

Celiac Disease and Chronic Pancreatitis

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Background

- Celiac disease is an immune-mediated inflammatory disorder of the small intestine caused by sensitivity to gluten and related proteins in predisposed individuals.
- Estimated global prevalence is about 1 percent.
- Several associated conditions have been linked to patients with celiac disease including selective IgA deficiency, diabetes mellitus, inflammatory bowel disease, pancreatitis, cardiomyopathy, etc.

Case

- A 61-year-old male presenting for his initial screening colonoscopy as well as evaluation for unintentional weight loss of 45-pounds over the last few year and new onset anemia with hemoglobin level of 11.7 g/dL.
- Pertinent symptoms of difficulty gaining weight and recurrent diarrhea.
- Past medical history: coronary artery disease, diabetes mellitus, hypertension, and a remote history of hepatitis.
- Patient underwent laboratory work-up for malabsorption and hepatic function, esophagogastroduodenoscopy (EGD), and colonoscopy.
 - Lab results: tissue transglutaminase (tTG)-IgA >100 U/mL, total IgA 280 mg/dL, endomysial (EMA)-IgA positive, anti-gliadin (AGA) IgA >150 U/mL, AGA-IgG 134 U/mL, anti-smooth muscle antibodies positive 1:160, and iron deficiency anemia was confirmed.
 - Normal results for viral hepatitis panel, antinuclear antibodies, anti-mitochondrial antibodies, alpha-1 antitrypsin levels, and ceruloplasmin levels.
 - EGD revealed blunted villi with flat mucosa in the first and second portion of the duodenum. Biopsy results were compatible with celiac disease.
 - Colonoscopy was unrevealing except for a rectal tubular adenoma.
- During the course of evaluation, the patient developed nephrolithiasis and was evaluated by urology. Incidental findings of pancreatic atrophy and pancreatic head calcifications were detected on CT urogram. Chronic pancreatitis was confirmed via endoscopic ultrasound. A fecal elastase level was significant at 31 mcg/g supporting a diagnosis of exocrine pancreatic insufficiency.

Management and Outcome

- Patient was educated and advised on strict adherence to a gluten-free diet. Dietary counseling was provided.
- Supplementation with pancrelipase was prescribed for exocrine pancreatic insufficiency.
- On 4 month follow-up appointment, patient reports improved overall symptoms and has gained 9-pounds.

Imaging



EGD imaging

Scalloped duodenal folds



CT abdomen

Pancreatic calcifications

Discussion

- Celiac disease classically present as malabsorptive symptoms such as nutritional deficiency, weight loss, and diarrhea; many extraintestinal sequelae may manifest as a result.
- Genetic basis of celiac disease increases patient risk for additional associated conditions.
- Suspicion for celiac disease should prompt serologic testing and may also include an EGD with small bowel biopsy.
- Mainstay of management revolves around strict adherence to a gluten-free diet.
- Investigate an alternative diagnosis or concurrent conditions that may contribute to malabsorption in patients with poor response despite medical adherence.

Conclusion

- Patient with malabsorption may benefit from additional work-up for secondary contributors in addition to celiac disease such as pancreatic insufficiency, microscopic colitis, and inflammatory bowel disease.
- Dietary counseling can assist patients with adhering to a gluten-free diet and creating a diet regimen with sufficient nutritional supplementation.

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