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Short Communication

Gluten free diet does not alter diabetic control in children with “silent” celiac disease

Manoj K Ghoda^{1*} and Atit Ghoda²

¹Senior Consultant Gastroenterologist, Gujarat Gastro Group, Gujarat University, India

²Clinical Fellow, Department of Acute Medicine, East Sussex Hospital, U.K

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*Corresponding author: Dr Manoj K Ghoda, Senior Consultant Gastroenterologist, Gujarat Gastro Group, 2nd floor, Aeon complex, Opp: Navkar Institute, Vijay Cross road, Ahmedabad 380009, India, Tel: +91-9824024165; E-mail: mkgghoda@gmail.com; mkgghoda@yahoo.com

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Celiac disease which is an autoimmune enteropathy has a well recognized association with type I diabetes in about 3.5 to 10% of patients [1]. Routine screening for celiac disease is now recommended for newly detected type I diabetes along with other autoimmune conditions like thyroid disorders.

We provide secondary and tertiary care for gastroenterological problems. We have observed following relationship with type I diabetes and celiac disease.

Celiac disease in type I diabetes has predominantly a “silent” presentation, without associated failure to thrive, diarrhea, bloating, iron deficiency anemia etcetera (in 52 out of 63 of our patients). It was diagnosed by strongly positive Tissue Transglutaminase Antibodies (TTGA) followed by various grades of villous atrophy on endoscopic deep duodenal biopsy as per Marsh criteria [2,3]. The reason for investigating for Celiac disease was our diagnostic protocol.

Out of this cohort of 63 children, there were 9 children who were diagnosed with diabetes *elsewhere* but testing for Celiac disease was not done at the time of diagnosis of diabetes, and therefore they continued on routine gluten containing diet for at least 6 months or more. So they were put on gluten free diet after they came under our care and thereby giving us an important in site in to the effect of gluten containing diet on diabetes control.

We found that out of these 9 children, most of the children (7 out of 9; mean age 7.2 years) did not differ in their Insulin requirement, HbA1c levels and episodes of hypoglycemia or ketoacidosis, as judged from their records for at least six months pre and post gluten free diet. (If there was more than 10% change in either Insulin requirement or HbA1c levels, this

was considered significant).

It appears that for some yet unknown reasons celiac disease in type I diabetic children remains “silent”, at least for a period, and clinical and biochemical benefits of gluten free diet are not obvious in short term. This causes difficulty in encouraging gluten free diet (Table I).

Our observations are consistent with others [4,5], as far as the need for testing for Celiac disease in all children with type I diabetes; however we are odds with their finding of benefit of gluten free diet. The reason could be that we had a much shorter follow up and our sole focus was on effect of GFD on diabetes control. Long term follow up is required to see if these silent cases become symptomatic (Figure 1).

Table 1:

	Major symptoms of Celiac disease: Diarrhea, bloating, failure to thrive, anemia.	No Celiac disease related symptoms (“silent”)
Total n=63	9	54

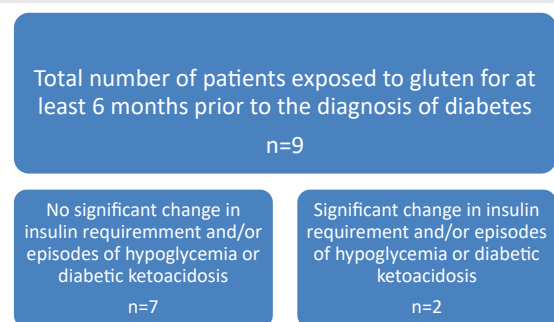


Figure 1: A flow diagram of patients showing diabetes control of diabetes pre and post gluten free diet.



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