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CELIAC DISEASE AS A CAUSE OF RECURRENT ANEMIA: A CASE REPORT

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ABSTRACT: Celiac disease is an immune mediated enteropathy with sensitivity to gluten. It is a disease with heterogenous presentation. We report a case of a 12 year old who presented with episodes of recurrent anemia. The patient had no gastro intestinal symptoms. Celiac disease should be considered in any child with iron resistant anemia even if no gastrointestinal symptoms are present. Celiac Disease is an immune mediated enteropathy with permanent sensitivity to gluten in genetically susceptible individuals.¹ The clinical manifestation of the disease can be quite varied. The various clinical symptoms described with celiac disease include failure to thrive, diarrhea, vomiting, short stature, delayed puberty, iron deficiency anemia not responding to hematinics etc.¹ In some patients anemia might be the sole presentation.²

KEYWORDS: Celiac disease, anemia.

CASE REPORT: A 12 year old presented with history of recurrent anemia since the age of 6 years. The patient was first diagnosed as a case of anemia at the age of six years. At that time his Hb was 5.5 gm/dl, PCV of 20, Reticulocyte count 1%, the peripheral blood film was microcytic hypochromic in nature and was suggestive of Iron deficiency anemia. Patient was given one unit of packed red blood cell transfusion and discharged on hematinics. After three years at the age of 9, patient developed symptoms of fatigability, tiredness and was shown to a pediatrician.

The work up done at that time showed a Hb of 7.4gm/dl, PCV of 22, PBF showing microcytic hypochromic anemia, suggestive of iron deficiency. Hemoglobin electrophoresis showed normal study. The patient had normal liver and kidney function tests. HIV, HBSAG, HCV were negative. Serum Ferritin was 2.6ng/ml. Stool for occult blood was negative and urine routine microscopy was normal. The patient was prescribed a course of hematinics for three months. On further enquiry that patient replied in affirmative to having taken iron syrup regularly.

At the age of 12 years patient presented to our OPD with complaints of easy fatigability and tiredness. On examination the child weighed 40kg (Normal for age) and his height was 140 cms (normal for age). The general physical examination revealed pallor, no icterus, no lymphadenopathy. No significant findings were found on systemic examination. A diagnosis of recurrent anemia was made and investigations sent. The investigations revealed a Hb of 6.4gm/dl, PCV 24.8, TLC 6000cells/cu mm, ESR 2 mm at the end of 1sthr. PBF suggestive of microcytic hypochromic RBC's with anisopoikilocytosis, tear drop cells. Liver function and kidney function tests were normal. HIV, HBSAG, HCV were negative.

Thyroid function tests were normal. TTG- Iga value was 155.Au/ml (normal <20Au/ml). In view of recurrent anemia and high TTG-Iga a provisional diagnosis of celiac disease was made. Multiple duodenal biopsies were taken and the tissue sent for histopathological diagnosis. There was moderate to severe villous atrophy, lamina propria was infiltrated with chronic mononuclear cells,

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Intraepithelial cells were increased in number. A diagnosis of Celiac disease (Marsh Oberhuber grade 3c) was made. Patient was advised a gluten free diet and was prescribed a course of hematinics.

DISCUSSION: Celiac disease is an immune mediated enteropathy with permanent sensitivity to gluten¹. It is disease with heterogeneous presentation. Often the sole presenting feature of the disease might be refractory anemia.² Fisgin et al studied 22 patients with celiac disease and have reported anemia alone in 19 patients.³ Kumar et al have reported a case of celiac disease presenting as pancytopenia⁴. Bansal et al identified 83 children with celiac disease over a 21 year period, 81 % of the patients had anemia and 55 had received iron supplements without discernible benefit.⁵ Hematological manifestations of celiac disease are being increasingly recognized with iron deficiency anemia and megaloblastic anemia being the common presentation.

In a study by Kochar et al 434 children were diagnosed with celiac disease, 84% had iron deficiency anemia at presentation and 39% of children had anemia as presenting feature.⁶ Abd El Dayem et al studied 25 children with refractory iron deficiency anemia and found 44% of them had celiac disease.⁷ Carrocio et al studied 130 children with confirmed celiac disease and found that 1.5% of patients had iron deficiency as the only symptom.⁸ Kulogu et al studied 109 children with confirmed celiac disease and found that 16/109 had recurrent anemia as the only presenting feature.⁹ In our patient the only presenting feature was recurrent anemia, the patient did not have any gastrointestinal symptoms.

The pathogenesis of anemia in celiac disease appears multifactorial. Impaired intake of micronutrients like iron, folic acid due to anorexia and vomiting and reduced absorption due to reduction in absorptive surface.¹

To conclude celiac disease should be considered in any child with resistant iron deficiency anemia even if no gastrointestinal symptoms are present.¹⁰

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