Celiac Disease Prevalent in 12% of Type 1 Children

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New York — Diagnosis and treatment of symptomatic celiac disease in children with type 1 diabetes can result in significant improvement in growth parameters and symptom relief, according to a study from Denmark.

"The data lend support to recommendations of regular screening for celiac disease in children with type 1 diabetes," wrote Dr. Dorte Hansen of Odense (Denmark) University Hospital (Diabetes Care 2006;29:2452-6).

The study screened 269 children with type 1 diabetes and found a 12.3% prevalence of biopsy-confirmed celiac disease—the highest reported prevalence of celiac disease in patients with type 1 diabetes in Europe.

Only 5 (15%) of the 33 patients with celiac disease had been diagnosed prior to the study, even though the majority reported symptoms at baseline. "Despite an increased clinical awareness from physicians, celiac disease may remain undiagnosed in many patients with type 1 diabetes if regular screening is not performed," they wrote.

Compared with diabetic patients without celiac disease, the children with concomitant diabetes and celiac "were stunted in their growth, with both height and weight … being affected," the authors wrote. The average ages of the study patients were 11.1 years for diabetic children without celiac disease and 9.4 years for those with celiac disease.

A total of 31 of the 33 diagnosed patients initiated a gluten-free diet and stayed on it for 2 years. At the end of follow-up, those who had been symptomatic reported a significant reduction in abdominal pain, loose or frequent stools, bloating, constipation, arthralgias, fatigue, and aphthous ulcers, compared with baseline.

In terms of diabetic control, although two patients experienced fewer episodes of hypoglycemia after starting a gluten-free diet, there were no significant changes in metabolic control, with hemoglobin A_{1c} levels remaining almost unchanged from baseline, the authors reported.

The benefits of adding gluten restriction to the already restricted diet of children with type 1 diabetes should be carefully examined before this treatment is routinely recommended to all children with these two disorders, warned Dr. Richard Logan of Nottingham (England) University.

A diet that addresses both of these conditions is "quite demanding," he said in an interview at an international symposium on celiac disease. "Given that this really is quite an imposition, we have to be absolutely sure that it is beneficial before we recommend it," he said.

Preliminary results from another study presented at the meeting leave this question unanswered.

The study included diabetic children with celiac disease who self-selected to follow a gluten-free diet (36 subjects) or a regular diet (29 subjects) for 12 months. At entry, the celiac patients weighed less, had increased evidence of bone turnover, had similar bone mineral density, and had similar diabetes control, compared with a control group of nonceliac diabetic patients, reported the study's investigator Dr. Edward Hoffenberg, director of the Center for Pediatric Inflammatory Bowel Diseases at the Children's Hospital, Denver.

"The potential advantages of early diagnosis and treatment of celiac disease in children with type 1 diabetes may include improved growth, improved bone mineralization, and improved diabetes control, perhaps by a reduction in hypoglycemic events," said Dr. Hoffenberg, also of the University of Colorado, Denver.

He emphasized that all of the celiac patients in his study were asymptomatic—a major difference from the European study. "For those diabetic children with clinical evidence of celiac disease, [a gluten-free diet] does help," he said in an interview. "We focused primarily on diabetic children without significant symptoms of celiac disease."

His study found that after 1 year, patients on a gluten-free diet had no significant changes in weight, bone turnover, or diabetic control, compared with celiac disease patients on a normal diet or control diabetic patients who did not have celiac disease.

"We're not saying these children can have a free ride and don't need to ever go on a gluten-free diet, but we just don't know when it should begin," said Dr. Hoffenberg. ■