Screening for celiac disease

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Editorial

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Résumé

DANS CE NUMÉRO, le Dr Ernest G. Seidman et des collègues présentent un compte rendu sur une étude de dépistage de l'anticorps de l'antigliadine sérique pour détecter la maladie coeliaque chez les enfants. Dans cet éditorial, les auteurs soutiennent que la mise en service de tels tests constitue un progrès important, étant donné surtout que l'on est très loin de diagnostiquer suffisamment la maladie coeliaque en Amérique du Nord. Des programmes de dépistage général de routine de la maladie coeliaque seraient néanmoins prématurés tant qu'on n'accumulera pas plus de données probantes sur leur efficacité. Il ne faut pas oublier non plus que les tests sérologiques sont utiles comme moyen de dépistage seulement. Il faut quand même confirmer les résultats positifs par une biopsie de l'intestin grêle.

Celiac disease (CD) is a serious, lifelong, gastrointestinal disorder that can cause a wide spectrum of clinical symptoms in children and adults. The classic symptoms of diarrhea, abdominal distension, weight loss and malnutrition were described by Samual Gee in 1888, but our current understanding of CD dates from the 1950s, when the therapeutic effect of a gluten-free diet was discovered, the presence of typical small-bowel mucosal lesions in untreated patients was recognized, and the ability to obtain small-bowel biopsy specimens via the oral route was developed.[1] Since that time, knowledge about CD and its clinical manifestations has increased, but the interest of the North American medical and scientific community in this disease has remained very limited. This is at least in part because of the comparative infrequency of the diagnosis on this continent.

The rarity of CD in North America may be more apparent than real, however.[2] A low index of suspicion and reliance on classic symptoms may be resulting in significant underdiagnosis of CD. This supposition is supported by the results of the Canadian Celiac Association's survey, conducted in 1989–91, of its members with CD.[3–5] Fewer than 75% of the 1294 respondents with biopsy-confirmed CD had presented with classic symptoms. The average duration of symptoms in adults before diagnosis was more than 7 years for fatigue, diarrhea, bloating and abdominal pain. For headache or "neuropsychiatric" symptoms, the mean duration before diagnosis of CD was almost 14 years; the average delay in diagnosis for patients with associated skin rash (dermatitis herpetiformis) was on average 11 years.[5] In over a third of pediatric cases, symptoms were present for 1 year or longer. Nearly 60% of the respondents, whether children or adults, had had to consult 3 or more physicians before the diagnosis was made, and 15% had had to consult 5 or more physicians. Most children were first misdiagnosed as having an illness other than CD, such as gastroenteritis or food allergy. In adults, the most frequent misdiagnoses were viral or other infection, anemia, stress, nervous condition, irritable bowel and food allergy. The survey results also showed that CD was considered and investigated in only 1.5% of first-degree relatives of patients with biopsy-proven CD, despite findings reported in the literature that approximately 10% of first-degree relatives also have small-bowel changes typical of CD.[1]

Another factor that may contribute to the apparently low prevalence of CD in North America is the deplorable practice of many physicians of advising a trial of a wheat-free or gluten-free diet without first performing a small-bowel biopsy.[6] If gluten is reintroduced, as often happens several months or years after symptoms are controlled, the disease may remain latent for many years, setting the scene for

serious late complications of untreated CD such as osteoporosis and cancer.

Even when the index of suspicion is high, the apparent prevalance of CD as diagnosed by standard clinical assessment followed by biopsy has been likened to the tip of an iceberg. Studies using recently developed serologic screening tests such as serum antigliadin antibody (AGA) and antiendomysial antibody (EMA) tests have indicated CD prevalence rates as high as 1 in 200 in unselected blood donors[7,8] and in Italian schoolchildren.[9] Interest in population screening has been kindled by results such as these and have been the focus of international conferences at Ancona, Italy, in 1995 and in Tampere, Finland, in 1996. At our centre a screening program using a 2-step AGA and EMA testing protocol is being implemented for patients who may be at high risk for CD, such as first-degree relatives of patients with biopsy-confirmed CD. Our intention is to extend this program to include other high-risk groups, such as children with unexplained failure to thrive, diabetes mellitus, Down syndrome, juvenile rheumatoid arthritis or immunoglobulin A deficiency.

Although screening manoeuvres such as the AGA test evaluated by Dr. Ernest G. Seidman and colleagues in this issue (page 527) must be followed up with biopsy before dietary therapy is started, they represent an important step forward and have the potential to significantly improve the diagnostic process for Canadians with unrecognized CD.

It is clear that serologic tests have an important place in case finding among high-risk patients and in assisting diagnosis of patients with suggestive but not classic symptoms. Nevertheless, it has not been established that mass screening is justified,[10] even though AGA and EMA testing appears to offer sufficient sensitivity and specificity, and despite the fact that other criteria for population screening — the likelihood that undiagnosed illness will become severe, the inadequacy of standard clinical diagnostic methods, and the availability of effective treatment — are, arguably, met in CD. Definitive answers to certain questions are needed before a trial of mass screening can be recommended, particularly with regard to asymptomatic patients who might be found to have CD. It is yet to be determined how many of these people would in time develop significant ill health and overt CD or would be at risk for cancer or other complications, and how difficult it would be to motivate people who receive an unexpected diagnosis of CD to adhere to a gluten-free diet.[11] Although it is premature, therefore, to call for mass screening in Canada, this is a topic that needs further consideration as evidence accumulates from controlled studies of CD screening world wide, and as more is learned about the natural history of CD.

In the meantime, however, these tests can play an important role in case finding when it is not clear whether biopsy is indicated. This would apply to patients from high-risk groups or with suggestive rather than classic symptoms. Serologic testing can also be useful in decreasing the number of unnecessary biopsies. AGA and EMA testing makes good clinical and diagnostic sense and should be used more widely in Canada. It is worth emphasizing, however, that small-bowel biopsy remains the only way to diagnose CD definitively and is the only test upon which to base a recommendation for dietary management.

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