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UNLOCKING THE POWER OF *ERAND (RICINUS COMMUNIS):* AN AYURVEDIC PERSPECTIVE ON PATHOGENESIS AND MANAGEMENT OF *PARINAMSHOOL*

Dr. Vrushabh Junghare[1*], Dr. Meenakshi Amrutkar[2]

[1]P. G. Scholar, [2]Professor

[1,2]Department of Rasashastra Evam Bhaishajya Kalpana

[1,2]Y. M. T. Ayurvedic Medical College and Hospital, Kharghar, Navi Mumbai, Maharashtra, India.

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***Corresponding Author**

Dr. Vrushabh Junghare

P. G. Scholar, Department of Rasashastra Evam Bhaishajya Kalpana. Y. M. T. Ayurvedic Medical College and Hospital, Kharghar, Navi Mumbai, Maharashtra, India.

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ABSTRACT

The present conceptual review aims to elucidate the Ayurvedic pathogenesis of *Parinamashoola* and explore the therapeutic role of *Eranda* (*Ricinus communis*) in its management. *Parinamashoola* is a Vata-predominant gastrointestinal disorder characterised by abdominal pain during the digestive phase and is associated with *Agnimandya* and the formation of *Ama*. It may be clinically correlated with certain modern gastrointestinal conditions, particularly peptic ulcer disease and functional dyspepsia, although these conditions are not directly equivalent. According to Ayurvedic principles, impaired *Agni* contributes to *Ama* formation, which may disturb the normal functions of *Vata Dosha* and manifest as *Shoola* (pain) during digestion. *Eranda* is an important medicinal plant in Ayurveda, traditionally recognized for its *Vatahara, Shoolahara, Anulomana,* and *Mridu Virechana* properties. Its *Ushna Virya, Snigdha Guna,* and *Madhura Vipaka* are considered beneficial in alleviating aggravated *Vata,* promoting bowel movement, regulating *Apana Vayu,* and supporting digestive function. Contemporary pharmacological research also suggests that *Eranda* possesses anti-inflammatory, laxative, antispasmodic, and gastroprotective properties. These traditional attributes and reported pharmacological activities provide a rationale for

exploring its potential role in the management of *Parinamashoola*. Thus, *Eranda* may contribute to symptomatic relief and the management of underlying functional disturbances associated with this condition, highlighting its therapeutic relevance in Ayurvedic practice.

KEYWORDS: *Agnimandya, Ayurveda, Eranda* (*Ricinus communis*), Functional Dyspepsia, *Parinamshool, Vata Dosha.*

INTRODUCTION

Ayurveda, the traditional science of life, emphasizes the preservation of health and the management of disease through a holistic understanding of Dosha (functional principles governing physiological processes), Agni (digestive and metabolic processes), and Dhatu (structural tissues of the body). The Ayurvedic concept of disease is fundamentally associated with the vitiation and imbalance of Tridosha, among which Vata Dosha plays a significant role in the manifestation of pain and discomfort.[1] Shoola (pain) is a commonly described clinical manifestation in Ayurvedic literature and is recognized both as a symptom of various diseases and as an independent disease entity. It is primarily associated with the vitiation of Vata Dosha, either through its independent aggravation (Swatantra Prakopa) or through obstruction of its normal functions (Avarana) by other Doshas and pathological factors.[2] Acharya Madhavakara was among the early Ayurvedic scholars to describe Shoola as an independent disease entity (Swatantra Vyadhi) and classify its various types according to Dosha predominance and pathogenesis.[3]

Among the different types of Shoola, Parinamashoola is a distinct condition characterized by abdominal pain occurring during the digestive phase, particularly when the transformation of ingested food is in progress.[3] It is described as an Avaranajanya Tridoshaja Vyadhi, with a predominance of Vata Dosha, and is often associated with Agnimandya (impaired digestive capacity) and the formation of Ama (incompletely processed metabolic products).

From a contemporary clinical perspective, Parinamashoola may be compared with certain gastrointestinal disorders, particularly peptic ulcer disease and functional dyspepsia, in which abdominal pain or discomfort may be associated with food intake and digestive activity.[4] Alterations in gastric acid secretion, gastrointestinal mucosal integrity, and gut motility may be discussed in relation to the Ayurvedic concepts of Pitta, Ama, and Vata, respectively. However, these correlations are conceptual and do not establish direct equivalence between Ayurvedic disease entities and modern clinical diagnoses.

Eranda (Ricinus communis), commonly known as castor, is an important medicinal plant described in classical Ayurvedic literature and traditionally used in the management of Vata Vyadhi. Its Snigdha (unctuous) and Ushna Virya (hot potency) properties, along with its Vatahara (Vata-pacifying), Anulomana (promoting the normal downward movement of bodily contents), and Mridu Virechana (mild purgative) actions, provide a traditional therapeutic rationale for its use in conditions associated with Vata aggravation and gastrointestinal dysfunction.[5]

Therefore, the present conceptual review aims to elucidate the Ayurvedic pathogenesis of Parinamashoola and critically evaluate the potential therapeutic role of Eranda in its management. By integrating classical Ayurvedic concepts with relevant contemporary scientific evidence, this review seeks to explore the traditional therapeutic rationale and possible mechanisms underlying the use of Eranda in Parinamashoola.

METHODOLOGY

The present study is a narrative literature review undertaken to critically analyse the Ayurvedic concept of *Parinamashoola* and evaluate the therapeutic role of *Eranda* (*Ricinus communis* Linn.) in its management.

Classical Ayurvedic literature was reviewed using standard texts, including the *Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Madhava Nidana,* and *Bhavaprakasha Nighantu,* along with relevant literature on *Dravyaguna Vigyana*. Information regarding the *Nidana* (etiological factors), *Samprapti* (pathogenesis), *Lakshana* (clinical features), and *Chikitsa* (management) of *Parinamashoola* was collected and analysed. The pharmacodynamic properties and therapeutic actions of *Eranda* were also examined.

Contemporary scientific literature was searched using electronic databases, including PubMed, Google Scholar, Scopus, and ScienceDirect. The search employed keywords such as “Parinamashoola,” “Shoola,” “Ricinus communis,” “Eranda,” “functional dyspepsia,” “peptic ulcer disease,” “gastroprotective activity,” “anti-inflammatory activity,” and “Ayurveda.” Relevant peer-reviewed original research articles, review articles, pharmacological studies, and experimental studies published in English were considered for inclusion.

The collected literature was critically reviewed, compiled, and analysed to elucidate the Ayurvedic pathogenesis of *Parinamashoola* and evaluate the potential therapeutic role of *Eranda*. The analysis integrated classical Ayurvedic principles with relevant contemporary scientific evidence to explore the traditional therapeutic rationale and possible pharmacological mechanisms underlying its use in the management of this condition.

Nidana (Etiology)

The etiological factors (*Nidana*) of *Parinamashoola* are primarily associated with the aggravation of *Vata Dosha* and the impairment of *Agni*. According to classical Ayurvedic literature, *Vata Dosha* plays a significant role in the manifestation of *Shoola*, and its vitiation may occur independently due to specific etiological factors or secondarily through *Avarana* (obstruction of its normal functions) caused by other *Doshas* or pathological factors.[1]

Dietary factors, including the excessive consumption of *Ruksha* (dry), *Laghu* (light), and *Katu-Tikta-Kashaya Pradhana Ahara* (foods predominantly possessing pungent, bitter, and astringent tastes), irregular eating habits (*Vishamashana*), and excessive fasting, may contribute to the aggravation of *Vata Dosha* and the impairment of *Agni* (*Agnimandya*).[2] Lifestyle factors such as *Ativyayama* (excessive physical exertion), *Ratrijagarana* (prolonged night-time wakefulness), and *Vegadharana* (suppression of natural urges) may further aggravate *Vata Dosha* and disturb normal physiological functions.[3]

Psychological factors such as *Chinta* (worry or anxiety) and *Krodha* (anger) are also considered relevant in the Ayurvedic understanding of digestive disturbances. These factors may adversely influence digestive function and contribute to the development of *Agnimandya* and *Ama* formation. The resulting disturbances in physiological processes may be discussed in relation to *Srotorodha* (obstruction of bodily channels), further contributing to the pathogenesis of *Parinamashoola*.[2]

Thus, the combined influence of dietary, lifestyle, and psychological factors may contribute to the vitiation of *Vata Dosha*, impairment of *Agni*, and disturbances in normal physiological functions, creating conditions conducive to the manifestation of *Parinamashoola*.

***Samprapti* (Pathogenesis)**

The *Samprapti* (pathogenesis) of *Parinamashoola* involves the interplay of *Agnimandya*, *Ama* formation, *Vata Prakopa*, and *Avarana*. It is described in Ayurvedic literature as an *Avaranajanya Tridoshaja Vyadhi*, with a predominance of *Vata Dosha*.

Initially, improper dietary habits and lifestyle factors may impair *Jatharagni* (digestive fire), resulting in disturbed digestion and contributing to the formation of *Ama*. In the proposed Ayurvedic pathogenesis, *Ama* may contribute to disturbances in the normal functioning of the *Annavaha Srotas* (channels associated with the transport and processing of food).[3]

Subsequently, aggravated *Vata Dosha*, characterized by its *Ruksha* (dry) and *Chala* (mobile) properties, becomes involved in the gastrointestinal tract (*Koshtha*). The normal movement and functions of *Vata* are further disturbed when its activity is obstructed by *Kapha* and *Pitta*, a process described as *Avarana*. This disturbance in *Vata* function is considered an important factor in the manifestation of *Shoola* (abdominal pain), particularly during the digestive phase.

Clinically, *Parinamashoola* is characterized by abdominal pain occurring during *Parinama Kala* (the period of digestion). Classical descriptions may also include variations in symptom intensity in relation to the stages of digestion and the associated *Dosha* involvement. The predominance of *Pitta* may be associated with a burning sensation, whereas *Kapha* involvement may be reflected in heaviness and sluggish digestive function.[2]

Thus, the Ayurvedic understanding of *Parinamashoola* emphasizes the interaction of impaired *Agni*, *Ama* formation, *Dosha* vitiation, and *Avarana*, culminating in the manifestation of abdominal pain during digestion.

Lakshana (Clinical Features)

Parinamashoola is characterized by a distinctive pattern of abdominal pain associated with the digestive process. Its cardinal feature is the occurrence of pain during Parinama Kala (the period of digestion), typically after food intake. The pain may be experienced in regions such as Kukshi (abdomen), Nabhi (umbilical region), and Parshva (flanks), depending on the clinical presentation described in classical Ayurvedic literature.[3] The nature of the pain may vary in intensity and character, including severe (Teevra) or piercing (Bhedana) pain, reflecting the traditional association of Shoola with the vitiation of Vata Dosha.

The associated clinical features may vary according to the predominance of the involved Doshas. Pitta involvement may be associated with Daha (burning sensation), Amlodgara (sour belching), and increased thirst, whereas Kapha involvement may manifest as Gaurava (heaviness), nausea, and sluggish digestion.

A characteristic feature described in relation to Parinamashoola is the variation or relief of pain with changes in the digestive phase. Classical descriptions may include relief following the completion of digestion, food intake, or vomiting (Vamana), although these features should be interpreted in accordance with the specific classical reference consulted.[3] The condition is also described in classical literature as "Durvigneya Mahagada," emphasizing its complex nature and the challenges associated with its diagnosis and management.[3]

Overall, the clinical presentation of Parinamashoola is understood through the timing and character of abdominal pain, associated digestive symptoms, and the involvement of different Doshas, as described in Ayurvedic literature.

Modern Correlation

Parinamashoola shares certain clinical similarities with modern gastrointestinal disorders, particularly peptic ulcer disease and functional dyspepsia, in which abdominal pain or discomfort may be associated with food intake and digestive activity. However, these conditions are not directly equivalent, and their correlation requires careful clinical interpretation.

In modern medicine, abdominal pain may arise from the activation of visceral or somatic sensory pathways in response to stimuli such as inflammation, mucosal injury, distension, and chemical irritation. Visceral pain is often dull, diffuse, and poorly localized, and is commonly encountered in gastrointestinal disorders. These characteristics may be discussed in relation to the Ayurvedic concept of Vataja Shoola, although the two represent distinct explanatory frameworks.[4]

In peptic ulcer disease, factors such as gastric acid, disruption of mucosal defence mechanisms, and Helicobacter pylori infection contribute to the development of mucosal injury. Within an Ayurvedic interpretative framework, these processes may be conceptually discussed in relation to Pitta Dushti. Similarly, disturbances in digestion may be considered in relation to Agnimandya and Ama formation, while alterations in gastrointestinal motility and

visceral sensitivity may be compared with the functional disturbances attributed to Vata Dosha. These associations are interpretative correlations rather than established biomedical equivalences.[4,6]

Thus, the Ayurvedic concepts of Vata, Pitta, Agni, and Ama provide a traditional framework for understanding the clinical manifestations of Parinamashoola. Integrating this framework with contemporary knowledge of gastrointestinal pathophysiology may facilitate a broader understanding of the condition while preserving the conceptual distinctions between Ayurvedic disease descriptions and modern medical diagnoses.[6]

Eranda (Ricinus communis) – Drug Review

Eranda (Ricinus communis Linn.), commonly known as castor, is an important medicinal plant described in classical Ayurvedic literature and traditionally used in the management of Vata Vyadhi. It is recognised for its Vatahara (Vata-pacifying) properties and is valued for its therapeutic actions in conditions associated with Vata Dosha vitiation. Its pharmacological properties and traditional applications provide a basis for exploring its potential therapeutic role in gastrointestinal disorders, including Parinamashoola.

एरण्डपत्रं वातघ्नं कफक्रिमिविनाशनम् ।
मूत्रकृच्छहरं चापि पितरक्तप्रकोपम् ।
वातार्यंदलं गुल्मबस्तिमवस्तिशुलहरं परम् ॥ 64॥
कफवातकृमीन्हन्ति वृद्धि सप्तविधामपि ।
एरण्डफलमत्युष्णं गुल्मशुलानिलापहम् ॥65॥
यकृत्प्लीहोदरार्शोघ्नं कटुकं दीपनं परम् ।
तद्वन्मजा व विडभेदी वातश्लेष्मोदरापहः ॥ 66 ॥

– भाव प्रकाश निघंटु, गुडुच्यादि वर्ग, 64-66

Classical Properties (*Dravyaguna*)[7]

- ***Rasa* (Taste):** *Madhura (Sweet), Katu (Pungent)*
- ***Guna* (Qualities):** *Snigdha, Tikshna (piercing, Entering into deep tissues)*
- ***Virya* (Potency):** *Ushna*
- ***Vipaka* (Post-digestive effect):** *Madhura*
- ***Karma* (Actions):** *Vatahara, Shoolahara, Anulomana, Bhedana (Penetrating).*

Owing to its *Snigdha* and *Ushna* properties, *Eranda* effectively alleviates aggravated *Vata Dosha*, the principal aetiologic factor involved in *Parinamashool*.

Pharmacological Actions (Ayurvedic Perspective)

Eranda exhibits multiple therapeutic actions that are relevant in gastrointestinal disorders:

- ***Vatahara*:** Reduces aggravated *Vata* and relieves colicky pain
- ***Anulomana*:** Facilitates downward movement of *Vata*
- ***Mridu Virechana*:** Acts as a mild purgative, eliminating *Ama*
- ***Shoolahara*:** Provides relief from abdominal pain.[5]

These actions make it particularly useful in conditions involving *Vata prakopa* and *Koshthagata Vikara*.

Role of *Eranda* in *Parinamashool* (*Samprapti Vighatana*)

Eranda plays a significant role in breaking the pathogenesis (*Samprapti Vighatana*) of *Parinamashool* at multiple levels:

1. Correction of *Vata Prakopa*

The *Snigdha* and *Ushna* qualities of Eranda pacify aggravated *Vata Dosha*, thereby reducing spasmodic pain (*Shoola*), which is the cardinal feature of the disease.

2. Removal of *Avarana*

Through its *Anulomana* and *Virechana* actions, *Eranda* clears obstruction (*Margavarodha*) caused by *Ama* and other doshas, restoring normal physiological movement of *Vata*.

3. Reduction of *Ama*

The mild purgative effect (*Mridu Virechana*) helps in expelling accumulated *Ama*, thereby improving metabolic processes and reducing pathological load in the gastrointestinal tract.

4. Improvement of *Agni*

By removing *Ama* and regulating digestion, *Eranda* indirectly enhances *jatharagni*, preventing further formation of undigested metabolites.

5. *Shoolahara* Effect

Eranda provides direct symptomatic relief from abdominal pain due to its analgesic and antispasmodic properties.

Modern Pharmacological Correlation

From a modern perspective, *Eranda* (castor oil) contains ricinoleic acid, which is responsible for its pharmacological actions:

- **Laxative effect:** Stimulates intestinal motility
- **Anti-inflammatory action:** Reduces mucosal inflammation
- **Smooth muscle relaxation:** Relieves intestinal spasm
- **Gastroprotective effect:** Protects gastric mucosa.[6]

These actions validate the Ayurvedic use of *Eranda* in managing conditions like *Parinamashool*, which correlate with peptic ulcer disease and functional dyspepsia.

DISCUSSION

Parinamashoola is described in Ayurvedic literature as a Tridoshaja Vyadhi with a predominance of Vata Dosha. Its pathogenesis involves disturbances in Agni, the formation of Ama, and the vitiation of Vata Dosha. Classical Ayurvedic texts identify Vata as an important factor in the manifestation of Shoola (pain), and its vitiation is associated with characteristic abdominal pain.[8]

The involvement of Avarana by Kapha and Pitta is considered to further disturb the normal functions of Vata, contributing to the manifestation of pain during Parinama Kala (the digestive phase). The relationship between pain and the stages of digestion is an important feature in the classical description of Parinamashoola. The pattern and timing of symptom relief may vary according to the underlying condition and individual presentation.

From a contemporary medical perspective, Parinamashoola may be compared with certain gastrointestinal disorders, particularly peptic ulcer disease and functional dyspepsia, in which abdominal pain or discomfort may be associated with food intake, gastric secretion, and disturbances in gastrointestinal motility. Within an Ayurvedic interpretative framework, these processes may be discussed in relation to Pitta Dushti and Vata dysfunction, respectively. Similarly, Ama may be considered a traditional conceptual framework for understanding disturbances in digestion and metabolism; however, it should not be equated directly with inflammatory mediators or toxic metabolites.[9]

In this context, Eranda (Ricinus communis Linn.) is of therapeutic interest because of its established traditional use in conditions associated with Vata Dosha vitiation. Its Snigdha

(unctuous) and Ushna Virya (hot potency) properties are traditionally considered beneficial in alleviating aggravated Vata. Furthermore, its Anulomana (promoting the normal downward movement of bodily contents) and Mridu Virechana (mild purgative) actions may help regulate bowel movements and relieve constipation-associated discomfort, where present.[10]

From the Ayurvedic perspective, these properties provide a rationale for exploring the role of Eranda in Samprapti Vighatana (interruption of the disease process) in Parinamashoola. Its traditional actions may be relevant to the management of selected symptoms associated with altered bowel function and Vata aggravation. Nevertheless, whether Eranda directly modifies the underlying pathogenesis of Parinamashoola or provides specific gastroprotective benefits requires further investigation through appropriate pharmacological and clinical studies.

Thus, the traditional properties of Eranda provide a conceptual basis for its potential role in the Ayurvedic management of Parinamashoola. Further scientific evidence is necessary to establish its specific therapeutic effects, mechanisms of

CONCLUSION

Parinamashoola is a Vata-predominant gastrointestinal disorder characterized by abdominal pain during the digestive phase and is traditionally associated with Agnimandya, Ama formation, and Vata Dosha vitiation. The Ayurvedic understanding of its pathogenesis provides a conceptual framework for interpreting its clinical manifestations and therapeutic management. Eranda (Ricinus communis Linn.), traditionally recognized for its Vatahara, Anulomana, and Mridu Virechana properties, may have a supportive role in alleviating selected symptoms associated with Vata aggravation and altered bowel function. Its documented laxative and anti-inflammatory activities provide a basis for further investigating its therapeutic potential. However, condition-specific pharmacological and clinical studies are required to establish its efficacy and clarify its role in the management of Parinamashoola. Thus, Eranda represents a promising subject for further scientific evaluation within the framework of integrative Ayurvedic therapeutics.

DECLARATION

Ethics Approval and Consent to Participate

Not applicable, as this study is a conceptual review based on classical Ayurvedic literature and published scientific data.

Prior Informed Consent

Not applicable.

Availability of Data

All data generated or analysed during this study are included in this published article and its references.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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