

Title: Factors associated with adherence to a gluten-free diet in patients with concomitant celiac disease and type 1 diabetes

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Abstract

Introduction: Celiac disease (CeD) and type 1 diabetes (T1D) often coexist. The burden of two concomitant autoimmune conditions predisposes patients to impaired adherence to a gluten-free diet (GFD). Currently, factors associated with dietary lapses in this group remain unclear.

Methods: We compared the baseline characteristics and long-term treatment outcomes between adherent and non-adherent CeD patients with co-existing T1D.

Results: Altogether 125 patients had co-existing CeD and T1D, but 56 were excluded due to insufficient or unclear data or since CeD was diagnosed before T1D. Of the remaining 69 patients, 45% were females, and the median age at T1D diagnosis was 6.0 years and at CeD diagnosis 8.8 years. CeD was diagnosed in connection with T1D diagnosis in 22 patients and later in 47 patients. After median of 2.0 (quartiles 1.0-6.0) years from CeD diagnosis, 73% of the patients were adherent and 27% non-adherent to a GFD. Adherent patients were detected more often by annual CeD screening (88 % vs 63 %, $p=0.041$), whereas they did not differ from non-adherent in the severity of clinical symptoms or duodenal lesion at diagnosis, sex, family risk for CeD or T1D, presence of other chronic diseases, age at or time between T1D and CeD diagnoses, or CeD autoantibody levels at diagnosis or on a GFD.

Conclusions: CeD patients with concomitant T1D presented with suboptimal adherence to a GFD. However, receiving a CeD diagnosis by systematic screening was not a risk factor for non-adherence and could even be beneficial in this respect.