosal atrophy and collagen band deposition seen in both age groups.
- Treatments of this condition remains a challenge due to lack of established effective therapy. Prior reports with conventional treatments such as anti-secretary agents, iron supplementation, hypoallergenic diet, and systemic corticosteroids have produced limited success.
- Topical budesonide has emerged as effective treatment options in achieving clinical and histopathological improvement.
- Similarly in our case, treatment with budesonide resulted in endoscopic, hematological and clinical improvement despite persistent inflammation on repeat histopathology.
- Ongoing endoscopic and histopathological surveillance is often required to assess for chronic inflammation and further guide tapering of topical budesonide therapy

Conclusion

- CG is a rare entity that should be kept in mind in young patients who present with iron deficiency and nodularity seen on endoscopic evaluation.
- Our case adds to the growing body of literature in support of topical budesonide in treatment of CG.

Figure 1: EGD at the time of initial diagnosis (A and B) showed hematin in the stomach with nodularity, cobble stoning and friability seen in the gastric body and antrum. Repeat EGD at three-month follow-up post budesonide therapy (C and D) showed nodularity in the mucosa of the gastric body without oozing of blood. Initial gastric biopsy at the time of diagnosis (E and F). Marked chronic inflammation, overlying epithelium and a thickened band of subepithelial collagen (Hematoxylin and eosin; 100X) (Figure E) highlighted with a trichrome stain (200X) (Figure F). Repeat gastric biopsy at three months follow-up post treatment with budesonide (G and H). Chronic gastritis and thickening of collagen plate (Hematoxylin and eosin; 100X) (Figure G) and Trichrome stain (200X) highlights marked thickening of the collagen plate (H).