

Prevalence of Celiac Disease Among Schoolchildren in Egypt: Results of a Pilot Study

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Background. Celiac disease (CD) is an immune-mediated enteropathy triggered by the ingestion of gluten in genetically susceptible individuals. It is one of the most common, lifelong disorders in both the US and Europe affecting approximately 1 % of the general population. The CD prevalence in developing countries is less clear, although occasional data suggest that CD prevalence could be high in Northern Africa and Middle East countries. In these areas, untreated CD may contribute to childhood mortality by worsening the vicious circle of diarrhea-malnutrition. The determination of anti-transglutaminase (tTG) antibodies (Ab) is considered a sensitive tool for detecting atypical and silent forms of CD.

Aims of the study (1) To investigate the CD prevalence in a cohort of school age children in Egypt; (2) To describe the main presenting symptoms of CD in this country.

Study-design. Children were screened for CD at school in Cairo City after obtaining informed consent from their parents. The screening test was serum class A anti-tTG Ab. Samples showing anti-tTG less than 0.5 U were further analysed for IgG class anti-tTG and total IgA level (to rule out IgA deficiency). Serum antiendomysium Ab (EMA) determination was performed in subjects that tested positive for anti-tTG IgA Ab. Small intestinal biopsy was recommended to subjects showing either IgA anti-tTG and EMA positivity or IgA deficiency plus IgG anti-tTG positivity.

Results. To date, 1064 children have been screened and 5 subjects (1:213), 3 females and 2 males aged 6-18 yrs, were diagnosed with CD (biopsy-proven). Three of these children experienced anemia and two showed intestinal complaints (diarrhea and abdominal pain). Following the screening, CD was also diagnosed in the father of one of these cases. There were also 5 children showing IgA deficiency and increased levels of IgG-tTG (small bowel biopsy still pending).

Conclusions. These preliminary results indicate that CD in the Egyptian pediatric population is as frequent as in Europe and North America. However CD prevalence is likely to be lower in Egypt than other Northern African countries, probably due to dietary factors (lower gluten consumption). Further investigations are needed to clarify the role of IgG-tTG positivity in subjects showing low values of total serum IgA.