Publication of the Month

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February 02/07: Recent advances in coeliac diseases

Several screening studies worldwide have shown that approximately 1% of the population may have undetected coeliac disease. The prevalence is even higher in first and second degree relatives of people with coeliac disease. This high prevalence combined with increasing population and primary care awareness is leading to more and more referrals. Consequently many more patients with no or only mild clinical symptoms are identified. These changes in clinical practice have been paralleled by a dramatic increase in our knowledge of disease pathogenesis, making coeliac disease the best understood human "autoimmune" disorder.
In the following review article, the authors present selected major recent advances in both clinical and basic science aspects of coeliac disease:

Van Heel DA, West J (2006)
Recent Advances in Coeliac Disease
Gut 55, 1037-1046

Starting with a review of all recent epidemiological studies, this paper covers clinical manifestations, impact of undetected coeliac disease, impact of clinically diagnosed coeliac disease, clinical implications of basic science advances, and finally ends with diagnostics and therapeutics.

With the appreciation of the high prevalence of coeliac disease, there is increasing use of serology in screening asymptomatic people and testing those with suggestive features. Another review, also published in 2006, focuses on serodiagnosis and its growing role:

Lewis NR, Scott BB (2006)
Systematic review: the use of serology to exclude or diagnose coeliac disease (a comparison of the endomysial and tissue transglutaminase antibody tests)
Aliment Pharmacol Ther 24, 47-54

34 studies fulfilled the reviewers' criteria of being a peer reviewed published study, the study included untreated patients and controls, both EMA and tTG antibody were tested, all patients had had a biopsy with clear diagnostic criteria, and it was clear which controls were biopsy negative and which had not been biopsied. In table 1 all studies are listed, including number of patients and sensitivity and specificity for EMA and anti-tTG. From the results of this review the authors recommend the use of recombinant human tTG antibody test to exclude coeliac disease if the pretest probability is low. If it is positive they recommend small bowel biopsy to confirm the diagnosis. If for any reason biopsy is precluded then the EMA test could be used to confirm the diagnosis.

On the theme of coeliac disease, we came across a prospective study on pathogenesis which might be of interest:

Steene LC, Honeyman MC, Hoffenberg EJ et al. (2006)
Rotavirus infection frequency and risk of celiac disease autoimmunity in early childhood: a longitudinal study
Am J Gastroenterol 101, 2333-2340

1,931 children, who carried HLA risk alleles for coeliac disease were followed from infancy. Anti-tTG and rotavirus antibodies were assayed in serial serum samples from each child and 2 matched controls. 54 children developed coeliac disease. This study provides the first indication that a high frequency of rotavirus infection may increase the risk of coeliac disease in childhood in genetically predisposed individuals.