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Case Report

Cryptogenic Cirrhosis Revealing Celiac Disease: A Case Report

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Abstract

Celiac disease is a chronic autoimmune enteropathy triggered by gluten ingestion in genetically predisposed individuals. It is characterized by small-intestinal villous atrophy leading to malabsorption and may present with numerous extraintestinal manifestations, particularly hepatic ones. Although uncommon, the association between celiac disease and liver cirrhosis is often overlooked. Its recognition is crucial, as adherence to a gluten-free diet can lead to significant improvement in liver function and overall prognosis.

Case Presentation: We report the case of a 65-year-old female patient followed for cryptogenic cirrhosis, complicated by ascites and variceal bleeding. She also presented chronic abdominal pain and recurrent watery diarrhea. The IgA anti-transglutaminase antibodies were strongly positive at 300 IU/mL. Upper endoscopy showed partial disappearance of duodenal folds, and biopsies confirmed celiac disease. The patient was started on a strict gluten-free diet with marked improvement during follow-up. Our case stresses the importance of considering celiac disease in cryptogenic cirrhosis, as early detection may modify the outcome.

Keywords: Celiac Disease; Cryptogenic Cirrhosis; Gluten-Free Diet; Autoimmune Enteropathy; Malabsorption

Introduction

Celiac disease is a chronic autoimmune enteropathy induced by gluten ingestion in genetically predisposed individuals. It is characterized by villous atrophy of the small intestine, which causes malabsorption, and may be associated with numerous extraintestinal manifestations, particularly hepatic ones. The hepatic abnormalities observed in celiac disease range from simple biological disturbances to more severe conditions such as autoimmune hepatitis, steatohepatitis, or, more.

The association between liver cirrhosis and celiac disease remains rare and often unrecognized, but its identification is essential, as a gluten-free diet can improve liver function and overall prognosis.

We report the case of a cirrhotic patient who was diagnosed with celiac disease, highlighting the importance of targeted screening in this context.

Case Presentation

Ms. E.K., aged 65, is being treated for liver cirrhosis of unknown etiology, complicated by ascites decompensation under diuretic treatment and hemorrhagic decompensation due to grade III esophageal variceal rupture, treated by endoscopic ligation and beta-blockers.

The patient had been reporting chronic intermittent abdominal pain associated with episodes of watery diarrhea for several months.

Laboratory tests revealed severe hypochromic microcytic anemia at 6 g/dL. The IgA anti-transglutaminase antibody test was strongly positive at 300 IU/mL.

Esophagogastroduodenal fibroscopy showed partial effacement of the duodenal folds. Duodenal biopsies revealed subtotal villous atrophy, classified as Marsh IIIb, confirming the diagnosis of celiac disease.

The patient was placed on a strict gluten-free diet, consisted of eliminating wheat, barley, rye and processed foods containing gluten, with marked clinical, biological, and nutritional improvement during follow-up.

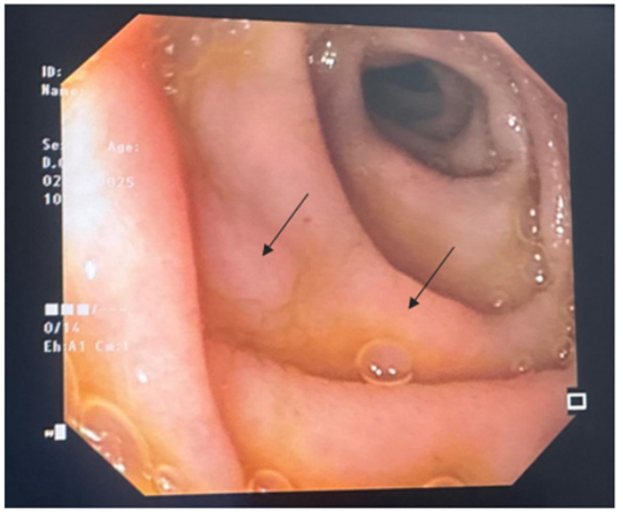

Figure 1: Endoscopic appearance consistent with duodenal fold effacement.

Discussion

Celiac disease is an autoimmune enteropathy triggered by the ingestion of gluten in genetically predisposed individuals. Cirrhosis, on the other hand, is the result of multiple chronic attacks on the liver. When its etiology remains undetermined, it is referred to as cryptogenic cirrhosis. In this context, testing for celiac disease is particularly relevant. According to the literature, patients with celiac disease are 23 times more likely to develop liver cirrhosis than individuals without celiac disease [1]. In addition, the risk of mortality related to liver cirrhosis is eight times higher in celiac patients than in the general population [2]. However, adopting a gluten-free diet appears to have a beneficial effect on these liver disorders.

Several pathophysiological mechanisms may explain the link between cirrhosis and celiac disease. On the one hand, chronic malabsorption and vitamin deficiencies can impair liver regeneration and aggravate the progression of liver disease. On the other hand, bacterial translocation, which is promoted by increased intestinal permeability, can contribute to chronic liver inflammation [3]. Finally, the autoimmune mechanism of celiac disease may play a role through cross-reactivity with liver tissue.

Therapeutically, the introduction of a strict gluten-free diet is the cornerstone of management. Several authors have shown a significant improvement, or even normalization, of liver tests in celiac

patients with unexplained cytolysis [4]. In the series by Tovoli., *et al*. [5], some patients showed stabilization of their cirrhosis after gluten exclusion, suggesting that early identification of celiac disease could alter the prognosis.

Our observation fits into this context and illustrates the importance of considering celiac disease as a potential but often overlooked cause of severe liver damage. It highlights the need for systematic screening for celiac disease, particularly in cryptogenic cirrhosis.

Conclusion

Although rare, clinicians should be aware of the association between celiac disease and liver cirrhosis. Celiac disease may be a potential cause of cytolysis or cryptogenic cirrhosis. Systematic screening for this condition, particularly in patients with unexplained liver damage or signs of malabsorption, is therefore of particular interest.

Early recognition of the disease and the introduction of a strict gluten-free diet can not only improve digestive symptoms, but also stabilize or even improve liver function.

Our observation highlights the importance of a comprehensive diagnostic approach to any cirrhosis of unknown etiology, including testing for celiac disease, in order to optimize patient management and prognosis.

Acknowledgements

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Conflict of Interest

The authors declare no conflict of interest.

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