Celiac disease and lactose intolerance in North Indian children

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Introduction: Celiac disease may be asymptomatic or symptomatic with severe malabsorption. Symptoms of malabsorption in celiac disease include chronic diarrhea, abdominal distention, failure to thrive and nutritional deficiencies. Celiac disease could lead to lactase deficiency. It can lead to lactose intolerance but it has not been reported in North Indians. Therefore, the study was planned to elucidate lactose intolerance in children with celiac disease.

Materials & Method: Lactose intolerance was estimated by using non-invasive lactose hydrogen breath test in 155 children suffering from celiac disease and 110 age & sex matched apparently healthy controls. 25g lactose dissolved in 250 ml water was given orally for lactose hydrogen breath test to all subjects after measuring fasting breath H2 and CH4 concentrations. End expiratory breath was collected every 30 minutes up to 4 hrs. H2 & CH4 concentrations were measured by using Microlyzer. Rise ≥20ppm over base line value in H2 and/or CH4 concentration in two consecutive readings was considered as lactose intolerance.

Results: Out of 155 children, 90 (58.06%) were boys and 65 (41.94%) were girls. The age range of children was 3-13 years. The Mean ± SD of age was 7.5±2.9 years. Out of 110 healthy controls, 65 (59.09%) were boys and 45 (40.91 %) were girls. Lactose intolerance was significantly higher (p<0.0001) in celiac patients (106/155; 68.4%) as compared to controls (40/110; 36.4%).

Conclusion: This study indicates that lactose intolerance is common among children with celiac disease which can be one of the causes for gastrointestinal symptoms.

Biography

Satya Vati Rana is working as faculty in field of Clinical Biochemistry related to Gastroenterology since 1988. Throughout her career; she has worked on non-invasive malabsorption diagnostic tests for various gastrointestinal diseases. Her field of specialization is various aspects of gastrointestinal problems in different diseases like celiac, type 1 diabetes, IBS, IBD etc. She is actively involved in the research studies related to pathological, risk factors and preventive aspects of malabsorption syndromes. Her expertise is also in oxidative stress and antioxidants in different gastrointestinal diseases, hepatotoxicity and its prevention. She has published various research papers and review articles in national and international journals.

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