SUMMARY AND CONCLUSION
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The present study was conducted in Department of Pediatrics, Biochemistry and Microbiology, M.L.B. Medical College, Jhansi, for a period of one year from 10.9.94 to 15.9.95. The cases included in this study comprised of children presenting with chronic diarrhoea.

Altogether eighty five children presenting with chronic diarrhoea were studied. Aim of this study was to find out the prevalence of lactose intolerance in chronic diarrhoea, and to assess the efficacy of soya based lactose free formula in lactose intolerance patients and to do a comparative evaluation vis-a-vis antibiotics therapy in the management of cases of lactose intolerance.

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, status of malnutrition was recorded.

The diagnostic procedure employed for detecting lactose intolerance was thin layer chromatography. Prior to that all the screening tests viz. stool pH, stool reducing substance by Benedict's and Rubner's tests were done.

Treatment given to children were kept in 3 groups. One group of 18 patients which were treated
with soya based lactose free milk alone. In second group of 11 children treated with antibiotics (Amikacin) alone and 3 cases were kept on both antibiotics and soya based lactose free formula. Cases who required another additional therapy such as antiamoebic and antifungal were not included in this study.

The results obtained are summarised as follows:

1. The prevalence of carbohydrate intolerance in chronic diarrhoea was 52.35%.
2. The prevalence of lactose intolerance among total patients of carbohydrate intolerance was 71.1%.
3. Lactose intolerance was predominantly a problem of the latter half of infancy, majority of cases (37.5%) occurring in this age group, mean age was 9 months.
4. There was a definite male preponderance in lactose intolerance with male : female ratio being 2.2:1.
5. Lactose intolerance was predominantly a problem affecting the children in the lower socio-economic strata, 78.12% of cases belonged to this group.
6. Majority of patients (56.25%) in this study had either grade II and III malnutrition. Remaining of the cases were in grade I and IV malnutrition. Only 6.25% cases had normal nutrition.
7. Antibiotics had been administered to 87.50% of cases who developed lactose intolerance prior to admission.
8. In present study it was seen that among 85 cases, 56% of cases were on breast feed alone and 35% of cases received artificial milk (cow's/buffalow milk) alone. Remaining of the cases were on breast milk and some semisolid household proprietary preparation. It was concluded in present study that breast fed babies were more prone to develop lactose intolerance.

9. Out of 32 cases of lactose intolerance, 37.5% of cases were on cow's milk or buffalow's milk in addition to breast milk when they developed the problem of lactose intolerance. Another 28.12% of cases were on breast feeds alone. Remaining of cases were on artificial milk and some kind of proprietary preparation.

10. Watery diarrhoea was observed in 87.50% of children suffering from lactose intolerance. Stool frequency was more than 10/day in 56.25% cases. Perianal excoriation was present in 75% of cases of lactose intolerance. Other symptoms vis fever in 56.25%, vomiting in 43.70%, abdominal distension in 37.50% of cases of lactose intolerance.

11. More than half (53.12%) cases had associated systemic diseases vis. acute respiratory infection, encephalitis like illness, malaria and vitamin deficiency. Among them (12.50%) acute respiratory infection was predominant systemic disease.
12. On microscopic examination, stool was greenish yellow, foul smelling and frothy in 75% of cases. Microscopic examination revealed pus cells in 12.5% of cases. Amoeba was seen in 6.25% of cases. Giardia was not seen in any of the case. Ova of round worm were seen in 9.38% of cases, but no other parasites were seen. Fat globules were also not seen in any of the case. Stool culture revealed organisms predominantly E. Coli in 9.38% of cases while Shigella was seen only in 1(3.13%) case.

13. Stool pH in majority of cases (56.25%) was 5.5. Only 6.25% of cases had pH 4.5.

14. Benedict's test for reducing agent in stool showed 0.25-0.99 gm% sugar in 35.5% and 1.0-1.90 gm% sugar also in 35.50% of cases while more than 3 gm% sugar was present in 22.33% of cases.

15. It was also found out in the present study that Benedict's test was more sensitive as compared to Rubner's test in finding out sugar intolerance. It's sensitivity in sugar intolerance was 93.7% as compared to 90.45% in Rubner's test. But Benedict's test was less specific (86.9%) as compared to Rubner's test (93.0%).

16. Stool chromatography was found to be a highly sensitive and reliable indicator for the presence of lactose intolerance. Lactose alone was present in
71.1% of cases. Lactose in addition to glucose was detected in 8.8% of cases and lactose along with galactose and sucrose was detected in 13.3% of cases while in 4.4% of cases lactose was seen in addition to sucrose. Not more than three sugars were present in this study.

Out of 32 cases of lactose intolerance, 18 cases were put on soya based lactose free milk formula, 11 cases were only given antibiotics and remaining 3 cases received both antibiotics and soya based lactose free milk formula. This treatment protocol was done to evaluate the efficacy of lactose free formula, antibiotics and a combination of antibiotics and lactose free formula in management of cases of chronic diarrhoea showing lactose intolerance.

17. 56.25% of cases were treated with soya based lactose free milk, and all of them responded to that therapy within 7 days.

18. 43.75% were treated with antibiotics. Antibiotic used in those cases was Amikacin in 63.6% and Amikacin plus cefotaxim in 36.4% of cases.

19. Out of 1 43.75% of cases treated with antibiotics, only 36.4% of cases responded with antibiotics therapy within 7 days.
20. Remaining 63.6% of cases who did not respond with antibiotics alone were switched over to soya based lactose free milk. It was seen that all the cases were symptom free within next 5-7 days.

21. Stool culture was positive with E. Coli in 9.38% of cases and Shigell in 3.13% of cases. All stool cultures were sensitive to Amikacin.

22. Three cases treated with antibiotics along with soya based lactose free milk responded within 7 days of therapy.

Thus over observations in a nutshell reveal that soya based lactose free milk was found to be much more beneficial in the management of cases of chronic diarrhoea showing lactose intolerance than administration of antibiotics alone.

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