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POTENTIAL RISKS OF LACTOBACILLI USE IN LACTASE DEFICIENCY IN BREASTFED INFANTS

Khadzhaev Tokhir Avazkhanovich

Central Asian Medical University, Fergana, Republic of Uzbekistan

Abstract: Lactase deficiency in early infancy leads to impaired digestion of lactose, the primary carbohydrate in breast milk, resulting in gastrointestinal symptoms. In the search for gentle treatment strategies, probiotics—particularly lactobacilli-based preparations—have gained attention. However, in some cases, their use in infants with lactase deficiency may not only fail to improve the condition but may exacerbate symptoms. The aim of this study is to analyze the potential adverse effects of lactobacilli on the clinical course of lactase deficiency in breastfed infants.

Keywords: lactase deficiency, breastfeeding, probiotics, lactobacilli, infants, complications.

Introduction

Lactose is the main carbohydrate in breast milk and requires the enzyme lactase for digestion. In infants, both transient and congenital forms of lactase deficiency can occur. Lactobacilli are used to support intestinal microbiota and metabolic regulation, but their enzymatic activity may enhance fermentation processes, particularly in the presence of undigested lactose in the small intestine.

Materials and Methods

The study included 40 infants aged 1 to 4 months with clinically and laboratory-confirmed lactase deficiency. Participants were divided into two groups: the main group (n=20) received probiotics (Lactobacillus acidophilus, L. rhamnosus), while the control group (n=20) received only lactase enzyme supplements. Monitoring was conducted over 14 days based on gastrointestinal symptom scoring, stool pH levels, and weight gain.

Results

In the main group, from days 3 to 5, worsening of symptoms was observed: increased gas production, frequent watery stools, and perianal irritation. Average weight gain was 10–12% lower compared to the control group. In 25% of cases, probiotics had to be discontinued. Stool pH remained low (4.5–5.0), indicating ongoing fermentation.

Discussion

The observed negative dynamics in the main group are likely associated with the β-galactosidase activity of lactobacilli, which may accelerate the metabolism of undigested lactose into organic acids and gases. In infants with enzyme deficiency, this can cause mucosal irritation, motility disturbances, and deterioration of general condition.

Conclusion

Despite the popularity of probiotics, their use in infants with lactase deficiency requires an individualized approach. Prior diagnostic evaluation, assessment of enzymatic activity, and careful monitoring of tolerance are essential. Inappropriate use of probiotics may aggravate the course of the disease.

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