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HLA genes as a predictive screening tool for celiac disease

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Dear Editor,

We read with great interest the recent original article published in "The Turkish Archives of Pediatrics" by Tuhan et al. (1) about celiac disease (CD) in children with Hashimoto's thyroiditis. However, we would highlight important points related to the reported method because the authors did not explore the genetic susceptibility to developing CD.

Celiac disease is a well-recognized auto-immune enteropathy involving genetic factors, and is associated in almost all patients to specific susceptibility alleles encoding human leucocyte antigen (HLA) histocompatibility antigens, the corresponding genes being localized at the major histocompatibility region in the short arm of chromosome 6.

Epidemiologically, more than 95% of patients with CD share the HLA-DQ2 heterodimer, and the remainder present the HLA-DQ8 heterodimer (2). Present in nearly all patients with CD, these risk-haplotypes have a negative predictive value of CD approaching 100% (3); thus, they are widely used to exclude CD in targeted populations. On the other hand, there is good evidence to show an increased prevalence of CD with autoimmune diseases such as type 1 diabetes and autoimmune thyroid disease (2). In this optic, HLA typing emerges as an important tool able to discriminate individuals genetically susceptible to CD in at-risk groups such as those with autoimmune conditions (e.g., thyroiditis) (4).

Recent guidelines from the European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) for the diagnosis and treatment of celiac disease recommend that HLA testing for CD should be offered to asymptomatic children and adolescents if they carry an increased risk for CD such as in autoimmune thyroiditis. In addition, this test is probably more cost effective than serial serologic evaluations because it confers a life-long genetic susceptibility profile (5).

Thus, we advocate that HLA typing could be indicated at first-line to exclude CD in specific, at-risk populations such as those presenting with the autoimmune Hashimoto's disease.

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References

1. Tuhan H, Işık S, Abacı A, et al. Celiac disease in children and adolescents with Hashimoto thyroiditis. Turk Pediatri Ars 2016; 51: 100.
2. Husby S, Koletzko S, Korponay-Szabo IR, et al. European Society for Pediatric Gastroenterology, Hepatology, and Nutrition guidelines for the diagnosis of coeliac disease. J Pediatr Gastroenterol Nutr 2012; 54: 136-60.
3. Pallav K, Kabbani T, Tariq S, Vanga R, Kelly CP, Leffler DA. Clinical utility of celiac disease-associated HLA testing. Dig Dis Sci 2014; 59: 2199-206.
4. Megiorni F, Pizzuti A. HLA-DQA1 and HLA-DQB1 in Celiac disease predisposition: practical implications of the HLA molecular typing. J Biomed Sci 2012; 19: 1.
5. Francavilla R, Castellaneta S. Inverting the diagnostic pyramid in celiac disease: HLA typing for screening suspects of coeliac disease. J Pediatr Gastroenterol Nutr 2016; 63: e20.

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Re: HLA genes as a predictive screening tool for celiac disease

Dear Editor,

We read the interpretation for our article titled "Celiac disease in children and adolescents diagnosed with Hashimoto thyroiditis". The esteemed author stated that HLA-DQ2 tissue type was found in 95% of patients and HLA-DQ8 was found in the remaining patients as a result of genetic analysis performed in celiac patients, and the risk of celiac disease was higher in patients with autoimmune diseases including type 1 diabetes mellitus and autoimmune thyroiditis compared with the normal population. In addition, human leucocyte antigen (HLA) screening was primarily recommended in asymptomatic children with autoimmune thyroiditis and a risk for celiac disease in the final 'European Society for Paediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN)' Celiac Disease Guideline as stated by the esteemed author (1). However, HLA tissue type screening cannot be performed in practice in our country, because genetic studies have high cost and are not easily accessible. Therefore, we used celiac serology to screen for celiac disease in patients who were diagnosed as having autoimmune thyroiditis.

References

1. Husby S, Koletzko S, Korponay-Szabo IR, et al. European Society for Pediatric Gastroenterology, Hepatology, and Nutrition guidelines for the diagnosis of coeliac disease. J Pediatr Gastroenterol Nutr 2012; 54: 136-60.[CrossRef]

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