SUMMARY AND CONCLUSIONS
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The present study was conducted in the Departments of Paediatrics and Biochemistry, M.I.B. Medical College, Jhansi, for a period of one year from 1st July 1992 to 15th July 1993. The cases included in this study comprised of children presenting with protracted diarrhoea.

Altogether seventy five children presenting with protracted diarrhoea were studied. Aim of this study was to find out the prevalence of carbohydrate intolerance in protracted diarrhoea, to find out the type of sugar intolerance and to evaluate the diagnostic methods available for finding out the sugar intolerance in protracted diarrhoea.

In each case, a detailed history particularly with regard to diarrhoea, its duration and severity and other complaints were noted. A detailed dietary history regarding the nature of feeds, average amount of proteins and calories consumed was recorded.

The diagnostic procedure employed for detecting sugar intolerance was Thin Layer Chromatography. Prior
to that all the screening tests, viz., stool pH, stool reducing substance by Benedict's and Rubner's test were done.

The results obtained are summarized as follows:

1. The prevalence of carbohydrate intolerance in protracted diarrhoea was 46.67%.

2. Carbohydrate intolerance was predominantly a problem of the latter half of infancy with 52% of cases occurring in this age group.

3. There was a definite male preponderance in carbohydrate intolerance (male to female ratio being 2.2 : 1).

4. Sugar intolerance was predominantly a problem affecting the children in the lower socio-economic strata. 71.4% of the cases belonged to this group.

5. More than half (52%) of the patients in this study had either normal nutritional status or they fell in grade I malnutrition. Grade II to IV malnutrition was present in the remaining cases.

6. Antibiotics had been administered to seventy four percent of the cases, prior to admission, who subsequently developed sugar intolerance.
7. More than half (57%) of the children were on Cow's or buffalo milk in addition to breast milk when they developed the problem of sugar intolerance. Another 25.8% cases were on some kind of proprietary preparation in addition to breast milk. Rest of 11.4% cases were exclusively breast fed.

8. Watery diarrhoea was observed in 85% of children suffering from sugar intolerance. Stool frequency was more than 10/day in 57% cases. Perianal excoriation was present in all the cases of sugar intolerance.

9. Nearly 17% of cases had associated systemic diseases, viz., asthmatic bronchitis, bronchopneumonia, severe anemia etc.

10. On macroscopic examination, stool was greenish yellow, foul smelling and/or frothy in 65.7% of cases. No fat globules or pus cells were seen in any of the cases. On microscopic examination, Giardiasis was also not seen in any of the cases. Stool culture revealed organisms predominantly E. coli in 17.1% of cases.

11. Stool pH was 6 or below 6 in all the cases. In 31.4% of cases mean stool pH was 6, while in 45.7% cases it was 5.

12. Benedict's test for reducing agent in stool showed 0.25 - 0.99 gm% sugar in 71.4% cases.
13. It was also found out in the present study that Rubner's test was a more specific test as compared to Benedict's test in finding out sugar intolerance. It's specificity in sugar intolerance was 95.1% as compared to 80.6% in Benedict's test. But Rubner's test was less sensitive, with 97.5% as compared to Benedict's test (94.6%).

14. Stool chromatography was found to be a highly sensitive and reliable indicator of the presence of sugar intolerance. Lactose alone was present in 65.7% of cases. Lactose in addition to galactose was detected in 14.3% cases. In 11.6% cases, lactose was present in addition to glucose, while in 2.8% of cases lactose was seen in addition to sucrose. In only 5.6% of cases triple sugar intolerance was detected.