

Prevalence of Lactose Intolerance and its Association with Malnutrition in Children

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Introduction: Lactose Intolerance is an important indicator of under nutrition, as studied in many setting. More than 60% especially in older school going children had a hypolactasia and half of them had Lactose intolerance. Another dimension of the problem could be lactose intolerance leading to underweight.

Objectives: 1. To determine the prevalence of Lactose intolerance in 5-15 years of age group. 2. To determine the peak age group that is most susceptible to lactose intolerance in children of 05 years to 15 years of age. 3. To find out association of lactose intolerance with malnutrition.

Methodology: This is a cross sectional study design where a randomly selected 220 children of school going age were provided with lactose drink and their intolerance was assessed by H2 breath test. The child ingests a load of carbohydrate 2 gram/kg maximum 50 gram and the breath is collected in sealed plastic containing and limited interval up 2 hour after ingestion. The hydrogen content of the gas can be easily measured and is reported in particle per min.(ppm) and that's how malabsorption of any lactose can be evaluated.

Results: Results of this study shows 31% percent prevalence in children, who had Lactose intolerance in-group of 220 asymptomatic children. In this study the highest number of Lactose Intolerance was found in oldest age group that is more than eleven years and 33% in lowest age group (less than 8 years of age). The numbers of tolerant and intolerant children in normal height group were 73% and 27% respectively. Stunted group had 42% intolerant and 58% tolerant Children. But when tolerant group (Negative HBT) was observed the difference in stunted and normal height group children was statistically significant ($p=0.034$).

Difference in the number of intolerant children (Positive HBT) in stunted group and normal height group was not statistically significant. 25.9% were underweight, amongst them 37% were intolerant and 63% were tolerant, but on the other hand 74.1% normal weight children, whose weight was above the 80% of median, 28.8% were intolerant and 71.2% were tolerant. This also indicates that underweight children had more intolerance in comparison to normal weight children but this was not statistically significant ($p=0.26$).

Conclusion: It is possible that nutritional status may affect lactose absorption, so that lactose mal-absorbers may be less well nourished than lactose absorbers. We could not fully link up the lactose intolerance and under-nutrition, but we can recommend on the bases of finding in this research that whenever new policies of combating malnutrition were framed, use of milk in supplementation program should be used with caution.

Keywords: Lactose intolerance, Malnutrition, Hydrogen breathe test, Stunted, Underweight, Wasted.