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EDITORIAL

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Screening for coeliac disease in type 1 diabetes

In this issue of *Acta Paediatrica*, Laitinen et al. (1) explore symptoms and mucosal damage in 22 patients with type 1 diabetes who were screened for coeliac disease and compared them to 498 individuals diagnosed with coeliac disease on a clinical basis. The authors concluded that screening for coeliac disease should be considered among children with type 1 diabetes, which is in line with current recommendations (2–4). A meta-analysis found that coeliac disease occurred in more than one in 20 patients with type 1 diabetes (5), and long-term coeliac disease may influence the risk of both retinopathy and chronic renal disease in type 1 diabetes (6,7), potentially due to an increased prevalence of microvascular complications in patients with both type 1 diabetes and coeliac disease (8).

The paper by Laitinen et al. (1) is interesting for several reasons. First of all, the authors found that patients with type 1 diabetes and coeliac disease did differ from patients diagnosed with coeliac disease due to clinical symptoms. For instance, patients with type 1 diabetes and coeliac disease did not experience such poor growth as those with clinically diagnosed coeliac disease. That is reassuring, as poor growth in childhood can have long-term consequences. Although catch-up growth is commonly seen in children with coeliac disease just after diagnosis, restricting food intake to make a diet suitable for both type 1 diabetes and coeliac disease could theoretically make catch-up growth more difficult to achieve. The authors also found that while children with type 1 diabetes and coeliac disease often had unrecognised gluten-dependent symptoms, these were less severe than in children who were clinically diagnosed with coeliac disease. That was to be expected, because otherwise the children with type 1 diabetes and coeliac disease should have been diagnosed before, due to gastrointestinal symptoms, rather than just after their diagnosis of type 1 diabetes. We believe that the lower prevalence of symptoms reflects the fact that patients with type 1 diabetes and coeliac disease may have less severe small-bowel mucosal atrophy than patients who just have coeliac disease. We disagree with Laitinen et al. on their interpretation in this regard, as we believe that the lack of difference with regard to mucosal atrophy in their study was due to lack of power. Laitinen et al. based their findings on only 22 patients with type 1 diabetes and coeliac disease and the statistical lack of difference was probably due to the equal proportions of patients with subtotal villous atrophy. Estimating total villous atrophy from their Figure 1B seems to indicate that it was more common in patients with clinical suspicion of coeliac disease (roughly 23% versus 9%), while partial villous atrophy was more common in patients with type 1 diabetes (52% versus roughly 32%).

The same objection could be raised about the conclusion that dietary adherence was similar in patients with both type 1 diabetes and coeliac disease and those with just coeliac disease. The power for dietary adherence was limited in type 1 diabetes and coeliac disease patients as there was only dietary data for 16 of the 22 patients, and the p value of 0.086 may have reached statistical significance if the type 1 diabetes and coeliac disease group had been larger. This said, it should be emphasised that a very high proportion of patients with type 1 diabetes and coeliac disease did comply with the diet. Nevertheless, the long-term implications of prescribing a life-long diet for a child based on screening are unknown, as adherence to a gluten-free diet may decline in adolescence among children with screen-detected coeliac disease. While the strongest evidence for the value of screening for coeliac disease would be derived from a randomised trial, in which a nonscreened group would be compared to a screened group with regard to morbidity, the length and expense of such a trial would probably be prohibitive. As such, we rely on observational studies, such as those by Laitinen et al., to inform us of the potential outcomes of screening.

In conclusion, this article makes a valuable contribution to the literature and once again underlines the potential value of examining children with type 1 diabetes for other autoimmunity problems, including coeliac disease.

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Jonas F. Ludvigsson (jonasludvigsson@yahoo.com)[1,2,3,4], *Benjamin Lebwohl*[4]
1.Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden

2.Department of Pediatrics, Örebro University Hospital, Örebro, Sweden
3.Division of Epidemiology and Public Health, School of Medicine, University of Nottingham, City Hospital, Nottingham, UK
4.Department of Medicine, Celiac Disease Center, Columbia University College of Physicians and Surgeons, New York, NY, USA

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