SHORT REPORT

Unrecognised coeliac disease is common in healthcare students

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Coeliac disease is a lifelong intolerance to dietary gluten. Untreated it can result in malabsorption, vitamin deficiencies, anaemia, and osteoporosis. Although histology remains the cornerstone of diagnosis, over the past decade serological testing for coeliac disease has facilitated the earlier recognition of coeliac disease and the detection of milder cases.[1] Recent studies have suggested that tissue transglutaminase (TTG) antibodies may be used to detect coeliac disease in children with a genetic risk for it.[2] Children at high risk for coeliac disease include those with a family history of coeliac disease, autoimmune thyroid disease, insulin dependent diabetes, Down's syndrome, and Noonan's syndrome. Serological prevalence data from a number of studies have indicated that coeliac disease may be far more common in Europe and North Africa than previously thought. It seems likely that there is a similar under-reporting of coeliac disease in the UK, which may have important health consequences as dietary avoidance of gluten results in a complete remission of the disease and prevents the two major complications—malignancy and osteoporosis[3]—as well as decreasing mortality in CD patients.[4]

The aim of the study was to prospectively estimate the frequency of coeliac disease in a population of young adults enrolling as healthcare students at the University of Wales College of Medicine.

METHODS

All new healthcare students were informed of the prospective study at the time when they were already undergoing serological examination for hepatitis B vaccination status. They were advised that they could have serological examination for the possibility of coeliac disease with counselling by an adult gastroenterologist if these tests were positive. Written consent was obtained in all cases and the project approved by the local research ethics committee. Tissue transglutaminase (Orgentec ELISA), antigliadin antibody estimation (Pharmacia Cap), and total IgA level analyses were performed on all students. Those students with raised TTG antibodies (>15 IU) also had serological examination for antiendomysial antibodies by immunofluorescence and their TTG assays repeated on the same sample. Those with positive TTG values on two occasions were referred to an adult gastroenterologist.

RESULTS

One thousand healthcare students were tested between August 2000 and January 2002. All antigliadin antibodies were negative. TTG antibodies were raised on two occasions for 17 students. Of these, six had positive and 11 negative antiendomysial antibodies. Fifteen students agreed to endoscopy and biopsy, of whom six had classical histological findings of coeliac disease and nine had normal histology. Of the six students with biopsy proven coeliac disease, two had iron deficiency anaemia, five were asymptomatic, and one had non-specific abdominal pain.

DISCUSSION

In this prospective study we have found a high prevalence of unrecognised coeliac disease in healthcare students, with the incidence of biopsy proven coeliac disease at least 1 in 166 in this selected young adult population. This is 15–40 times higher than the estimate described in the current standard UK paediatric textbook of 1 in 2000–6000.[5] It is clear that further epidemiological studies are urgently required in adults and children. Although the arguments for screening for it remain delicately balanced, we feel that targeted screening of selective high risk groups is justified for those with a family history of coeliac disease, autoimmune thyroid disease, insulin dependent diabetes, Down's syndrome, and Noonan's syndrome, as this may eliminate long term complications.

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Orgentec provided the ELISA kits for TTG analysis and Pharmacia provided those for antigliadin analysis.

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