


**PHARMACEUTICAL AND THERAPEUTIC REVIEW OF PANCHAMULADI GHRITA –
AN AYURVEDIC AND MODERN PERSPECTIVE**
Dr. Kaustubh Badave^{1*}, Dr. Kavita Deshmukh², Dr. Kalyani Jadhav³
¹MD(Scholar) Rasashastra Bhaishajya Kalpana Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar.

²(Asso. Prof) Rasashastra Bhaishajya Kalpana Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar.

³H.O.D Rasashastra Bhaishajya Kalpana Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar.

***Corresponding Author: Dr. Kaustubh Badave**

MD(Scholar) Rasashastra Bhaishajya Kalpana Sumatibhai Shah Ayurved Mahavidyalaya, Hadapsar.

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ABSTRACT

Ghrita Kalpana (medicated ghee preparations) represent one of the most significant dosage forms in Ayurveda. Among these, Panchamuladi Ghrita is traditionally used in the management of Grahaṇi Roga and Vata-kaphaj disorders. This review aims to analyze the pharmaceutical aspects, classical references, and modern pharmacological relevance of Panchamuladi ghrita. The formulation, composed of Panchmula (Bilva, Agnimantha, Shyonaka, Patala, Gambhari) along with Haritaki, Vyosha, Pippalimula, Saindhava, and other digestive and anti-inflammatory herbs, processed in ghee with acidic media such as Sukta or Matulunga swaras, exhibits deep intestinal action. Modern evidence suggests that ghee-based Ayurvedic formulations enhance drug bioavailability and have mucosal healing potential. The present review concludes that Panchamuladi Ghrita is a potent Ayurvedic preparation for gastrointestinal disorders with promising scope for further pharmacological and clinical research.

INTRODUCTION

- In Ayurveda, *Grahaṇi*^[1] is considered the seat of *Agni*—the digestive and metabolic fire responsible for transformation of food. When *Agni* is balanced (*Samagni*), digestion and absorption occur properly, maintaining overall health. However, impairment of *Agni* (*Mandagni*) leads to incomplete digestion, formation of *Ama* (toxic undigested matter), and dysfunction of the *Grahaṇi* organ. Thus, *Grahaṇi Roga* primarily arises from *Agni-vaishamya* (irregular digestive fire), and restoration of *Agni* forms the cornerstone of its management
- Acharya charak explains the role of ghrita kalpana in *grahani*^[2]

स्नेहमेव परं विद्यादुर्बलानलदीपनम्।
नालं स्नेहसमिद्दस्य शमायानं सुगुर्वपि

i.e sneha is the best among the deepan dravya which help in stimulating the inefficient agni. Also modern science says, The Ghrita and LBDDS^[3] as oral forms are absorbed from GIT yielding a solubilized solid-state solution with micronized particles. The avoidance of the

first-pass metabolism and targeting specific diseases makes LBDDS a good candidate for newer drugs. The lipid-based formulations have better bioavailability without being affected by food. Like any other LBDDS with lipidic core, Ghrita serves as a vehicle and excels as a therapeutic agent by reaching all the organs and tissues within a short duration, without any alteration of the drug. So, the use of Ghrita in drug delivery is not a new trend now, but still is a promising concept.

Also in case of chikitsa sutra of *grahani* the use of *sarpi* which is *deepan* in nature is mentioned.^[4]

स्नेहनं स्वेदनं शुद्धिर्लङ्घनं दीपनं च यत्।

चूर्णानि लवणक्षारमध्वरिष्टसुरासवाः।

विविधास्तक्रयोगश्च दीपनानां च सर्पिषाम् च.चि.15/196-197

From these we see importance of ghrita kalpana in case of *grahani*.

Panchamuladi Ghrita^[5] is mentioned in charak samhita *grahani* chikitsa.

पञ्चमूलाभ्याव्योषिप्पलीमूलसैन्धवैः।
 रास्नाक्षारद्वयाजाजीविड्गशटिभिर्घृतम्॥८॥।।।
 शुक्तेन मातुलुङ्गस्य स्वरसेनार्द्रकस्य च।।।
 शुष्कमूलककोलाम्बुचुक्रिकादाडिमस्य च॥९॥।।।
 तक्रमस्तुसुरामण्डसौवीरकतुषोदकैः।।।
 काञ्जिकेन च तत् पक्वमग्निदीप्तिकरं परम्॥१०॥।।।
 शूलगुल्मोदरश्वासकासानिलकफापहम्।।।
 सबीजपूरकरसं सिद्धं वा पाययेद्घृतम्। च.चि 15/ 88-93

The formulation utilizes Bruhatpanchamula^[5] – a group of five roots: Bilva (Aegle marmelos), Agnimantha (Clerodendrum phlomidis), Shyonaka (Oroxylum indicum), Patala (Stereospermum suaveolens), and Gambhārī (Gmelina arborea). With other ingredients. These bruhatpanchamula is vatanuloman and kaphashamak in nature.^[6] Grahani as a disorder of impaired digestion and absorption caused by vitiation of Agni. Panchamuladi Ghrita acts by restoring Agni, reducing Ama, and balancing Vata-kapha doshas.

Modern medicine correlates Grahani with Irritable Bowel Syndrome (IBS)^[7] and other malabsorption syndromes, highlighting the formulation's relevance in current gastrointestinal therapeutics.

The objective of this paper is to review Panchamuladi Ghrita with respect to its pharmaceutical preparation, Ayurvedic indications, and modern pharmacological relevance.

MATERIALS AND METHODS

This is a review-based therapeutic study. Classical Ayurvedic literature, including Charaka Samhita, Sushruta Samhita, Rasatarangini and Bhaishajya Ratnavali, were studied for references to Panchamuladi Ghrita and related formulations. Modern data were sourced from PubMed, AYUSH Research Portal, and Google Scholar. The inclusion criteria were texts and studies related to Ghrita Kalpanā, Sneha Pāka, and formulations containing Panchmula or its components. Non-lipid-based formulations were excluded.

Dravya	Rasa	Guna	Virya	Vipak	Karma	Modern Pharmacological Relevance
Bilva	Kashāya, Tikta	Laghu, Rūkṣa	Uṣṇa	Kaṭu	Dipana, Grahi, Amapachana	Antidiarrheal, antispasmodic
Agnimantha	Tikta, Katu	Laghu, Rukṣa	Uṣṇa	Kaṭu	Sothahara, Vatanulomana	Anti-inflammatory, antioxidant
Syonaka	Tikta, Kashaya	Laghu	Uṣṇa	Kaṭu	Dipana, Sothahara	Anti-ulcer, antimicrobial
Paṭala	Tikta, Kashaya	Laghu, Snigdha	Uṣṇa	Kaṭu	Tridoṣhamaka	Digestive stimulant, anti-inflammatory
Gambhari	Madhura, Tikta	Guru, Snigdha	Sīta	Madhura	Pittahara, Rasayana	Antioxidant, hepatoprotective
Haritaki	Kashaya	Laghu, Rukṣa	Uṣṇa	Madhura	Anulomana, Rasayana	Laxative, digestive, adaptogenic
Trikatu (Vyoṣa)	Kaṭu	Laghu, Tiksṇa	Uṣṇa	Madhura	Dipana, Pachana, Srotoshodhaka	Bioavailability enhancer, carminative
Pippalimula	Kaṭu	Laghu, Tiksṇa	Uṣṇa	Madhura	Dipana, Vatanulomana	Gut stimulant, anti-flatulent
Saindhava Lavana	Lavana	Snigdha, Laghu	Uṣṇa	Madhura	Dipana, Vatanulomana	Improves digestion, reduces bloating
Rasna	Tikta, Kaṭu	Laghu, Snigdha	Uṣṇa	Kaṭu	Vatahara, Vedanasthapana	Anti-inflammatory, analgesic
Ajaji (Jeeraka)	Kaṭu, Tikta	Laghu	Uṣṇa	Kaṭu	Dipana, Grahi	Carmine, antispasmodic
Viḍanga	Kaṭu, Tikta	Laghu, Rukṣa	Uṣṇa	Kaṭu	Krimighna, Dīpana	Anthelmintic, antimicrobial
Sati	Kaṭu, Tikta	Laghu, Snigdha	Uṣṇa	Kaṭu	Kaphahara, Dīpana	Antiemetic, anti-inflammatory
Ardraka	Kaṭu	Laghu, Snigdha	Uṣṇa	Madhura	Dipana, Pachana	Digestive stimulant, anti-inflammatory
suṣhka Mulaka	Kaṭu, Tikta	Laghu, Rukṣha	Uṣṇa	Kaṭu	Kaphavatahara, Dipana	Carmine, cholagogue
Kola	Madhura, Kashaya	Guru, Snigdha	Anuṣṇa Sita	Madhura	Balya, Pittahara	Demulcent, antioxidant
Cukrika	Madhura	Guru,	Sita	Madhura	Balya,	Nutritive, hematinic

		Snigdha			Raktavardhaka	
Dađima	Madhura, Kashaya	Laghu, Snigdha	Uṣṇa	Madhura	Dipana, Grahi	Antioxidant, gut-protective
Sukta / Mātuluṅga Svarasa	Amla	Laghu	Uṣṇa	Amla	Dipana, Rochana	Digestive acidifier, carminative
Ghṛita	Madhura	Snigdha, Mrdu	Sīta	Madhura	Yogavahi, Agnivardhaka	Mucosal healer, lipid carrier
Yavkshar	Katu, tika	teeksha	Ushna	katu		Dipana, pachan Shodhana, Lekhn
sajjikshar	Katu		ushna	katu		Dipana, pachana

Preparation of Panchamuladi ghrit

Ingredients

1. Dravya Dravya (Main Ingredients)

Category	Ingredients	Form	Quantity (as per classical proportion)
Sneha Dravya (Base)	Go-Ghṛita (cow's ghee)	—	1 part
Kalka Dravya (Paste drugs)	Panchmula (Bilva, Agnimantha, Shyonaka, Patala, Gambhari), Abhaya, Vyosha (Pippali, Maricha, Shunthi), Pippalimoola, Saindhava, Rasna, Kshara Dvaya (Yavakshara + Sarjikakshara), Ajājī, Vidanga, Shathi	Fine paste	1/4 part (of ghṛita)
Drava Dravya (Liquid media)	Shukta (fermented sour liquid), Matulunga swarasa (Citrus medica juice), Ardraka swarasa (ginger juice), Shushkamulaka rasa (radish juice), Kola ambu (jujube decoction), chukrika swarasa (beet juice), Dađima rasa (pomegranate juice)	Liquid	4 parts (of ghṛita)

Standard Ghrita Siddhi Vidhi (Method of Preparation)^[8]

1. Kalka Preparation

- Take all *Kalka dravyas* in required quantity.
- Make fine paste using a small quantity of the water.

2. Drava Preparation

- Draw swaras of the listed *Drava dravyas* freshly.
- Filter them through clean muslin cloth.

3. Mixing

- In a clean wide-mouthed vessel (preferably of stainless steel or copper), add:
 - Measured Go-Ghṛita
 - Prepared Kalka
 - **Drava Dravya** (there is rule about sneha kalpana if the drava dravya is more than 4 then all are taken in same quantity as ghṛita)

4. Heating

- Heat the mixture over mild fire (*manda Agni*).
- Stir continuously to avoid sticking at the bottom.
- Continue heating till the **Ghṛita Siddhi Laksanas** appear:
 - Ghṛita Siddhi Lakṣaṇas*^[9]
- **Kalka pariksha:** when rubbed between fingers, does not stick.
- **Sneha pariksha:** no froth or moisture sound; ghṛita becomes clear.
- **Gandha pariksha:** characteristic pleasant aroma of ghṛita develops.

- **Taila pariksha:** a drop placed on fire does not crackle (indicates absence of water).

5. Filtration

- Once Siddhi is achieved, remove from heat.
- Filter while warm through a clean cloth.

6. Storage

- Store the clear ghṛita in airtight glass container away from light and moisture.
- Label with name, date, and batch details.

Results (Literature Review Findings)

1. Pharmaceutical Description

The classical preparation of Pañcamūlādi Ghṛita involves processing Ghṛita with a decoction and paste of Panchmula, Hariṭakī, Vyosha, Pippalīmūla, Saindhava, Rasnā, Ajājī, Śaṭī, Ardraka, Śuṣka Mūlaka, Kola, Āmbu, Cukrikā, and Dāđima. The liquid media (Drava Dravya) used are Śukta (fermented sour liquid) or Mātuluṅga svarasa (Citrus medica juice). The mixture is subjected to Mrudu agni (mild heating) until Sneha Siddhi Laksana – the signs of completion such as absence of froth, proper consistency, and distinct aroma – are observed.

2. Classical Indications

Panchmuladi Ghṛita is indicated in Grahani Roga, Vata-Kaphaj, Sam kaph Vikara, pachan and deepan. Its classical verse from charak samhita (Grahaṇi Chikitsa Adhyaya, verse 88) reads:

“पञ्चमूलाभयाव्योषणिप्पलीमूलसैन्धवैः ।
रास्नाक्षारद्वयाजाजीविड्गशटिभिर्घृतम् ॥”
“शुक्तेन मातुलुङ्गस्य स्वरसेनाद्रकस्य च ।
शुष्कमूलकोलाम्बुचुक्रिकादाडिम पचेत् ॥”
शूलगुल्मोदरश्वासकासानिलकफापहम् ।

It is indicated in shool, gulma, udar, shwas, kaas, and vataj kaphaj vyadhi
वाते श्लेष्मावृते सामे कफे वा वायुनोद्धते ।

दद्याच्चूर्णं पाचनार्थमग्निसन्दीपनं परम् ॥ च चि 15/93

It is said that it is excellent pachana and agnideepan in nature.^[10]

3. Pharmacological Properties

Each ingredient contributes to the formulation's synergistic effect: Panchmula provides anti-inflammatory and carminative properties; Haritaki acts as a mild laxative and digestive tonic; Pippalimula and Vyosha enhance Agni and bioavailability; Ghrita serves as a vehicle improving intestinal absorption and mucosal repair. Collectively, these attributes make Panchmuladi ghrita a potent formulation for chronic digestive disturbances.

4. Modern Correlation

In modern terms, the formulation exhibits actions comparable to probiotics, anti-inflammatory agents, and mucosal healers. Studies on ghee-based preparations have demonstrated enhanced absorption of lipophilic phytochemicals, improved gut flora, and reduced intestinal inflammation. The ingredients of Panchmula possess antioxidant and hepatoprotective properties, supporting their role in the management of IBS and colitis.

DISCUSSION

The therapeutic efficacy of Panchmuladi Ghrita can be explained through both Ayurvedic and modern perspectives. According to Ayurveda, *Nidanas* disturb the *Jatharagni*, leading to *Mandagni* (low digestive fire). As a result, food is not properly digested, leading to *Ama Utpatti* (formation of toxins). The undigested material and vitiated *Doshas* accumulate in the *Grahani*, leading to dysfunction. The structural and functional capacity of *Grahani* is compromised.

Doshic Involvement: Pitta: Increases *Tikshna* (sharpness) → leads to burning, diarrhoea. **Vata:** Increases *Ruksha* (dryness), *Chala* (instability) → causes irregular bowels, gas. **Kapha:** Increases *Manda* (sluggishness), *Snigdha* (stickiness) → leads to heaviness, mucus in stool. *Doshas + Ama* localizes in *Grahani*. This impairs the retention and proper processing of food. The improperly digested food is either passed early (as in *Atisara*) or retained excessively (as in *Vibandha*). Resulting in Malabsorption, *Ama* formation and Nutritional deficiencies. The root cause of *Grahanī Roga*

lies in the dysfunction of Agni and accumulation of Ama. Which leads to disturbance in *grahani* organ and lead to muhurbaddha muhurdrav i.e alternate diarrhoea and alternate constipation. The formulation restores digestive fire, detoxifies the gut, and balances Vata and kaph doshas. From a modern viewpoint, Irritable Bowel Syndrome (IBS) is a chronic functional gastrointestinal disorder characterized by abdominal pain, altered bowel habits, visceral hypersensitivity, dysbiosis, low-grade inflammation, and impaired gut-brain axis.^[11]

1. Antispasmodic & Motility-Modulating Action

Drugs like Bilva, Ajaji, Pippali, and Shushka Mulaka possess antispasmodic and carminative properties. These help reduce intestinal smooth muscle spasms and normalize gut transit.

This is relevant for both IBS-D (diarrhea predominant) and IBS-M patterns.

Saindhava and Trikatu enhance digestive secretions, improving coordinated peristalsis and reducing bloating.

2. Anti-inflammatory & Mucosal-Protective Action

IBS is associated with low-grade intestinal inflammation. Drugs such as Agnimantha, Syonaka, Rasna, Paṭala, Shati, and Ardraka possess anti-inflammatory and antioxidant effects, reducing mucosal irritation and preventing flare-ups.

Gambhari and Ghrita exhibit mucosal-healing effects, which strengthen epithelial integrity and support barrier function—important in reducing visceral hypersensitivity.

3. Gut Microbiota Modulation

The presence of Vidanga (antimicrobial, anthelmintic) helps in correcting dysbiosis, which is increasingly recognized as a core mechanism in IBS.

By reducing pathogenic microbes, it indirectly enhances beneficial flora and reduces gas, pain, and bloating.

4. Digestive Enzyme Enhancement & Reduction of Fermentation

Herbs like Trikatu, Pippali mula, Ardraka act as digestive enzymatic stimulants, increasing secretion of saliva, gastric acid, pancreatic enzymes, and bile.

This reduces incomplete digestion and excessive colonic fermentation—a major cause of bloating, gas, and abdominal discomfort.

5. Reduction of Visceral Hypersensitivity

Antioxidant and anti-inflammatory herbs (Agnimantha, Gambhari, Shyonaka, and Rasna) help reduce inflammatory mediators that sensitize visceral afferents. Ghrita plays an important role as a neural modulator by stabilizing intestinal neuronal signaling.

6. Normalization of Bowel Habit (Grahi-Balya effect)

IBS-D patients often suffer from loose stools and urgency due to disturbed water absorption and mucosal irritation.

Bilva, Dadima, Ajaji have Grahi (absorbent) properties, helping to restore stool consistency.

Kola, Chukrika provide nutritive and demulcent effects which support epithelial repair and help in chronic diarrhea-related weakness.

7. Detoxifying, Carminative & Alkalizing Action

Yavakṣhara and Sajjikṣhara provide mild alkaline and scraping (Lekhana) action:

Reduce hyperacidity Break down tenacious mucus
Improve bile flow Reduce gas retention
Their carminative and metabolic-enhancing effect supports the reduction of abdominal pain and heaviness.

8. Bioavailability Enhancement

Trikatu acts as a bio enhancer by improving drug absorption and increasing gastrointestinal membrane permeability.

This ensures that the therapeutic actions of all ingredients are potentiated.

9. Ghrita as a Therapeutic Base (Lipid Carrier)

From a modern pharmacological perspective

Ghṛita acts as a lipid carrier improving transport of phytochemicals across the intestinal mucosa. It reduces mucosal dryness and inflammation.

Has neuroprotective and gut-brain axis benefits, helping reduce anxiety-linked IBS symptoms ghee acts as a lipid carrier facilitating the transport of active compounds across intestinal mucosa, enhancing bioavailability. The 2016 Rome IV^[12] consensus definition of irritable bowel syndrome is abdominal pain that has two of the following three features: (1) related to defecation, (2) associated with a change in frequency of stool, or (3) associated with a change in form (appearance) of stool. Which reduces these symptoms due to above action Ghrita rejuvenate the intestinal mucosa. Thereby addressing the root causes of chronic digestive dysfunctions like malabsorption syndromes and irritable bowel conditions. The unique lipophilic nature of ghee enhances the bioavailability of herbal actives, while the synergistic action of the ingredients imparts Deepan (appetizer), Pachana (digestive), Rasayana (rejuvenative), and Srotoshodhaka (channel-cleansing) effects. Furthermore, the anti-inflammatory and antioxidant nature of Panchamula herbs contributes to mucosal healing and reduction of gut hypersensitivity, key pathophysiological features of IBS.

Comparative evaluation of Ghrita-based and aqueous formulations indicates that Ghrita preparations yield better therapeutic efficacy due to higher tissue penetration and stability. The formulation's unique combination of acidic and lipid media ensures maximum extraction of active constituents.

CONCLUSION

Panchmuladi Ghrita is a classical Ayurvedic formulation of great clinical significance in managing Grahani Roga

and IBS-like conditions. Its ghee-based matrix ensures deep tissue delivery, anti-inflammatory action, and mucosal repair. The review supports its traditional use and suggests scope for further experimental validation, standardization, and clinical trials. Integrating this formulation into evidence-based practice may provide an effective alternative in chronic gastrointestinal disorders.

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