

Understanding Parinama Shoola and Annadrava Shoola in relation to Peptic Ulcers: An Overview


Nair SC^{1*}

DOI:10.21760/jaims.10.8.38

^{1*} Swathi C Nair, Assistant Professor, Sri Paripoorna Sanathana Ayurveda Medical College, Hospital and Research Centre, Bangalore, Karnataka, India.

Ayurveda, India's ancient and deeply rooted medical system, centres around the fundamental goal of preserving health and remedying ailments. Various factors like changing dietary patterns, busy schedules, adherence to Dinacharya and Ritucharya, are increasing individuals' susceptibility to illness. Among the array of disorders discussed within Ayurveda, Annadrava Shoola and Parinama Shoola stand out as particularly distressing. Presently, altered eating habits contribute significantly to gastrointestinal illnesses, including the prevalent peptic ulcer, characterized by stomach wall ulceration due to excessive HCl. Notably, Annadravashoola and Parinama Shoola, sharing similar symptoms, collectively embody peptic ulcer disease. In Ayurvedic literature, Madhava Nidana dedicated a specific chapter to Shoola, while Maharishi Sushruta pioneered the classification of numerous Shoola types in Uttara-tantra, excluding two categories, Annadravashoola and Parinama shoola. Annadravashoola presents with discomfort before, during, and after vomiting, epigastric burning, belching, while Parinama Shoola manifests post-digestion. Given their symptom overlap, both can be encompassed under the term peptic ulcer illness.

Keywords: Peptic ulcer disease, Gastrointestinal disorders, Epigastric burning, Ayurveda, Annadrava Shoola, Parinama Shoola

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Swathi C Nair, Assistant Professor, , Sri Paripoorna Sanathana Ayurveda Medical College, Hospital and Research Centre, Bangalore, Karnataka, India. Email: swathiappu.cnair@gmail.com	Nair SC, Understanding Parinama Shoola and Annadrava Shoola in relation to Peptic Ulcers: An Overview . J Ayu Int Med Sci. 2025;10(8):231-235. Available From https://jaims.in/jaims/article/view/4633/	

Manuscript Received
2025-06-11

Review Round 1
2025-06-24

Review Round 2
2025-07-04

Review Round 3
2025-07-14

Accepted
2025-07-24

Conflict of Interest
None

Funding
Nil

Ethical Approval
Not required

Plagiarism X-checker
11.36

Note



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Introduction

The fast-paced, stressful, and hectic modern lifestyle has adversely affected the digestive system, a vital biological system referred to as *Annavaha Srotas* in *Ayurveda*. *Annavaha Srotas* denotes the pathway through which food travels. This alimentary canal, encompassing processes such as *Anna Adana*, *Anna Pachana*, *Sara Kitta Vivechana*, and *Rasa Shoshana*, is crucial for overall well-being. In *Ayurveda* philosophy, *Dehagni* governs life, vitality, physical appearance, strength, health, as well as *Oja*, *Teja*, and *Prana*. Any disruption within the *Annavaha Srotas* or the *Dehagni* can lead to the accumulation of *Ama*, a toxic substance according to *Ayurveda*, at any level, adversely impacting health and vitality. *Ajeerna*, the formation of *Ama-Visha*, *Annadrava Shoola*, and *Parinama Shoola* represent subsequent stages in the digestive process, triggered by disruptions in the metabolic functioning of the digestive fire, leading to the generation of intermediate products. Modern research links peptic and duodenal ulcers respectively to *Annadrava* and *Parinama Shoola*. *Parinama Shoola*, also known as abdominal colic or *Shoola*, manifests during the digestion process, typically occurring around three to four hours post-meal, as food progresses through the intestines. *Acharya Madhav Nidana* described *Parinama Shoola* as an "*Avarana Janya, Tridoshaja Vyadhi*," while *Annadrava Shoola* is characterized by discomfort before and during digestion, alleviating after vomiting. The cause of *Annadravashoola* is attributed to *Vata Prakopa*, wherein aggravated *Vata Dosha* envelops nearby *Pitta* and *Kapha Doshas* within the gastrointestinal tract, leading to colicky pain during food digestion.

Kapha subsequently undergoes breakdown within its own domain, engaging with *Pitta* and *Vata*, thereby instigating colicky pain during the processing of ingested food. This recognizable form of discomfort, commonly referred to as *Shoola* or colic, is well-documented.[1,2]Top of FormBottom of Form

Concept of Parinama Shoola

The term "*Parinama Shoola*" is inherently descriptive, indicating abdominal colic experienced during the digestion process, typically occurring 3-4 hours post-meal as food progresses through the intestines. *Parinama Shoola* is classified as an "*Avarana Janya, Tridoshaja Vyadhi*."

Excessive aggravation of *Vata*, triggered by dietary or environmental factors, leads to its vitiation. Consequently, this vitiated *Vayu* becomes obstructed due to its interaction with imbalanced *Pitta* and *Kapha* Doshas. When *Vata*, mixed with *Pitta* and *Kapha*, becomes obstructed, it manifests as severe colicky pain, recognized as *Parinama Shoola*.

स्वैर्निदानैः प्रकुपितो वायुः संनिहितस्तदा ।
कफपित्ते समावृत्य शूलकारी भवेद्वली ।
भुक्ते जीर्यति यच्छूलं तदेव परिणामजम् ।

Engaging in dietary habits and activities that elevate all three doshas simultaneously leads to a severe form of colic that arises shortly after food digestion. This condition is referred to as *Parinamaja Shoola*. [3]

Types

Vataja

आध्मानाटोपविष्णुमूत्रविबन्धनारतिवेपनैः ।
स्निग्धोष्णोपशमप्रायं वातिकं तद्वदेन्द्रिषक् ।

In cases of *Parinamasoola* caused by *Vata*, symptoms such as intestinal distention, audible gurgling, blockages in the passage of faeces and urine, restlessness, and intense discomfort are observed. Relief from pain is noted with the consumption of fatty and warm foods.[3]

Pittaja

तृष्णादाहारतिस्वेदं कटुमूलवणोत्तरम् ॥१८॥
शूलं शीतशमप्रायं पैत्तिकं लक्षयेद्बुधः ॥

In cases of *Pittaja Parinamasoola*, symptoms include thirst, a burning sensation, restlessness, sweating, and heightened pain when consuming spicy, sour, or salty foods. However, pain can be alleviated by consuming cold foods and seeking comfort.[3]

Kaphaja

छर्दिहल्लाससंमोहं स्वल्परुग्दीर्घसन्तति ॥१९॥
कटुतिक्तोषशान्तं च तच्च ज्ञेयं कफात्मकम् ।

In *Kaphaja Parinamasoola*, symptoms such as vomiting, nausea, confusion, and persistent mild pain are observed. This pain tends to diminish with the consumption of pungent and bitter foods.[3]

Tridoshaja

संसृष्टलक्षणं बुद्ध्वा द्विदोषं परिकल्पयेत् ॥२०॥
त्रिदोषजमसाध्यं तु क्षीणमांसबलानलम् ।

Symptoms involving the combination of two or three doshas manifest when there's an elevation of two or three respective doshas. The *Tridoshaja* type, characterized by emaciation, weakened strength, and digestive issues, is regarded as extremely challenging to treat. [3]

Pathogenesis of *Parinama Shoola*

The progression of *Parinama Shoola* involves dry foods (such as barley, dry vegetables, and lean meats), irregular eating habits, and fasting exacerbating *Vata*, subsequently followed by *Pitta* and *Kapha*. Proper and comprehensive blockage, known as *Samavritya*, occurs, wherein aggravated *Vata* diminishes *Pitta* and *Kapha*.

Prognosis of *Parinama Shoola*[3]

For *Parinama Shoola* of *Tridoshaja* nature, where all three *Doshas* are involved, it is considered incurable. Similarly, *Parinama Shoola* linked with complications becomes incurable when there is a decline or deterioration in *Bala*, *Mamsa*, and *Agni*.

Annadrava Soolam[3]

जीर्णे जीर्यत्यजीर्णे वा यच्छूलमुपजायते ॥२१॥
पथ्यापथ्यप्रयोगेण भोजनाभोजनेन च ।
न शमं याति नियमात्सोऽन्नद्रव उदाहृतः ॥२२॥
(अन्नद्रवाख्यशूलेषु न तावत्स्वास्थ्यमश्नुते ।
वान्तमात्रो जरत्पित्तं शूलमाशु व्यपोहति ॥२३॥

Another form of colic, termed *Annadrava*, presents with intense and persistent pain that persists regardless of digestion, food intake, comfort measures, or their absence. In this type, relief from pain is only achieved after the expulsion of accumulated pitta through vomiting.

Exploring the causes of *Parinama Shoola* and *Annadrava Shoola* in Ayurveda: Incorporating Peptic Ulcer Insights

Ayurveda attributes the causative factors of *Parinama Shoola* and *Annadrava Shoola* to *Samana Vata*, *Pachaka Pitta*, and *Kledaka Kapha*. Additionally, external influences include *Slesmaja Krimi* (*H. pylori*), a spiral-shaped, microscopic bacterium manifesting symptom such as abdominal pain, bloating, nausea, and burning stomach pain, closely resembling the Ayurvedic concept of *Slesmaja Krimi* as described by *Acharya Charaka*. *Charaka*, in *Vimana Sthana*, elucidated that *Slesmaja Krimi*, imperceptible to the naked eye, resides in the *Amaasaya*. [4]

The structure of *Slesmaja Krimi* resembles a thin, white, thread-like leech, causing symptoms like nausea, indigestion, vomiting, and bloating. The similarity in symptoms, origin, shape, and size between *H. pylori* and *Slesmaja Krimi* is striking. Infection with *H. pylori* is identified as the primary etiological agent for gastritis, often leading to the development of peptic ulcer disease. [5]

Pathyapatya

Pathya includes consuming three moderate meals throughout the day to prevent hunger pangs and overeating, practicing mindful eating by thoroughly chewing food, and maintaining an upright posture during and for an hour after meals. It is also advisable to refrain from eating three hours before bedtime to prevent nighttime stomach acid secretion induced by late-night snacks. Additionally, individuals should avoid fatty, rich, spicy, and acidic foods, as well as certain beverages like tomato juice, citrus drinks, chocolate, and carbonated drinks. Each meal should ideally contain a quality protein source such as milk, meat, eggs, or cheese. Other recommendations for maintaining health include quitting smoking, limiting or avoiding alcoholic beverages, coffee, tea, and sugary carbonated drinks.

Treatment[6]

Ayurveda modalities play a significant role in the treatment of *Parinama Shoola*, also known as peptic ulcer disease. *Langhana*, is utilized to restore balance and alleviate conditions such as indigestion, accumulation of waste products, and imbalances in *Doshas*. *Vamana* or medicated emesis, is particularly effective for *Kaphaja Shoola*, involving the expulsion of excess *Kapha Dosha* with specific medications tailored to the *Dosha* imbalance. *Virechana* or medicated purgation, is recommended for *Pitta*-related *Shoola* and involves the elimination of excess *Pitta Dosha* through specific herbs and remedies. *Basti* or medicated enemas, are highly regarded for treating vitiated *Vata Dosha*, which is often implicated in various types of *Shoola*. *Basti Karma* is considered crucial for managing *Shoola* conditions, with various formulations used depending on the specific *Dosha* imbalance.

Modern concept of Peptic-Ulcer Disease[5][7]

Peptic Ulcer Disease (PUD) is characterized by a burning sensation in the epigastric area, worsened by fasting and relieved by eating.

It results from local defects caused by inflammation compromising the mucosal integrity of the stomach or duodenal wall, typically developing chronically. Acid pepsin production, cellular renewal, mucous secretion, blood flow, mucosal barrier, prostaglandins, epidermal development, and *Helicobacter pylori* all play a role in its etiology. Additionally, it can be interpreted as an imbalance between the production of acid and the protective system of the stomach mucosa, including prostaglandin and bicarbonate. The lining of the stomach and duodenum, the top portion of the small intestine, become inflamed with ulcers.

The parietal cell, also known as the oxyntic cell, resides in the isthmus, neck, or oxyntic gland at its apical end. In its resting state or when unstimulated, it exhibits prominent cytoplasmic tubulovesicles and intracellular canaliculi with short microvilli. Upon stimulation, H, K-ATPase is expressed in the tubule's membrane, leading to the presence of long microvilli along with apical canaliculi. Acid secretion, a membrane-based process, transforms into a complex network of apical intracellular processes at the apical canalicular surface, requiring substantial energy. The oxyntic gland houses the acid-secreting parietal cell, which secretes intrinsic factor (IF) and contains receptors for gastrin, histamine, and acetylcholine, among other acid production stimulants. Various ligands and their associated receptors activate different signalling pathways, explaining why combinations like histamine and gastrin or acetylcholine can enhance acid production. In PUD, histamine, gastrin, and acetylcholine, which stimulate acid secretion, are associated with the aggressive element Vata. The major stomach secretory products potentially causing mucosal damage are HCl and pepsinogen. Basal acid production is primarily influenced by cholinergic input from the vagus nerve and histaminergic input from nearby stomach sources.

Discussion

Peptic ulcer disease, though not a recent discovery, has been long recognized in Ayurveda, correlating with concepts such as *Parinama Shoola* and *Annadrava Shoola*. According to *Madhav Acharya Nidana*, *Annadravashoola* presents unique discomfort patterns during and after food digestion, attributed to aggravated *Vata* dosha encircling *Pitta* and *Kapha* Doshas, causing colic discomfort.

This phenomenon, where *Kapha* combines with *Pitta* and *Vata* during digestion, is termed *Annadravashoola* or typical colic. *Acharya Charaka's* description of *Shleshmaja Krimi*, which resembles *H. pylori*, is striking in its similarities. The characteristics of the bacteria, such as its shape, size, symptoms, and origin in the antrum region of the stomach and duodenum, align with the concept of *Sleshmaja Krimi*, which is associated with the *Amasaya*. The correlation between *Samana Vata* and the peripheral nervous system, *Pitta* and pepsinogen production with HCl, and *Kledaka Kapha* with mucous function provides a notable parallel between ancient and modern pathology.

Conclusion

The pathogenesis of *Parinama Shoola* and *Annadrava Shoola* involves *Vata*, *Pitta*, *Kapha*, and *Shleshmaja Krimi*. *Vata* predominately causes abdominal discomfort and is associated with the parasympathetic nervous system. *Kledaka Kapha*, resembling the mucus layer and mucin, serves as a protective mechanism in the development of these conditions. *Pitta*, linked to HCl and pepsin, acts as an aggressive factor in their pathogenesis. Additionally, *Shleshmaja Krimi* shares a connection with *Helicobacter Pylori*. Thus, *Vata*, *Pitta*, *Kapha*, and *Shleshmaja Krimi* collectively contribute to the onset of *Parinama Shoola* and *Annadrava Shoola*.

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