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50 Years Ago in *THE JOURNAL OF PEDIATRICS*

Association of Type 1 Diabetes Mellitus and Celiac Disease: Then and Now

Penny R, Thompson RG, Polmar SH, Schultz RB. Pancreatitis, malabsorption, and IgA deficiency in a child with diabetes. J Pediatr 1971;78:512-6.

Fifty years ago, the medical community recognized 2 distinct types of diabetes mellitus, one mostly diagnosed in childhood and another with an adult-onset. Contemporaneously, the first set of diagnostic criteria for celiac disease established the causal relationship between dietary gluten and villous atrophy on intestinal biopsy. However, the autoimmune etiologies of these 2 diseases had not yet been elucidated.

A pattern emerged of children with diabetes with coexistent malabsorption. In 1971, Penny et al published a case report of a 5-year-old girl diagnosed with diabetes at the age of 2 years. One year after diagnosis, she began experiencing abdominal pain, foul-smelling stools, and weight loss. After 11 months of symptoms, she was hospitalized with ascites, pancreatitis, and steatorrhea. She was discharged on pancreatic enzymes but was re-hospitalized for no weight gain. A duodenal biopsy revealed absence of villi and chronic inflammation consistent with celiac disease. She was placed on a gluten-free diet, and after 1 year, had gained 13 pounds.

Fifty years later, the association between celiac disease and type 1 diabetes (T1D) is well recognized. Now, children newly diagnosed with T1D are screened at regular intervals for celiac disease, and most cases develop within 5 years of their diabetes diagnosis. Research continues to better understand the autoimmune etiologies of T1D and celiac disease and their pathophysiologic relationship; studies describe genetic susceptibilities for both with the HLA-DR3-DQ2 and HLA-DR4-DQ8 gene loci.[1] Therapy for T1D has evolved significantly in the past 50 years, although as environmental triggers are still unclear, prevention strategies remain elusive. Awareness and diagnosis of celiac disease also has increased, and a gluten-free diet successfully treats celiac disease. However, the burden of this co-diagnosis continues and requires expanded therapies,[2] prevention, and a cure.

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