A CASE OF CELIAC DISEASE IN AN ADULT

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INTRODUCTION

Diarrhea remains one of the common reasons for out patient attendance. Complains of recurrent episodes of diarrhea lasting for more than 10 days, especially associated with weight loss, should be evaluated thoroughly in order to diagnose treatable conditions. A good history, meticulous examination avidly supported by laboratory evaluation will unmask most of these diseases. We present one such case of chronic recurrent diarrhea which eventually turned out to be Celiac disease.

CASE REPORT

A 22- year- old army officer presented in medical out patient department with 12 years history of intermittent diarrhea and failure to gain adequate weight despite good appetite. According to patient his stools were semi formed, occurred 3-4 times per day, they were bulky, occasionally contained mucus but never blood. He did not notice any difficulty in flushing the stools. He could not discern any association with particular food intake. These episodes would settle either spontaneously or with medication after 10-12 days of onset. The patient also had recurrent oral ulcers which use to recur at monthly intervals and settled spontaneously or with medications. There was no associated fever, joint pains, abdominal pain and abdominal distension, rashes on the body or any other complaint pertaining to other systems. He was investigated extensively ever since his childhood with repeated complete blood counts, stool routine examination, abdominal sonography, liver function tests and upper GI endoscopy. The latest endoscopic- biopsy was carried out three years prior to present consultation but it revealed only nonspecific gastritis and nonspecific changes in duodenum. He received repeated courses of metronidazole, quinolones and antihelminthics during the last 10 years without any relief.

His clinical examination at present time revealed no systemic abnormality except his weight which was below the standard for his age and sex.

Repeat laboratory investigations revealed Hemoglobin of 11.2 g/dL with low MCV. Serum iron and ferritin levels were below the normal range. Rest of chemical profile and stool examination was normal. Based on the history, clinical examination and laboratory findings serological tests for anti-endomysial and anti-gliadin antibodies were performed which turned out to be strongly positive. He was advised strict gluten free diet to which he responded remarkably with weight gain, normal stool frequency and liberty from oral ulcers. His hemoglobin level and MCV returned to normal on subsequent evaluation. The patient was advised regular follow up and re- evaluation if symptoms of abdominal pain, anorexia, weight loss, diarrhea or persistent fever develop.

DISCUSSION

Celiac sprue, also known as celiac disease or gluten-sensitive enteropathy, is a autoimmune disease. People with celiac sprue cannot tolerate gluten, a protein commonly found in wheat, rye, and barley. The term gluten refers to entire protein component of wheat; gliadin is the alcohol soluble fraction of gluten that contains bulk of toxic component. In patients with celiac disease immune response to gliadin fraction promotes an inflammatory reaction, primarily in the upper small intestine, characterized by infiltration of lamina propria and the epithelium with chronic inflammatory cells and villous atrophy [1].

Genetic influence in pathogenesis is indicated by its familial occurrence. Celiac disease does not develop unless a person has

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Table: Fundamentals of Gluten free diet

Grains to be avoided	Wheat(includes spelt, kamut, semolina , triticale) , rye, barley(Including malt)
Safe Grains	Rice, amaranth, buckwheat, corn, millet, quinoa , sorghum, oats
Gluten free starches	arrowroot, jicama, taro, potato, tapioca, chickpeas, lentils, kidney- beans, navy beans, pea beans, peanuts, soybeans, almonds, chestnuts, hazelnuts, cashews, sunflower seeds, flax seeds, pumpkin seeds.

allele that encode for HLA –DQ2 or HLA-DQ 8 proteins [2].

Patients can present with failure to thrive and diarrhea (the classical form). However, some patients have only subtle symptoms (atypical celiac disease) or are asymptomatic (silent celiac disease) [3].

Celiac disease is a common cause of malabsorption of one or more nutrients especially in Caucasians [3]. The symptoms may first become evident at almost any age through out adulthood and includes diarrhea, steatorrhoea and weight loss. The classic presentation in adult is diarrhea, which may be associated with abdominal pain or discomfort. Other presentations include anemia due to iron and folate deficiency, aphthous ulcers, angular stomatitis, tetany due to hypocalcemia, gross malnutrition, peripheral oedema, paraesthesia, muscle weakness, constipation, weight loss, dermatitis herpeteformis and elevated liver enzymes [3].There is an increased incidence of osteoporosis and other autoimmune disorders as compared to general population. In a case finding study indications for screening included bloating, irritable bowel syndrome, thyroid disease, chronic unexplained diarrhea, chronic fatigue and constipation [4].

The diagnosis of celiac disease requires characteristic histopathological changes of Partial villous atrophy on small intestinal biopsy [5]. At least 4-6 endoscopic- biopsy specimens are obtained from the duodenum given the patchy nature of disease and difficulty in orienting the small pieces of tissue taken during the biopsy for assessment of villous morphology .Spectrum of pathological changes ranges from near normal villous architecture with prominent intraepithelial lymphocytes to a total villous atrophy. Histological findings are characteristic but not specific, permitting presumptive diagnosis, which is confirmed upon a favorable response to diet [6].

Most sensitive antibody tests for diagnosis of Celiac disease are of Ig A class. Available tests include those for antigliadin antibodies, antireticulin antibodies, antiendomysial antibodies and antibodies against tissue transglutaminase [6].

Treatment involves life long elimination of wheat, rye and barley from the diet [7]. Meat, dairy products, fruits and vegetables are naturally occurring gluten free products and make for a more nutritious and varied diet (Table). Patient should also be assessed for iron, folic acid and other vitamin deficiencies .Screening for osteoporosis should also be carried out. Gluten free diet produces rapid clinical as well as morphological improvement of intestinal histology [8]. Prognosis for patients who adhere to gluten free diet remains excellent except for increased risk of Enteropathy associated T and B –cell non-Hodgkin's lymphoma and adenocarcinoma of small intestine. Occasionally small bowel ulceration and stricture may occur [6].

Development of new symptoms (e.g., weight loss, abdominal pain or fever) or recurrence of diarrhea in patients on strict gluten free diet requires extensive investigations. Possible causes of poorly responsive Celiac disease include gluten ingestion, refractory celiac disease, microscopic colitis, lactose intolerance, pancreatic insufficiency, bacterial over growth and enteropathy associated T cell lymphoma [6, 9].

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