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Celiac Disease Initially Mis-Diagnosed as Irritable Bowel Syndrome: Case Report.

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Abstract
Background: The increasing availability of serological testing & upper endoscopy has led to more frequent diagnosis of celiac disease & recognition that it may mimic Irritable bowel syndrome.
Objective: The objective of the present case report is to describe the importance of screening those with vague abdominal symptoms (like patients with irritable bowel syndrome) and iron deficiency anemia for celiac disease.
Methods: We report the clinical course of a 30-year-old patient with vague abdominal symptoms initially misdiagnosed as having Irritable bowel syndrome; later on when he reviewed our clinic he was noted to have iron-deficiency anemia. On workup for the cause of iron deficiency anemia he was found to have celiac disease on basis of positive serological tests and small-bowel biopsy result. After being placed on gluten free diet plus iron supplement his abdominal symptoms and iron deficiency anemia was totally improved.
Conclusion: Our case demonstrates that routine screening for celiac disease should highly be considered for patients with iron deficiency anemia and Irritable bowel syndrome.
Keywords: Celiac disease • Iron deficiency anemia. Irritable bowel syndrome (IBS).

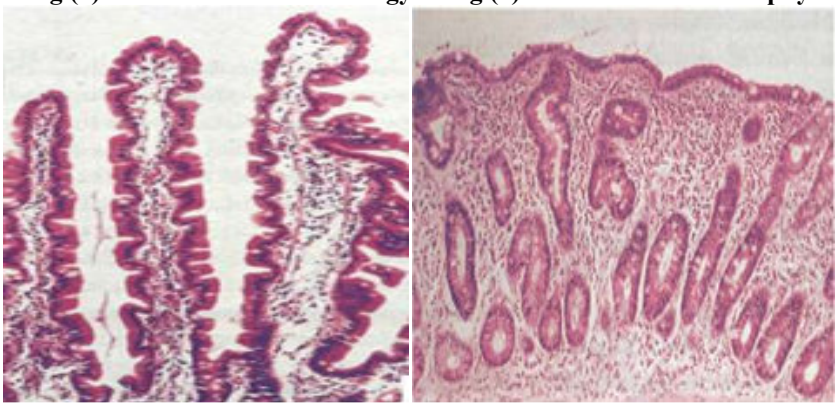
Introduction

Celiac disease or gluten sensitive enteropathy is an intolerance of dietary gluten that results in immunologically-mediated inflammatory damage to the small intestinal mucosal. The damage is characterized by inflammation, crypt hyperplasia, and villous atrophy. [1]

Case presentation

A 30-year-old Saudi male teacher was referred to our clinic because he was incidentally found to be positive for HBsAg. For the last 18 months prior to the date of referral to our clinic he has been treated as having IBS in another GI clinic, diagnosis of irritable bowel syndrome(IBS) was made on clinical basis as he gave a history of recurrent episodes of abdominal bloating, vague abdominal pains & diarrhea alternating with constipation. Otherwise his appetite is good; but there was some weight loss, no history of gastrointestinal bleeding. He had neither extra-intestinal symptoms nor past medical history of note. Physical examination revealed no abnormalities. Routine workup for HBV showed that he is an inactive carrier with normal liver enzymes, very low viral load, -ve HBeAg , and +ve HBeAb, however his CBC revealed microcytic hypochromic blood film with low hemoglobin (9.3gm/dl),so further workup results were as follows:
Low serum iron & ferritin, endoscopic small bowel biopsy showed subtotal villous atrophy plus inflammatory cells infiltrate **Fig(1), Fig(2)** , positive anti-tissue transglutaminase (IgA) with a high level (126), positive anti-endomysial antibodies, low serum albumin and calcium, high PT and PTT, high alkaline phosphatse ,low triglyceride with normal serum cholestrol, high TSH with normal T3 and T4, , normal LFTs and RFTs, normal serum B12 and folate, normal abdominal ultrasonography CT scan with iv contrast.so finally a diagnosis of Celiac disease was made and the patient was put on free gluten diets in addition to ferrous sulphate 200 mg BID and calcium supplement. Two months later his abdominal symptoms were dramatically improved and his Hb level rose to 12 gm d/dl.

Fig (1): Normal mucosal histology **Fig (2): Subtotal villous atrophy**



Discussion

Celiac disease can be present at any age. The peak incidence in adults is in the fifth decade with a female preponderance. The symptoms are very variable and often non-specific with tiredness and malaise often associated with anemia. Many patients are asymptomatic (silent) and picked up on incidental findings. Common GI symptoms of Celiac disease include diarrhea or steatorrhea, abdominal discomfort, bloating or pain and weight loss. Mouth ulcers and angular stomatitis are frequent and can be intermittent. Infertility and neuro-psychiatric symptoms of anxiety and depression also can occur. [2]

Patients with irritable bowel syndrome (IBS) suffer from biopsy-proven celiac disease at rates that are more than four times higher than in non-IBS control subjects. This was the conclusion of a systematic review and meta-analysis conducted by Alexander *etal* and his colleagues. [3]

Also it is recommended to screen for celiac disease in patients with newly diagnosed chronic fatigue syndrome, irritable bowel syndrome and autoimmune thyroid disease, [4, 5, 6] .Some authors have recommended that patients with iron deficiency anemia be routinely assessed for celiac disease. [7]

In our case, his clinical symptoms were initially suggestive of IBS and because our current medical guidelines do not always call for celiac screening in these individuals the diagnosis was initially missed. However with the progression of the disease he developed weight loss and features of iron deficiency anemia and these signs led us to screen him for celiac disease. Enomysial (EMA) and tissue transglutaminase IgA (TGA) are the most sensitive and specific antibodies for the diagnosis of untreated Celiac disease and can also be used as screening tests. Treatment of Celiac disease with gluten-free diet usually produces a rapid clinical and histological improvement. In untreated cases the incidence of enteropathy-associated T-cell lymphoma (EATCL) is increased. [8]

In our case both endomysial and tissue transglutminase antibodies were positive, but for more confirmation we obtained endoscopic biopsy from the third part of the duodenum which was in keeping with Celiac disease (showing subtotal villous atrophy) and in a top of that our patient responded to gluten free diet. So screening patients with vague abdominal symptoms and explained iron deficiency anemia for Celiac disease by serological tests is cost effective as treatment of Celiac disease is simple, and at the same time if diagnosis of celiac disease is missed the patient will be at risk of developing small bowel malignancy.

One of the abnormal laboratory findings in our case is the elevation of TSH with normal T3, T4, these thyroid dysfunction are consistent with subclinical hypothyroidism. It has been reported that CD can be seen in association with thyroid dysfunction. [9]

Conclusion

This case demonstrates the significance of screening patients with vague gastrointestinal symptoms for Celiac disease at least using serological tests as Celiac disease is a treatable condition.

References

1. Ch'ng C.L, et al.: Celiac disease and autoimmune thyroid disease. Clin. Med. Res., 5(3): 184-192, 2007.
2. Parveen Kumar and Micheal Clark.Celiac disease. Clinical Medicine, 5th ed. Toronto: W. B SAUNDERS; 2002; p: 292.
3. Alexander C. Ford, MBChB, MD, MRCP; William D. Chey, MD; Nicholas J. Talley. Yield of Diagnostic Tests for Celiac Disease in Individuals with Symptoms Suggestive of Irritable Bowel Syndrome Systematic Review and Meta-analysis. Arch intern med.2009, 169:651-658.
4. National Institute for Health and Clinical Excellence. Clinical guideline 53: Chronic fatigue syndrome/myalgic encephalomyelitis. London, 2007.
5. National Institute for Health and Clinical Excellence. Clinical guideline 61: Irritable bowel syndrome. London, 2008.
6. National Institute for Health and Clinical Excellence. Clinical guideline 15: Diagnosis and management of autoimmune thyroid disease in young people and adults. London, 2009.
7. Cindy Huang, MD, PGY3, Amy 1 Toscano-Zukor, DO,2 Xiangbing Wang, MD, PhD3. Hyperthyroidism, Iron-deficiency Anemia, and Celiac Disease: Case Report. Thyroid Science 4(3):CR1-3, 2009.
8. Parveen Kumar and Micheal Clark. Celiac disease. Clinical Medicine, 5th ed. Toronto: W. B SAUNDERS; 2002; p: 293.
9. Brandimarte, G., et al.: Changing trends in clinical forms of celiac disease: Which is now the main form of celiac disease in clinical practice? *Minerva Gastroenterol. Dietol*., 48(2):121-130, 2002.