COMMENT ON CRAIG ET AL.

Prevalence of Celiac Disease in 52,721 Youth With Type 1 Diabetes: International Comparison Across Three Continents. Diabetes Care 2017;40:1034–1040

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We read with interest the data by Craig et al. (1) about the prevalence of celiac disease (CD) in 52,721 youth with type 1 diabetes (T1D). The authors found a prevalence of 3.5% based on four national registries (range 1.9–7.7). We would like to share the experience of five centers of pediatric diabetes care of northern Italy (Bologna, Florence, Genoa, Trento, and Turin): we recently collected data on 2,164 children and adolescents with T1D and found 213 subjects affected by both CD and T1D (punctual prevalence 9.8% [range 6.8–12.8]). As in Italy there is no registry for pediatric diabetes, and in order to avoid a "hot spot effect" (big centers attract complex subjects), we focused only on the new diagnoses of T1D in the five centers between January 2005 and December 2012, with a minimum follow-up of 2 years. The cumulative incidence was 8.5%, higher than that reported by Craig et al. It is known that geographical differences in CD prevalence can exist even within a genetically stable population (2), and experts partly justified the variation by exogenous factors. Thus, this variation could be basically explained by a different incidence of CD in different geographical areas. Interestingly, the incidence is higher than previously reported by other Italian surveys (3). As T1D subjects have always been considered an "at-risk population" for CD, the increased prevalence is likely not only due to more active screening programs; some authors affirmed that the westernization of the diet and changes in wheat production may play an important role (4). Craig et al. reported that CD was diagnosed before T1D in 5.4% of case subjects and that 37% were diagnosed with CD within the first year after diagnosis of T1D. However, it is not clear whether the authors have considered CD diagnosed at diabetes onset as preexisting. Surprisingly, in our cohort, CD diagnosis preceded T1D in 19.3% of case subjects, and subjects were already on a gluten-free diet at diabetes diagnosis. The mean interval between CD and T1D diagnosis was 4.4 years (range 0.32–11.8). Moreover, 45.6% of subjects showed first CD autoantibody positivity at T1D onset, and CD was subsequently confirmed via biopsy. Although great attention to the risk of CD in Italy could have allowed early diagnosis in asymptomatic subjects who subsequently developed T1D, it is still debated whether CD diagnosed at T1D onset is to be considered preexisting. Simell et al. (5) analyzed the age at development of T1D and CD in genetically susceptible children and observed that those who developed both associated antibodies generated the two types of antibodies, usually in a random order within a short time interval, and therefore they should be considered as a separate subgroup. Our data suggested that the T1D–CD association can markedly vary in different areas with a prevalence that seems to increase over time. Although our study was not designed to assess the development of T1D in CD subjects, we observed that diabetes seemed to occur more frequently in subjects with CD; therefore, screening for diabetes autoantibodies should be performed regularly.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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