Chronic diarrhea and immunoglobulin adeficiency

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Primary immunodeficiency disorders (PID) are heritable disorders of immune system function, characterized by susceptibility to infection with a predisposition to the development of autoimmune disease and malignancy. Many children with primary immunodeficiency have chronic diarrhea and failure to thrive as a common presentation. IgA deficiency is considered to be the most common antibody deficiency in humans and its prevalence varies in different geographic location.The aim of the work was to study the relationship between chronic diarrhea and immunoglobulin A deficiency by screening the children presenting with chronic diarrhea for immunoglobulin A deficiency. This study was conducted at Tropical Clinic at Cairo University Pediatric Hospital from July 2010 to February 2011. There were 11 females (27.5%) and 29 males (72.5%), their ages ranged between 4 and 14 years with a mean of (6.7 ± 4.5 y) complaining of chronic diarrhea.In our study, among the 40 patients enrolled in this study, 6 (15%) patients had laboratory evidence of IgA deficiency, two patients (33.3%) had their weight below 3rd percentile for age, and three patients (50%) had their height below 3rd percentile for age, 4 cases had IgG and IgM levels within normal ranges for age and one case had IgG and IgM levels below normal, while in the last case IgG level was above normal for age and IgM level within normal. B lymphocytes surface markers (CD19) had been done for one patient and was below normal range, but this cannot apply to the other patients.Parent’s consanguinity was evident since 66.7% IgA deficient patients had consanguineous parents, while in chronic diarrhea cases without IgA deficiency it was 35.3%.In our study, chronic diarrhea was not associated with the recovery of particular pathogens except for Giardia lamblia which had been detected by stool analysis in 66.7% of IgA deficient group while in chronic diarrhea cases without IgA deficiency it was 29.4%. Cytomegalovirus was not looked for among our IgA deficient group or chronic diarrhea cases without IgA deficiency. E. coli had been detected in pus culture of one patient with IgA deficiency not from stool. No evidence of fungal infection among our IgA deficient group or chronic diarrhea cases without IgA deficiency.One patient of IgA deficient group (16.7%) was IgG and IgM deficient and suffering from chronic diarrhea, recurrent pneumonia, multiple bone fractures and autoimmune disorders in the form of insulin dependent diabetes mellitus (IDDM), hyperparathyroidism and possible celiac disease. These associations are common features of CVID.Celiac disease was diagnosed in 16.7% of IgA deficient group while in chronic diarrhea cases without IgA deficiency it was 11.8% and IBD had been diagnosed in 66.7% among our IgA deficient group, while among chronic diarrhea cases without IgA deficiency it was

52.9%.