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Diarrhoeal disease is one of the leading causes of morbidity and mortality among infants and preschool children in developing countries. Majority of the diarrhoeal episodes are acute and self-limiting. Protracted diarrhoea is defined as persistence of diarrhoea beyond 2 weeks with at least 4 liquid stools per day, with no weight gain or with weight loss and where conventional line of treatment has failed.

Protracted diarrhoea is associated with deterioration in nutritional status and there is a substantial risk of death.

There are various causes of protracted diarrhoea, viz., Enzyme deficiency, Villous atrophy, persistant infection, inflammatory bowel disease, metabolic disorder etc. Despite the best investigative set-up, etiology of protracted diarrhoea may remain unknown in as many as 30% of infants. Of the known causes, carbohydrate intolerance and milk protein intolerance are the commonest in our country. The hallmark of this disorder in infants is a persistent mucosal injury. Several secondary factors supervene to perpetuate the mucosal
abnormality and lead to vicious cycle of diarrhoea - malabsorption - malnutrition - diarrhoea. Clinically, the severity ranges from critically ill patients requiring sophisticated hospital treatment to those who are moderately ill and recover slowly over weeks or months or promptly with dietary and other therapeutic measures.

Alteration in the digestion and absorption of carbohydrates may lead to carbohydrate intolerance in patients of all age groups. Alteration may occur in the form of primary inborn defect of absorptive ability, involving lactose, sucrose, isomaltose or it could be due to ethnic characteristics of lactose malabsorption which affects a majority of world's population and is given the name of Ontogenetic Lactase Deficiency. Carbohydrate malabsorption may also occur as a result of secondary alteration in the absorptive capacity in a variety of clinical disorders.

Secondary carbohydrate intolerance was first recognized at the beginning of this century in infants with transient lactose intolerance, following gastro-enteritis. A prolonged and severe illness was attributed to the presence of this complication which was alleviated when the offending carbohydrate viz., lactose was eliminated from the diet. It is known that secondary
carbohydrate intolerance is associated with any one of the several diverse systemic and/or intestinal disorders. Secondary carbohydrate intolerance is usually related to a depression of small intestinal oligosaccharidase activity as a result of mucosal damage induced by the primary disease process. The lesion may affect lactase and/or one or all of the mucosal oligosaccharidases. It may also alter the intestinal transport process, and at times even intestinal permeability.

Malabsorption of lactose is a problem of special importance for 2 reasons: 1) the sugar is the major carbohydrate in milk and is poorly absorbed as against all other intestinal disaccharides; 2) the intestinal lactase is the most sensitive of all the intestinal disaccharidases to be affected by intestinal infection. Therefore, lactose malabsorption is one of the most sensitive indicators of mild intestinal insult.

Sugar malabsorption may not only worsen the diarrhoeal symptoms but may also contribute substantially to the perpetuation and promotion of bacterial overgrowth.

Besides, enteritis and diarrhoeal diseases which are the leading causes of carbohydrate intolerance, pathophysiological stress like hypoxia, can also lead to similar condition.
There are various methods for diagnosing this important condition, ranging from simple screening test like demonstration of reducing substance in stool to more sophisticated hydrogen breath test. Among the whole battery of tests are oral lactose loading test, jejunal biopsy and stool chromatography for detecting the offending sugar.

The purpose of this study was to find out the prevalence of carbohydrate intolerance in protracted diarrhoea and to evaluate various diagnostic methods available for the diagnosis of sugar intolerance.