



RECONDITIONING THE INTOLERANT GUT: A CASE SERIES-BASED REAPPRAISAL OF LACTOSE INTOLERANCE AS A GUT PLASTICITY DISORDER THROUGH AYURVEDIC–BIOMEDICAL INTEGRATION

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ABSTRACT

Lactose intolerance is commonly perceived as an irreversible enzymatic deficiency. However, emerging evidence suggests that intestinal adaptability and microbial modulation play a significant role in symptom manifestation. *Ayurveda* correlates similar conditions with *Agnimandya*, *Ama*, and *Grahani Dosha*. This study proposes the concept of lactose intolerance as a Gut Plasticity Disorder, emphasizing reversibility. A case series of three patients treated with an integrative protocol demonstrates restoration of lactose tolerance. The findings support a paradigm shift from dietary restriction to functional gut rehabilitation.

Keywords: Lactose intolerance, *Grahani*, *Agni*, Gut plasticity, Case series, *Ayurveda*

INTRODUCTION

Lactose intolerance is defined as the inability to digest lactose due to reduced lactase enzyme activity¹. However, symptom severity varies significantly among individuals, suggesting involvement of additional factors such as gut microbiota and intestinal adaptability².

Ayurveda describes digestive impairment through *Agnimandya* and *Grahani Dosha*, where improper digestion leads to formation of *Ama*, causing gastrointestinal disturbances³. These principles provide a broader framework to understand lactose intolerance beyond enzymatic deficiency.

Recent studies indicate that gradual lactose exposure can enhance tolerance, highlighting the adaptive capacity of the gut⁴. Based on this, lactose intolerance may be conceptualized as a reversible functional disorder, termed here as Gut Plasticity Disorder.

AIM

To evaluate the effectiveness of an integrative *Ayurvedic* protocol in restoring lactose tolerance and to validate the concept of lactose intolerance as a Gut Plasticity Disorder.

MATERIALS AND METHODS

Study Design

- Case series (n = 3)
- Duration: 6 weeks
- Setting: OPD-based clinical practice

Inclusion Criteria

- Clinical symptoms of lactose intolerance
- Age 18–40 years

Exclusion Criteria

- Severe gastrointestinal pathology
- Congenital lactase deficiency

INTERVENTION PROTOCOL

Phase 1: *Agni Deepana & Ama Pachana* (Week 1–2)

- *Trikatu Churna* – 1 gm twice daily before food
- *Hingwashtaka Churna* – with meals
- *Takra* with *Jeeraka*

Phase 2: *Grahani Management* (Week 3–4)

- *Kutaja Ghana Vati* – 2 tablets twice daily
- *Guduchi Satva* – 500 mg twice daily

Phase 3: *Lactose Reintroduction* (Week 5–6)

- Gradual milk exposure (10 ml → 150 ml)
- Administered with *Shunthi*

CASE SERIES

Case 1

- Age/Sex: 23/Female
- Symptoms: Bloating, irregular bowel habits
- Findings: *Mandagni, Ama Lakshana*
- Outcome: Tolerating 150 ml milk without symptoms

Case 2

- Age/Sex: 28/Male
- Symptoms: Diarrhea after milk intake
- Findings: *Grahani Dushti*
- Outcome: Tolerating 100 ml milk

Case 3

- Age/Sex: 21/Female
- Symptoms: Flatulence, abdominal discomfort
- Findings: *Vishamagni*
- Outcome: Marked symptom reduction, partial tolerance

RESULTS

Parameter	Before Treatment	After Treatment
Bloating	3.0	0.6
Diarrhea	2.3	0.3
Abdominal Pain	2.6	0.5

Mean improvement: 75–85%

CONCEPTUAL MODEL

Weak *Agni* → *Ama* Formation → Microbiota Imbalance → Lactose Maldigestion → Symptoms

↓ Intervention ↓

Agni Deepana + *Grahani Chikitsa* → Microbiota Adaptation → Gradual Lactose Exposure → Restored Tolerance

DISCUSSION

This study supports the hypothesis that lactose intolerance is not purely an enzymatic deficiency but a functional gut disorder influenced by digestive capacity and microbiome dynamics⁵. *Ayurvedic* management addresses *Agnimandya*, *Ama*, and *Grahani*, thereby correcting the root pathology.

Modern studies also confirm microbial adaptation to lactose ingestion⁶. The observed clinical improvement in all cases validates the concept of Gut Plasticity Disorder, where gut function can be restored through targeted interventions. This integrative approach provides a bridge between classical *Ayurvedic* principles and contemporary biomedical understanding, offering a sustainable and patient-centered therapeutic model.

ETHICAL CONSIDERATION

Informed consent was obtained from all patients prior to their inclusion in the study.

CONCLUSION

Lactose intolerance can be effectively managed and potentially reversed through an integrative approach focusing on gut restoration. The concept of Gut Plasticity Disorder provides a novel, clinically relevant framework for understanding and treating this condition.

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CONFLICT OF INTEREST

None declared.

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