

October 10/10: Epidemic of Celiac Disease in Sweden

Myléus A, Ivarsson A, Webb C, Danielsson L, Hernell O, Högberg L, Karlsson E, Lagerqvist C, Norström F, Rosén A, Sandström O, Stenhammar L, Stenlund H, Wall S, Carlsson A

Celiac Disease Revealed in 3% of Swedish 12-year-olds Born During an Epidemic

J Pediatr Gastroenterol Nutrition 2009, 49: 170-176

Introduction:

Screening studies in children report a prevalence between 0.3 and 1.4%, with the exception of 5.6% in Sharawi children in Algeria. Most cases are undiagnosed so far. Sweden experienced a marked epidemic of celiac between 1984 and 1996. The incidence rate of symptomatic celiac disease in children younger than two years of age increased 4-fold within a few years and declined in an equally abrupt manner about two decade later. The epidemic was partly explained by changes in infant feeding. Before the epidemic, a national recommendation was made to postpone introduction of gluten from 4 to 6 months of age, an interval during which breast-feeding was often discontinued. At the same time, but unrelated to this, the gluten content of commercially available milk cereal drinks and porridges was increased. When the epidemic ended it was preceded by a recommendation to introduce gluten gradually, preferably while still breast-feeding, as well as a reduction in the gluten content in commercially available infant foods. Thus, as a result, Sweden has birth cohorts that differ with respect to infant feeding.

The objective of the study entitled Exploring the Iceberg of Celiacs in Sweden (ETICS) was to determine the prevalence of celiac disease in 12-year-old children born during the Swedish epidemic (1993), including both previously diagnosed cases and screening detected cases.

Results:

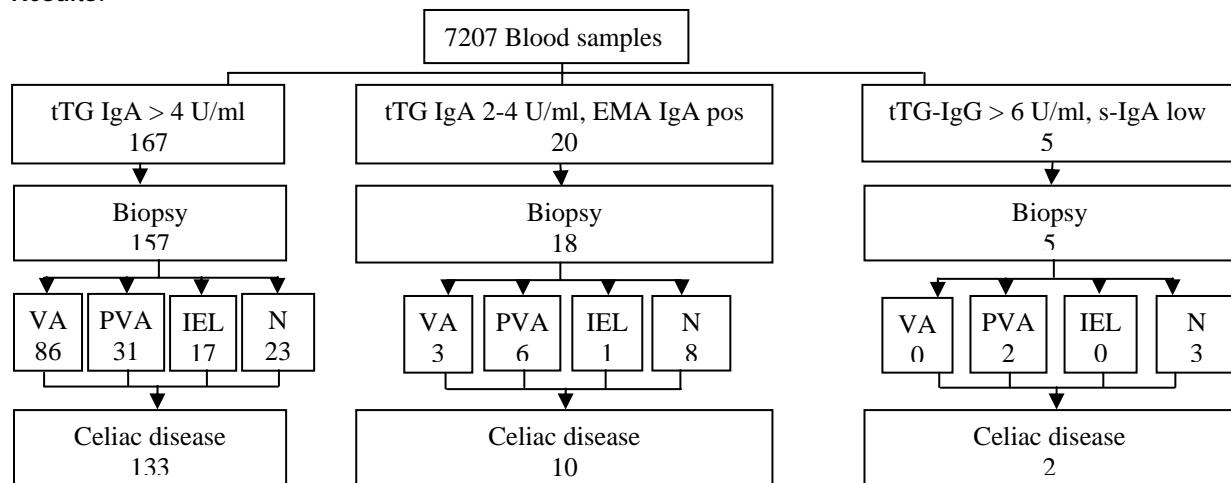


Fig.: Blood samples were analyzed for anti-tTG (Celikey from Phadia). Equivocals were tested also for EMAs. Serum-IgA <0.5 g/L was defined as low. Small intestinal biopsies were subcategorized into subtotal/total villous atrophy (VA), partial villous atrophy (PVA), increased intraepithelial lymphocytes count (IEL), or normal mucosa (N). All but 1 children with IEL reported symptoms such as tiredness, stomach ache, nausea or underweight.

Previously diagnosed celiac disease was found in 67 children. In another 145 children, celiac disease was verified. The total prevalence was 2.9 %. The prevalence in these children is 3-fold higher than the usually suggested prevalence of 1%. When these 12-year-olds were infants, the prevailing feeding practice was to introduce gluten abruptly, often without ongoing breast-feeding, which might have contributed to this unexpected high prevalence.

