Is duodenal biopsy necessary in celiac disease diagnosis for children and adults?

October 23 2009

Duodenal biopsy remains the gold standard for celiac disease (CD) diagnosis. However, it has several pitfalls and requires an invasive procedure in children. In the past few years, a more prominent role for a definitive diagnosis based solely on serology has been proposed. The predictive value of high levels of anti-tissue transglutaminase (tTG) antibodies has also been reported in retrospective CD cohorts. Based on these studies, some authors have proposed to start a gluten-free diet (GFD) for those patients with high tTG antibody levels, without duodenal biopsy. There is no agreement to start a GFD without biopsy to confirm mucosal atrophy. There are age-related differences in CD diagnosis that may be taken into account to evaluate the predictive value of tTG antibody for mucosal atrophy.

A research team, led by Dr. Santiago Vivas from Hospital de León recruited a total of 324 patients with celiac disease (CD; 97 children and 227 adults) prospectively at two tertiary centers. Human IgA class anti-tTG antibody measurement and upper gastrointestinal endoscopy were performed at diagnosis. A second biopsy was performed in 40 asymptomatic adults on a gluten-free diet (GFD) and with normal tTG levels.

Their study will be published on October 14, 2009 in the *World Journal of Gastroenterology*.

In this study, adults showed less severe histopathology (26% vs 63%; P

The authors suggest that because of the high predictive value of tTG antibody for mucosal atrophy, duodenal biopsy may not always be necessary. In children, CD diagnosis may only require clinical and serological features, thus avoiding an invasive procedure, and starting an earlier GFD. In contrast, for adults, CD presentation and monitoring are different, thus rendering necessary a histopathological confirmation in all the cases at diagnosis, and in some selected cases at follow-up on a GFD. Future CD guidelines may take into account these age-related differences.

More information: Vivas S, Ruiz de Morales JG, Riestra S, Arias L, Fuentes D, Alvarez N, Calleja S, Hernando M, Herrero B, Casqueiro J, Rodrigo L. Duodenal biopsy may be avoided when high transglutaminase antibody titers are present. World J Gastroenterol 2009; 15(38): 4775-4780, www.wjgnet.com/1007-9327/15/4775.asp

Source: World Journal of Gastroenterology (news : web)

Citation: Is duodenal biopsy necessary in celiac disease diagnosis for children and adults? (2009, October 23) retrieved 26 April 2024 from https://medicalxpress.com/news/2009-10-duodenal-biopsy-celiac-disease-diagnosis.html

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