Determination of frequency of HLA DQ2 and HLA DQ8 alleles in children with celiac disease in the North West.

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Abstract

Back ground and objectives: Coeliac disease is a small intestinal disorder, induced by ingestion of gluten in genetically predisposed individuals and it is an immune-mediated chronic inflammatory disease associated with HLA-DQ2 and DQ8 molecules. The aim was to determine the frequency of HLA-DQ2 and HLA-DQ8 alleles in children with celiac disease and whom with gastrointestinal symptoms but without having celiac disease in the North West.

Materials and methods: The cross - sectional study was conducted at the Children's Hospital of Tabriz, from April 2012 to December 2013, and analysed 26 children diagnosed to have coeliac disease as per the criteria set by the European Society of Paediatric Gastroenterology and Nutrition and patients were compared with a group of 30 subjects with gastrointestinal symptoms such as abdominal pain, FTT, weight loss, vomiting etc. But have no celiac disease.

Results: HLA-DQ2 was identified in 92.3% patients, and 20% control individuals (P=0.0001) and HLA-DQ8 was identified in 11.53% patients and 6.66% of control group (P=0.59). HLA-DQ8 occurred more often in HLA-DQ2-negative patients compared to HLA-DQ2-positive patients. HLADQ2 sensitivity and specificity were 92% and 80% respectively and on the other hand HLADQ8 sensitivity and specificity were 11% and 97% respectively.

Conclusions: HLA-DQ2 is associated with CD. In HLA-DQ2-negative patients, there is more often present at least the haplotype HLA-DQ8. The presence of HLA molecules does not confirm this diagnosis absolutely; it only indicates the presence of a genetic predisposition. However, the absence of all the monitored alleles makes the onset of CD unlikely.

Keywords: celiac disease, HLA-DQ2, HLA-DQ8