

Ayurvedic Approaches to Recurrent Abdominal Pain in Children: Conceptual Understanding and Therapeutic Strategies

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Abstract—Recurrent abdominal pain (RAP) is one of the most common gastrointestinal complaints in children, affecting school attendance, physical growth, psychological well-being, and quality of life. Most pediatric cases are functional in nature and lack identifiable organic pathology. Modern medicine recognizes functional abdominal pain disorders (FAPDs) as disorders of gut–brain interaction involving altered gastrointestinal motility, visceral hypersensitivity, intestinal microbiota disturbances, and psychosocial factors. Ayurveda does not describe RAP as a single disease entity but offers conceptual correlations with Shoola, Grahani, Ajeerna, Krimi, and Vataja Udaravyadhi. Disturbances of Agni, formation of Ama, vitiation of Vata Dosha, and dysfunction of Grahani are central to its pathogenesis. Ayurvedic management emphasizes Nidana Parivarjana, correction of Agni, dietary regulation, psychological support, and individualized therapeutic interventions. This review explores the modern understanding of RAP, Ayurvedic correlations, gut–brain axis concepts, and evidence-based therapeutic strategies in Kaumarbhritya.

Index Terms—Recurrent abdominal pain, Functional abdominal pain disorder, Kaumarbhritya, Agni, Grahani, Gut–Brain Axis, Ayurveda.

I. INTRODUCTION

Recurrent abdominal pain (RAP) is defined as at least three episodes of abdominal pain occurring over a minimum period of three months and severe enough to interfere with normal activities. It affects approximately 10–20% of school-age children. RAP contributes significantly to school absenteeism, reduced academic performance, emotional disturbances, anxiety, stress, and impaired quality of life. Recent studies indicate a rising prevalence of functional gastrointestinal disorders (FGIDs) among children due to changing dietary habits, sedentary lifestyle, psychological stress, and gut microbiota alterations.

Ayurveda offers a holistic perspective by addressing digestive, psychological, and lifestyle factors simultaneously, making it highly relevant in pediatric functional disorders.

II. MODERN UNDERSTANDING OF RECURRENT ABDOMINAL PAIN

According to Rome IV criteria, most children with RAP fall under Functional Abdominal Pain Disorders (FAPDs).

2.1 irritable bowel syndrome (IBS)

- Recurrent abdominal pain
- Altered bowel habits
- Constipation or diarrhea
- Relief after defecation

2.2 Functional Dyspepsia

- Epigastric discomfort
- Early satiety
- Postprandial fullness
- Nausea

2.3 Abdominal Migraine

- Episodic central abdominal pain
- Nausea
- Vomiting
- Pallor
- Family history of migraine

2.4 Functional Abdominal Pain – Not Otherwise Specified

Pain not fulfilling criteria for other FAPDs.

III. AYURVEDIC CORRELATIONS

Modern Presentation
Ayurvedic Correlation
Functional abdominal pain
Shoola
Meal-related pain
Parinama Shoola
Chronic digestive dysfunction
Grahani
Indigestion-associated pain
Ajeerna
Helminthic causes
Krimi
Colicky pain
Vataja Udaravyadhi
Gut dysfunction
Annavaha Srotodushti

IV. ETIOPATHOGENESIS (NIDANA)

Dietary Factors
Adhyashana
Vishamashana
Guru Ahara
Fast food consumption
Processed foods
Carbonated beverages
Excess sweets
Lifestyle Factors
Irregular meal timings
Sleep disturbances
Excessive screen time
Physical inactivity
Psychological Factors
Chinta (Anxiety)
Bhaya (Fear)
Shoka (Grief)
Academic stress
Family conflicts

V. AYURVEDIC SAMPRAPTI

Nidana Sevana↓Agnimandya↓Ama Formation↓Annavaaha Srotodushti↓Grahani Dushti↓Vata Prakopa↓Altered Gut Motility and Pain↓Recurrent Abdominal Pain

VI. GUT–BRAIN AXIS AND AYURVEDA

Modern Perspective

Central nervous system

Enteric nervous system

Gut microbiota

Endocrine pathways

Immune pathways

Ayurvedic Interpretation

Agni as Functional Metabolism

Vata as Neural Regulation

Grahani as Gut Integrity

Manasika Bhavas as Psychological Influences

Integrative Concept

Gut–Brain Axis = Agni + Grahani + Vata + Manas

VII. CLINICAL ASSESSMENT

Modern Evaluation

Detailed history

Growth assessment

Physical examination

CBC

ESR

CRP

Stool examination

Ultrasonography

Red Flag Symptoms

Weight loss

GI bleeding

Persistent vomiting

Nocturnal pain

Growth failure

Fever

Ayurvedic Evaluation

Prakriti
Agni
Kostha
Dosha predominance
Ahara-Vihara history

VIII. AYURVEDIC MANAGEMENT

8.1 Nidana Parivarjana

Avoid:

Irregular meals
Junk foods
Cold foods
Excess sweets
Overeating

8.2 Ahara Chikitsa

Manda
Peya
Yavagu
Moong soup
Warm digestible food
Takra preparations

8.3 Shamana Chikitsa

Shunthi
Pippali
Musta
Hingu
Ajamoda

8.4 Panchakarma

Abhyanga
Mridu Swedana
Matra Basti

8.5 Psychological Support

Parental counselling
Stress reduction
Sleep hygiene

Yoga
Meditation

IX. EVIDENCE-BASED REVIEW

Recent studies indicate:

Ayurvedic digestive formulations improve symptoms of functional dyspepsia and IBS.

Takra-based interventions improve gut function.

Deepana-Pachana therapies reduce abdominal discomfort.

Mind-body interventions reduce stress-related gastrointestinal symptoms.

Research Gaps

Standardized Ayurvedic protocols

Long-term follow-up studies

Gut microbiome studies

Multicenter clinical trials

X. DISCUSSION

The modern gut–brain axis concept aligns closely with Ayurvedic principles of Agni, Vata, Grahani, and Manas. Ayurvedic management focuses on correcting Agni, eliminating Ama, restoring Grahani function, regulating Vata, and addressing psychological stress. Such an individualized approach is consistent with the principles of Kaumarbhritya and may offer sustainable benefits in functional abdominal pain disorders.

XI. CONCLUSION

Recurrent abdominal pain in children is commonly a functional disorder arising from complex interactions between digestive, neural, microbial, and psychological factors. Ayurveda conceptualizes these disturbances through Agnimandya, Ama, Grahani Dushti, and Vata Prakopa. Integrating the modern gut–brain axis with Ayurvedic concepts provides a promising framework for understanding and managing RAP. Dietary regulation, lifestyle modification, psychological support, and individualized Ayurvedic therapies offer a comprehensive and holistic approach. Further high-quality clinical research is needed to establish evidence-based pediatric Ayurvedic treatment protocols.

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