Clinical Shorts A brief review of the literature

Celiac disease

Celiac disease is a common chronic inflammatory bowel condition that frequently goes undiagnosed. The median delay in diagnosis ranges from 5 to 11 years in various studies. Classic celiac disease presents with diarrhea, weight loss, anemia, or other symptoms suggestive of malabsorption. However, celiac disease can also be "silent" and present with nonspecific abdominal pain, reflux, osteoporosis, diabetes mellitus, or cryptogenic hypertransaminasemia.

The criterion standard for diagnosing celiac disease is the demonstration of villous atrophy on a duodenal biopsy; however, serologic testing (eg, for IgA antibodies to tissue transglutaminase or IgA endomysial antibodies) is a cheap and noninvasive method of identifying patients with celiac disease.

How should these tests be used in practice?

A clinical decision tool designed to increase the detection of celiac disease without routine duodenal biopsy was developed following assessment of a retrospective cohort of patients attending a hospital in Sheffield, United Kingdom, for gastroscopy (**Figure 1**). The tool was then prospectively evaluated with 2000 consecutive adult patients referred for gastroscopy, using the patients' referral symptoms, tissue transglutaminase antibody test results, and duodenal biopsy results.

Patients were categorized into 2 groups (high and low risk) based on their referral symptoms (the presence or absence of diarrhea, weight loss, or anemia). Anemia was defined as a hemoglobin concentration of less than 120 g/L in women and less than 130 g/L in men. Diarrhea was defined as passing more than 3 stools per day. All patients were biopsied.

The tool performed very well. No cases of celiac disease were missed using the algorithm. The prevalence of celiac disease was 0.5% (6/1261) in the low-risk group and 9.6% (71/739) in the high-risk group. The prevalence of celiac disease in patients who were negative for the antibody was 0.4% (7/2000) patients. These patients were all in the high-risk group.

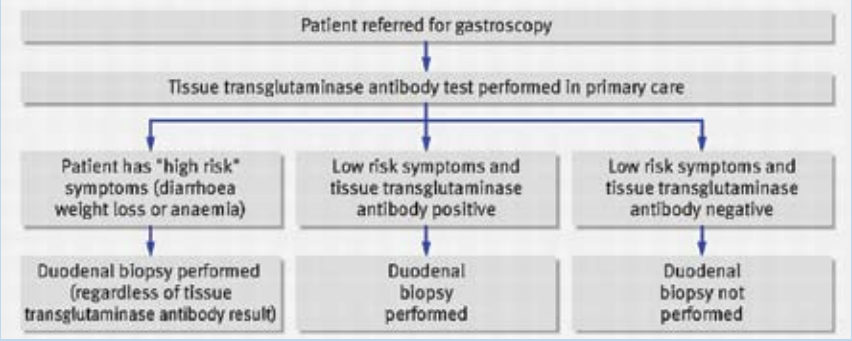
The clinical decision tool had a sensitivity of 100%, a specificity of 60.8%, a positive predictive value of 9.3%, and a negative predictive value of 100%. The researchers concluded that use of the tool might result in fewer referrals for biopsy, as 58.5% of patients in this study would have avoided duodenal biopsy using the tool. It should be noted that this study was done among patients referred for gastroscopy, not in a family practice setting.

Bottom line

- Using basic clinical information, serologic testing (using antibodies to tissue transglutaminase), and selected duodenal biopsy in high-risk cases, this simple clinical decision tool had 100% sensitivity for detecting celiac disease.
- This tool, however, was validated in a population referred for gastroscopy, rather than in a family practice setting.
- The study found that a small group of patients with high-risk symptoms (eg, anemia, diarrhea, weight loss) and negative serologic testing were found to have celiac disease on biopsy.

Source: Hopper AD, Cross SS, Hurlstone DP, McAlindon ME, Lobo AJ, Hadjivassiliou M, et al. Pre-endoscopic serological testing for coeliac disease: evaluation of a clinical decision tool. *BMJ* 2007;334(7596):729. DOI.10.1136/bmj.39133.668681.BE.

Figure 1. Clinical decision tool for celiac disease



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