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A CRITICAL REVIEW OF VISHAGHNA KALPA IN SAHASTRAYOGAM: CLASSICAL PERSPECTIVES AND THERAPEUTIC SIGNIFICANCE

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ABSTRACT

Background: Agada Tantra, one of the eight branches of Ayurveda, deals with the prevention and management of poisoning (Visha). Classical texts describe numerous Vishaghna Kalpas in various pharmaceutical dosage forms, including Ghrita, Taila, Churna, Gutika, Kashaya, Leha, and Rasa Yoga. From the perspective of Rasashastra and Bhaishajya Kalpana, these formulations are important for understanding classical pharmaceutical principles, such as dosage form selection, processing methods, and the use of herbal, mineral, and animal-derived ingredients. Sahasrayogam, a renowned Kerala compendium, contains several unique Vishaghna Kalpas that are widely used in Ayurvedic practice. However, their pharmaceutical characteristics and therapeutic significance have not been critically reviewed in a systematic manner. **Objective:** To critically review the Vishaghna Kalpas described in Sahastrayogam, classify them according to dosage forms and therapeutic indications, evaluate their pharmaceutical characteristics, and discuss their therapeutic significance in the light of classical Ayurvedic principles and contemporary scientific understanding. **Materials and Methods:** A narrative literature review was conducted using Sahastrayogam as the primary source of data. Classical Ayurvedic texts including Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, and standard textbooks of Agada Tantra were

consulted for conceptual understanding. Contemporary literature available through PubMed, Scopus, Google Scholar, and AYUSH Research Portal was reviewed to correlate the pharmacological activities of commonly employed medicinal plants and pharmaceutical principles. **Results:** Fourteen formulations possessing Vishaghna activity were identified in Sahastrayogam, comprising four Ghrita, one Taila, two Churna, one Rasa, four Gutika, one Kashaya, and one Leha. Triphala was the most frequently employed ingredient, followed by Ela, Chandana, Trikatu, and Vacha. Besides antidotal activity, these formulations demonstrated therapeuticutility in disorders such as Pandu, Jwara, Kushtha, Prameha, infertility, cognitive impairment, chronic respiratory diseases, and neurological disorders. Several formulations also incorporated unique pharmaceutical media such as goat's milk, breast milk, goat urine, cow urine, coconut water, snake bile, and precious metals, highlighting the advanced pharmaceutic concepts described in Sahastrayogam. **Conclusion:** The Vishaghna Kalpas described in Sahastrayogam constitute a valuable repository of Ayurvedic antidotal formulations with broad therapeutic applications extending beyond detoxification. Their multidimensional pharmacological actions indicate potential relevance in contemporary integrative toxicology. Further pharmacological investigations and well-designed clinical studies are required to establish their evidence-based clinical utility.

KEYWORDS: Agada Tantra, Sahastrayogam, Vishaghna Kalpa, Gara Visha, Dushivisha, Ayurveda, Chronic poisoning, Toxicology, Antidotal Formulations.

1. INTRODUCTION

Poisoning remains a major global public health problem and an important cause of morbidity and mortality, particularly in developing countries. Exposure to pesticides, industrial chemicals, environmental pollutants, venomous animals, poisonous plants, adulterated food, and pharmaceutical agents contributes to both acute and chronic toxicity. Despite advances in modern toxicology, the management of chronic poisoning and toxin-induced tissue damage remains challenging.[1]

Ayurveda addresses toxicology through Agada Tantra, which describes poisoning as a disturbance of Dosha, Dhatu, Agni, Mala, and Ojas. Accordingly, Ayurvedic management aims not only at detoxification but also at restoring physiological balance, preserving tissue integrity, and promoting rejuvenation.[2-3] Classical texts classify poison into Sthavara Visha, Jangama Visha, Gara Visha, and Dushivisha, and recommend a variety of Vishaghna Kalpas prepared in dosage forms such as Ghrita, Taila, Churna, Gutika, Kashaya, Leha, and Rasa Yoga. These

formulations reflect the principles of Rasashastra and Bhaishajya Kalpana, emphasizing appropriate dosage forms, pharmaceutical processing, Bhavana, Anupana, and the rational use of herbal, mineral, metallic, and animal-derived ingredients to enhance therapeutic efficacy.[4] Among the classical Kerala compendia, Sahastrayogam occupies a unique place because of its extensive collection of practical formulations used in Ayurvedic pharmaceutics and clinical practice. In addition to formulations for common diseases, it describes several Vishaghna Kalpas comprising herbal, herbo-mineral, and mineral preparations with distinct pharmaceutical characteristics and therapeutic applications in different types of poisoning.[5] Many of these formulations are also indicated in conditions such as Pandu, Jwara, Prameha, Kushtha, Kshaya, Shwasa, Shukra Kshaya, Artava Kshaya, infertility, cognitive disorders, and chronic inflammatory diseases, suggesting broader Rasayana, Balya, Medhya, and tissue-protective properties beyond antidotal activity. From the perspective of Rasashastra and Bhaishajya Kalpana, they provide valuable insights into classical formulation design, selection of dosage forms, specialized processing media, and the incorporation of mineral and metallic drugs.

Although these formulations possess considerable pharmaceutical and therapeutic significance, comprehensive scientific reviews focusing on their formulation design, dosage forms, ingredient distribution, pharmaceutical processing, and therapeutic relevance are lacking. Therefore, the present review critically analyzes the Vishaghna Kalpas described in Sahastrayogam, highlighting their pharmaceutical characteristics and therapeutic significance from the perspective of Rasashastra and Bhaishajya Kalpana, with relevance to contemporary integrative toxicology.

2. OBJECTIVES

1. To identify the Vishaghna Kalpas described in *Sahastrayogam*.
2. To classify the formulations according to their pharmaceutical dosage forms.
3. To analyze their ingredient composition and therapeutic indications.
4. To categorize the formulations based on the type of poisoning.
5. To evaluate the frequency of commonly used medicinal ingredients.
6. To assess their pharmaceutical rationale and therapeutic significance.
7. To identify future research opportunities for evidence-based validation.

3. MATERIALS AND METHODS

The present study is a narrative literature review based on classical Ayurvedic texts and contemporary scientific literature.

Sahastrayogam served as the primary source for identifying Vishaghna Kalpas. Information on Visha, Agada, and antidotal therapy was collected from *Charaka Samhita*, *Sushruta Samhita*, *Ashtanga Hridaya*, and standard Ayurvedic toxicology texts.[2,6,7]

To correlate classical concepts with modern evidence, electronic databases including PubMed, Scopus, Google Scholar, DHARA, and the AYUSH Research Portal were searched using relevant keywords. Review articles, pharmacological studies, and experimental publications in English were included.[8-10]

The identified formulations were critically analyzed with respect to

- Pharmaceutical dosage forms (Kalpana)
- Ingredient composition
- Therapeutic indications
- Classification according to poison type
- Frequency of medicinal ingredients
- Pharmaceutical media (Bhavana and Anupana)
- Additional therapeutic actions
- Pharmaceutical and clinical significance

4. RESULT AND DISCUSSION

4.1 Distribution of Vishaghna Kalpas According to Pharmaceutical Dosage Forms

A total of 14 formulations possessing Vishaghna (antitoxic) properties were identified in Sahastrayogam. These formulations were distributed among seven different pharmaceutical dosage forms (Kalpana), reflecting the diversity and sophistication of Ayurvedic pharmaceutics. Among them, Ghrita and Gutika were the most frequently employed dosage forms, each accounting for four formulations (28.57%), followed by Churna, while Taila, Rasa, Kashaya, and Leha were represented by a single formulation each. The predominance of lipid-based formulations suggests a deliberate preference for dosage forms capable of enhancing bioavailability, tissue penetration, and prolonged therapeutic action. The diversity of pharmaceutical preparations also indicates that Sahastrayogam recommends different dosage forms according to the nature of poison, route of administration, and clinical presentation of

the patient.

Table 1: Distribution of Vishaghna Kalpas According to Pharmaceutical Dosage Forms.

Sr. No.	Dosage Form (Kalpana)	No. of Formulations	Percentage (%)	Formulations
1	Ghrita	4	28.57	Kalyanaka-Ghrita, Mahakushmanda-Ghrita, Saraswata Ghrita, Panal Patiryadi Ghrita
2	Gutika	4	28.57	Kautajadi Guda, Bilvadi Gutika, Dashanga Gutika, Mrita Sanjeevani Gutika
3	Churna	2	14.29	Prithu Nimba Panchaka Churna, Naracha Churna
4	Taila	1	7.14	Eladi Taila
5	Rasa	1	7.14	Suchimukha Rasa
6	Kashaya	1	7.14	Visarpe Kulakadi Kashaya
7	Leha	1	7.14	Dashamoola Haritaki Leha
Total	—	14	100	—

Critical Analysis

The predominance of Ghrita among the Vishaghna Kalpas is noteworthy. Classical Ayurvedic literature recognizes Ghrita as a superior drug delivery system because of its Sukshma (micro-penetrating), Yogavahi (carrier), Samskaranuvarti (ability to retain the qualities of processed drugs), Medhya (nootropic), and Rasayana (rejuvenative) properties. These characteristics facilitate deeper tissue penetration and improve the systemic distribution of phytoconstituents, making Ghrita particularly suitable for conditions involving rapidly spreading toxins.

Similarly, Gutika formulations constitute another major category. Their compact nature, longer shelf life, accurate dosage, ease of transportation, and rapid administration during emergencies make them particularly suitable in toxicological practice. Several Gutika preparations described in Sahastrayogam are specifically indicated in acute poisoning such as snakebite, scorpion sting, insect poisoning, and Gara Visha, highlighting their practical utility in emergency management.[5]

The relatively smaller number of Taila, Kashaya, and Leha formulations indicates that these preparations were probably intended for specific clinical situations rather than routine antidotal use. External application of medicated oils such as Eladi Taila may have been intended for localized toxic manifestations, whereas Dashamoola Haritaki Leha appears to provide long-term restorative support following poisoning by improving nutritional status, tissue strength, and immunity.

Overall, the distribution of dosage forms demonstrates that Sahastrayogam adopts a comprehensive pharmaceutical approach, employing different dosage forms according to the nature of poisoning, desired therapeutic action, and stage of disease progression.

4.2 Formulation-wise Therapeutic Profile of Vishaghna Kalpas

The fourteen formulations described in Sahastrayogam exhibit considerable diversity with respect to ingredient composition, pharmaceutical processing, and therapeutic indications. Although all formulations possess antidotal activity, several extend their clinical utility to chronic metabolic disorders, neurological diseases, reproductive disorders, dermatological conditions, and respiratory illnesses. This observation suggests that the concept of Vishaghna in Ayurveda encompasses not only toxin neutralization but also restoration of physiological homeostasis and protection of vital tissues.

Table 2: Formulation-wise Therapeutic Profile of Vishaghna Kalpas in Sahastrayogam

Sr. No.	Formulation	Major Ingredients	Indications in Poisoning	Other Therapeutic Uses
1	**Kalyanaka Ghrita**	Triphala, Ela, Chandana, Kushta, Vidanga, Sariva	Gara Visha	Pandu, Kushta, Jwara, Prameha, infertility, memory enhancement
2	**Mahakushmanda Ghrita**	Kushmanda, Triphala, Vidanga, Draksha, Sariva	Vishadosha	Kshaya, Shwasa, Vatarakta, Asthistrava, infertility
3	**Saraswata Ghrita**	Triphala, Brahmi, Vacha, Lakshmana, Patha, Suvarna	General poisoning	Grahabadha, cognitive impairment, memory enhancement
4	**Panal Patiryadi Ghrita**	Triphala, Shirisha, Brahmi, Patha	Alarka (rabies), fox bite	Administered after purification therapy
5	**Eladi Taila**	Ela, Kushta, Jatamansi, Tagara	General poisoning	Skin disorders, itching, complexion enhancement
6	**Prithu Nimba Panchaka Churna**	Neem Panchanga, Trikatu, Haridra, Triphala	Gara Visha	Kushta, Prameha, Kasa
7	**Naracha Churna**	Triphala, Vacha, Trikatu, Danti, Trivrit	Gara Visha, Mula Visha, Damshtra Visha	Therapeutic purgation (Virechana)
8	**Suchimukha Rasa**	Parada, Gandhaka, Hartala, Manashila	Vishadosha	Dhanurvata, Unmada, Sannipata
9	**Kautajadi Guda**	Kutaja, Triphala, Neem, Musta, Shilajatu	Vishadosha	Pandu, Bhagandara, Agnimandya
10	**Bilvadi Gutika**	Bilva, Tulasi, Triphala, Karanja	Snakebite, scorpion sting, rat bite	Vishuchika, fever
11	**Dashanga Gutika**	Vacha, Hingu, Vidanga, Ativisha	Insect poisoning	Classical Agada formulation

12	**Mrita Sanjeevani Gutika**	Triphala, Chandana, Rudraksha, Suvarna	General poisoning	Apasmara, mental confusion
13	**Visarpe Kulakadi Kashaya**	Triphala, Chandana, Vasa, Nimba	Toxic Visarpa	Fever, burning sensation
14	**Dashamoola Haritaki Leha**	Dashamoola, Haritaki, Trikatu	Gara Visha	Shotha,Prameha, Udararoga

Critical Interpretation

A remarkable finding of the present review is that only a small proportion of the formulations are exclusively indicated for poisoning. The majority exhibit broad-spectrum therapeutic actions in disorders involving Dhatu Kshaya, chronic inflammation, metabolic dysfunction, reproductive impairment, and neurological abnormalities. This suggests that Ayurvedic physicians considered poisoning a systemic pathological process requiring restoration of tissue integrity, enhancement of Agni, preservation of Ojas, and correction of underlying physiological disturbances rather than simple toxin neutralization.

Furthermore, formulations such as Kalyanaka Ghrita, Mahakushmanda Ghrita, and Saraswata Ghrita combine antidotal activity with Medhya, Balya, Vrishya, and Rasayana properties, indicating a dual role in detoxification as well as rehabilitation. This holistic therapeutic approach distinguishes Ayurvedic antidotal formulations from conventional toxicological management and underscores their potential relevance in chronic toxicity, post-toxic recovery, and integrative healthcare.[11]

4.3 Classification of Vishaghna Kalpas According to Types of Poison

Ayurveda classifies poisoning into different categories based on the origin, mode of action, and clinical manifestations of the toxic substance. Classical texts describe Sthavara Visha, Jangama Visha, Gara Visha, and Dushivisha as the principal categories of poison, while specific conditions such as Damshtra Visha (bite poisoning), Keeta Visha (insect poisoning), and Mula Visha (root poison) are also discussed in the context of toxicological management.[2,6,7]

Analysis of *Sahastrayogam* revealed that its Vishaghna Kalpas are distributed according to different toxic conditions rather than being intended for a single universal antidotal purpose. This classification reflects the disease-specific therapeutic approach adopted by classical Ayurvedic physicians.

Table 3: Classification of Vishaghna Kalpas According to Types of Poison.

Type of Poison	Formulations	Number of Formulations
Vishadosha	Mahakushmanda Ghrita, Kautajadi Guda, Suchimukha Rasa	3
General Vishanashaka	Saraswata Ghrita, Eladi Taila, Mrita Sanjeevani Gutika, Visarpe Kulakadi Kashaya	4
Gara Visha	Kalyanaka Ghrita, Prithu Nimba Panchaka Churna, Dashamoola Haritaki Leha, Bilvadi Gutika, Naracha Churna	5
Mula Visha	Naracha Churna	1
Damshtra Visha	Naracha Churna, Bilvadi Gutika, Panal Patiryadi Ghrita	3
Keeta Visha	Dashanga Gutika	1

Critical Analysis

One of the most significant observations of the present review is that the highest number of formulations (n = 5) are indicated for Gara Visha. According to Ayurveda, Gara Visha refers to artificially prepared or compounded poisons that produce chronic systemic illness through gradual impairment of Agni, Dhatu, and Ojas.[3]

The predominance of Gara Visha formulations suggests that the authors of *Sahastrayogam* recognized chronic poisoning as a clinically important condition requiring specialized management. This concept remains relevant today, where prolonged exposure to pesticides, environmental pollutants, heavy metals, adulterated food, alcohol, tobacco, and certain pharmaceuticals results in cumulative toxic effects rather than acute poisoning. Thus, Gara Visha may closely resemble several modern chronic toxicological conditions.[9,10,12]

Four formulations are described as general Vishanashaka without specifying a particular poison, suggesting broad-spectrum antidotal activity. Their predominant Rasayana, Medhya, Balya, and anti-inflammatory ingredients indicate a dual role in detoxification and restoration of physiological homeostasis.[5,13]

Only one formulation each is specifically indicated for Keeta Visha and Mula Visha, whereas Damshtra Visha (snakebite, scorpion sting, rodent bite, and rabid animal bite) is managed by three formulations, highlighting the clinical importance of envenomation in classical Ayurvedic practice.[5]

Overall, these observations demonstrate that *Sahastrayogam* advocates a condition-specific

rather than a universal antidotal approach, reflecting the individualized management of poisoning according to its source, severity, and pathophysiological effects.

4.4 Additional Therapeutic Significance of Vishaghna Kalpas

An important observation of the present review is that the Vishaghna Kalpas described in *Sahastrayogam* extend beyond detoxification. Besides their antidotal activity, they are indicated in disorders involving multiple organ systems, suggesting roles in tissue restoration, immune enhancement, and recovery following toxic insults.[5]

Table 4: Additional Therapeutic Actions of Vishaghna Kalpas Beyond Detoxification.

Formulation	Additional Therapeutic Actions
Kalyanaka Ghrita	Improves memory, intellect, longevity, complexion, fertility; beneficial in Shukra Kshaya, Artava Kshaya, and psychological disorders
Mahakushmanda Ghrita	Promotes strength, nourishes tissues, improves fertility, useful in Asthistrava and chronic wasting disorders
Saraswata Ghrita	Enhances memory and cognition; beneficial in Grahabadha and neuropsychological disorders
Eladi Taila	Improves complexion; useful in pruritus, skin eruptions, and inflammatory dermatoses
Prithu Nimba Panchaka Churna	Effective in Kushtha, Prameha, and chronic skin lesions
Naracha Churna	Therapeutic purgative in chronic systemic disorders requiring Virechana
Kautajadi Guda	Corrects digestive impairment, beneficial in Shukra Dosha and chronic gastrointestinal disorders
Bilvadi Gutika	Useful in Vishuchika, fever, and protection from supernatural influences as described in classical texts
Suchimukha Rasa	Indicated in Dhanurvata, Unmada, and severe febrile conditions
Dashanga Gutika	Classical Agada for insect poisoning
Mrita Sanjeevani Gutika	Beneficial in Apasmara, mental confusion, and neurological disorders
Visarpe Kulakadi Kashaya	Useful in acute inflammatory conditions associated with fever, burning sensation, and Visarpa
Dashamoola Haritaki Leha	Beneficial in Shotha, Prameha, malnutrition, urinary disorders, and chronic debility

Critical Interpretation

A notable feature of these formulations is the integration of antidotal therapy with Rasayana principles. Many formulations are indicated in disorders such as Pandu, Jwara, Prameha, Kushtha, Shukra Kshaya, and Artava Kshaya, suggesting that Ayurvedic toxicology emphasizes restoration of Agni, nourishment of Dhatus, and preservation of Ojas in addition to toxin neutralization.[3,7,13]

The indication of Mahakushmanda Ghrita in Asthistrava is a distinctive therapeutic application that warrants further pharmacological and clinical investigation. Likewise, the use of Kalyanaka Ghrita and Saraswata Ghrita for fertility, memory enhancement, and neuroprotection suggests that *Sahastrayogam* recognizes poisoning as a systemic disorder requiring long-term restoration of neurological and reproductive health.

4.5 Frequency Analysis of Commonly Used Ingredients in Vishaghna Kalpas

Analysis of the fourteen Vishaghna Kalpas revealed a definite pattern in the selection of medicinal ingredients. Certain drugs were repeatedly incorporated into multiple formulations, indicating their fundamental role in Ayurvedic antidotal therapy. Triphala was the most frequently used ingredient, appearing in 10 out of 14 formulations, followed by Ela, Chandana, Trikatu, and Vacha. The repeated occurrence of these drugs suggests that they possess complementary pharmacological properties such as detoxification, antioxidant activity, immunomodulation, anti-inflammatory effects, enhancement of digestion and metabolism, tissue protection, and rejuvenation. Such properties collectively contribute to neutralizing toxic substances while restoring physiological homeostasis.[14-18]

Table 5: Frequency Distribution of Commonly Used Ingredients.

Rank	Ingredient	Number of Formulations	Percentage (%)
1	Triphala	10	71.43
2	Ela (Elettaria cardamomum)	6	42.86
3	Chandana (Santalum album)	5	35.71
4	Trikatu	5	35.71
5	Vacha (Acorus calamus)	5	35.71
6	Kushta (Saussurea lappa)	4	28.57
7	Vidanga (Embelia ribes)	3	21.43
8	Jeeraka (Cuminum cyminum)	3	21.43
9	Sariva (Hemidesmus indicus)	3	21.43
10	Dadima (Punica granatum)	2	14.29
11	Draksha (Vitis vinifera)	2	14.29
12	Hingu (Ferula asafoetida)	2	14.29
13	Nagakesara (Mesua ferrea)	2	14.29

Critical Analysis

The predominance of Triphala in nearly three-fourths of the formulations highlights its central role in Ayurvedic antidotal therapy. Classical texts describe it as Rasayana, Deepana, Anulomana, Chakshushya, and Tridoshaghna, while modern studies demonstrate antioxidant, anti-inflammatory, immunomodulatory, hepatoprotective, antimicrobial, and free radical scavenging activities, supporting its widespread use in Vishaghna formulations.[13,14]

Ela is repeatedly incorporated for its Deepana, Pachana, Hridya, and Vishaghna properties, with experimental evidence supporting antioxidant, gastroprotective, antimicrobial, and anti-inflammatory activities.[15] Chandana, owing to its Sheeta Virya, Pittahara, and Raktaprasadana properties, acts as an effective cooling and anti-inflammatory agent, corroborated by modern pharmacological studies.[16]

The frequent inclusion of Trikatu emphasizes the importance of restoring Agni and enhancing drug bioavailability during poisoning, with piperine recognized as a natural bioavailability enhancer.[17] Likewise, Vacha, known for its Medhya and Vishaghna properties, exhibits neuroprotective, anticonvulsant, antioxidant, and anti-inflammatory activities, supporting its use in poisoning associated with neurological manifestations.[18]

Overall, the ingredient profile of *Sahastrayogam* reflects a holistic therapeutic strategy that combines detoxification with correction of metabolic dysfunction, preservation of tissue integrity, and enhancement of host defense mechanisms.

4.6 Therapeutic Significance of Frequently Used Ingredients

To better understand the rationale behind the repeated selection of particular medicinal plants, their classical Ayurvedic properties and experimentally validated pharmacological activities were comparatively analyzed.

Table 6: Classical and Contemporary Therapeutic Significance of Frequently Used Ingredients.

Ingredient	Classical Ayurvedic Properties	Reported Modern Pharmacological Activities
Triphala	Rasayana, Tridoshaghna, Deepana, Chakshushya	Antioxidant, hepatoprotective, immunomodulatory, antimicrobial
Ela	Deepana, Pachana, Hridya, Vishaghna	Antioxidant, gastroprotective, antimicrobial
Chandana	Pittahara, Daha Prashamana, Raktaprasadana	Anti-inflammatory, antioxidant, wound healing
Trikatu	Deepana, Pachana, Ama Pachana, Yogavahi	Bioavailability enhancer, digestive stimulant, anti-inflammatory
Vacha	Medhya, Lekhana, Vishaghna	Neuroprotective, anticonvulsant, antioxidant
Vidanga	Krimighna, Vishaghna	Anthelmintic, antimicrobial, antioxidant
Sariva	Raktaprasadana, Vishaghna	Anti-inflammatory, hepatoprotective
Kushta	Vatakaphahara, Vishaghna	Anti-inflammatory, antimicrobial
Jeeraka	Deepana, Grahi	Antioxidant, digestive stimulant

Critical Interpretation

The repeated incorporation of these medicinal plants reflects a rational pharmacotherapeutic strategy in *Sahastrayogam*. Rather than relying on a single antidotal mechanism, the formulations combine drugs that promote detoxification, improve digestion and drug absorption, modulate immunity, reduce oxidative stress, and support tissue regeneration, thereby addressing the multisystem effects of poisoning.

Notably, most frequently used ingredients belong to the Rasayana, Deepana-Pachana, and Raktaprasadana groups, indicating that restoration of Agni, preservation of Ojas, and maintenance of tissue nutrition were key therapeutic objectives. This holistic approach closely parallels current concepts of oxidative stress, inflammation, immune dysfunction, and metabolic disturbances associated with chronic toxic exposure.

4.7 Significance of Special Pharmaceutical Media (Bhavana and Processing Media) in Vishaghna Kalpas

An important pharmaceutical characteristic observed in the Vishaghna Kalpas of Sahastrayogam is the incorporation of specific processing media (Bhavana Dravya, Anupana, and lipid vehicles). These media are not merely pharmaceutical additives but are selected according to Ayurvedic principles to enhance drug potency, improve bioavailability, facilitate tissue penetration, and augment antidotal efficacy. Classical Ayurvedic pharmaceutics considers the processing medium an integral determinant of the therapeutic action of a formulation.[2,5,8]

Unlike conventional pharmaceutical preparations, Sahastrayogam employs a diverse range of animal-derived products, mineral substances, and biological media, indicating an advanced understanding of drug processing and synergistic therapeutic enhancement.

Table 7: Special Pharmaceutical Media Used in Vishaghna Kalpas.

Formulation	Special Pharmaceutical Medium	Probable Ayurvedic Significance
Mahakushmanda Ghrita	Goat's milk (Ajadugdha) Coconut water (Narikela Jala)	Brimhana, Balya, tissue nourishment, Rasayana Cooling, Pittahara, replenishes body fluids
Bilvadi Gutika	Goat urine (Ajamutra)	Enhances penetration, detoxification, Kapha-Vata alleviation
Dashanga Gutika	Cow urine (Gomutra)	Yogavahi, Deepana, improves bioavailability and detoxification
Mrita Sanjeevani	Breast milk (Stanya)	Rapid assimilation, suitable for neurological

Gutika		disorders
Suchimukha Rasa	Snake bile (Sarpa Pitta)	Classical antidotal processing medium enhancing Vishaghna action
Saraswata Ghrita	Gold (Suvarna)	Medhya, Rasayana, Ojavardhaka, neuroprotective
Kautajadi Guda	Shilajatu	Rasayana, adaptogenic, tissue restorative

Critical Analysis

The use of Ajadugdha, Gomutra, Ajamutra, and Stanya reflects the Ayurvedic principle that the processing medium itself enhances therapeutic efficacy. Goat's milk provides nourishment, while cow urine, with its Yogavahi, Lekhana, and Deepana properties, facilitates improved drug absorption and detoxification.[2,8,13]

The inclusion of breast milk in *Mrita Sanjeevani Gutika* highlights its Jivaniya and Balya properties, particularly for neurological disorders. Likewise, the use of snake bile in *Suchimukha Rasa* exemplifies the classical toxicological principle of employing substances derived from the source of poisoning to enhance antidotal efficacy.[5]

4.8 Role of Mineral, Metallic and Animal-Origin Ingredients

Another distinctive feature of the Vishaghna Kalpas described in Sahastrayogam is the incorporation of mineral, metallic, and animal-derived substances in selected formulations. Their inclusion suggests that Ayurvedic toxicology extends beyond herbal therapeutics and employs a multidimensional pharmaceutic approach to achieve rapid and sustained therapeutic effects.[2,5]

Table 8: Mineral, Metallic and Animal-Origin Ingredients in Vishaghna Kalpas.

Category	Ingredients	Formulations	Probable Therapeutic Role
Precious metals	Gold (Suvarna), Silver (Rajata)	Saraswata Ghrita, Mrita Sanjeevani Gutika	Medhya, Rasayana, Ojavardhana
Marine minerals	Pravala	Mrita Sanjeevani Gutika	Pittahara, tissue support
Mineral drugs	Shilajatu	Kautajadi Guda	Adaptogenic, rejuvenative
Animal products	Goat's milk, Breast milk, Snake bile	Various formulations	Nourishment, rapid assimilation, antidotal potentiation
Animal derivatives	Deer horn, Bull horn, Peacock feather	Mrita Sanjeevani Gutika	Traditional neuroprotective and Vishaghna applications

Critical Analysis

The incorporation of mineral and animal-derived substances indicates that *Sahastrayogam*

adopts a multicomponent therapeutic approach, combining herbal medicines with biologically active adjuncts. Precious metals such as *Suvarna* and *Rajata*, along with *Shilajatu*, are traditionally valued for their Rasayana and rejuvenative properties, suggesting roles in both detoxification and post-poisoning recovery.[2,13]

The inclusion of animal-derived ingredients, particularly horn preparations and peacock feather, reflects the pharmaceutic traditions of *Agada Tantra*. Although modern evidence remains limited, their consistent use in classical formulations underscores their historical therapeutic importance and the need for further scientific evaluation.

4.9 Novel Observations from the Present Review

The present analysis yielded several noteworthy observations that have not been systematically highlighted in previous reviews of Sahastrayogam.

Table 9: Major Observations Derived from the Present Review.

Observation	Critical Interpretation
Majority of formulations are indicated for Gara Visha	Suggests that chronic or cumulative poisoning was considered a major clinical challenge in classical practice.
Triphala appears in 10 formulations	Indicates its central role as a Rasayana and detoxifying drug in Ayurvedic toxicology.
Ghrita constitutes the largest dosage form	Reflects the importance of lipid-based drug delivery for systemic antidotal therapy.
Many formulations possess Rasayana, Medhya, and Vrishya properties	Indicates emphasis on tissue restoration in addition to detoxification.
Mahakushmanda Ghrita is indicated in Asthistrava	Represents an uncommon therapeutic indication warranting further investigation.
Multiple formulations are useful in Shukra and Artava disorders	Suggests a relationship between chronic toxicity and reproductive health recognized in Ayurveda.
Frequent use of specialized pharmaceutical media	Demonstrates sophisticated pharmaceutic principles aimed at improving therapeutic efficacy.

Critical Discussion

The present review demonstrates that the *Vishaghna Kalpas* of *Sahastrayogam* extend beyond conventional antidotal therapy. In addition to neutralizing toxins, they exhibit *Rasayana*, *Balya*, *Medhya*, *Vrishya*, and *Dhatu-poshaka* properties, reflecting the Ayurvedic view that poisoning causes systemic disturbances involving metabolism, immunity, tissue nutrition, and neurological function. A notable observation is their frequent indication in disorders such as *Pandu*, *Jwara*, *Prameha*, *Kushtha*, *Shukra Kshaya*, and *Artava Kshaya*, which are characterized by *Dhatu* depletion, impaired *Agni*, and chronic inflammation. This suggests that

these formulations aim to restore physiological homeostasis rather than merely counteract toxins. The consistent use of *Rasayana* drugs, lipid-based formulations, specialized pharmaceutical media, and rejuvenative mineral substances further supports this holistic approach. Accordingly, these *Vishaghna Kalpas* may have potential applications beyond classical poisoning, including chronic inflammatory disorders, environmental toxin exposure, metabolic dysfunction, and post-toxic rehabilitation. However, systematic pharmacological studies and controlled clinical trials are necessary to validate these potential therapeutic applications.

5. FUTURE RESEARCH PERSPECTIVES

The *Vishaghna Kalpas* described in *Sahastrayogam* possess considerable therapeutic potential; however, scientific validation of these formulations remains limited. Future research should focus on standardization, phytochemical characterization, pharmacological evaluation, and toxicity studies to establish their safety and efficacy. Well-designed clinical trials are required to assess their role in chronic toxic exposure, environmental and heavy metal toxicity, and post-toxic rehabilitation. Integration of Ayurvedic principles with modern analytical techniques may further elucidate their mechanisms of action and facilitate evidence-based application in contemporary toxicology.

6. LIMITATIONS OF THE PRESENT REVIEW

This review is primarily based on the textual analysis of *Sahastrayogam* and other classical Ayurvedic texts. Although available scientific literature was consulted, experimental and clinical evidence for many formulations remains limited. Minor variations among different editions of *Sahastrayogam* may also exist. Furthermore, quantitative meta-analysis was not feasible because of the scarcity of standardized pharmacological and clinical studies.

7. CONCLUSION

Sahastrayogam is an important classical compendium containing diverse *Vishaghna Kalpas* for the management of poisoning. The present review identified fourteen formulations distributed across seven pharmaceutical dosage forms, reflecting the advanced pharmaceutical principles of Ayurveda. Ghrita and Gutika were the predominant dosage forms, while Triphala emerged as the most frequently used ingredient, indicating a therapeutic strategy focused on detoxification, restoration of Agni, and tissue protection.

Beyond their antidotal role, these formulations demonstrate potential applications in disorders

such as Pandu, Jwara, Prameha, Kushtha, Shukra Kshaya, Artava Kshaya, and neurological diseases, suggesting that the Ayurvedic concept of *Vishaghna* extends beyond toxin neutralization to include restoration of physiological homeostasis and rejuvenation. The use of specialized pharmaceutical media, along with herbal, mineral, and animal-derived ingredients, highlights the sophisticated pharmaceutic approach adopted in *Sahastrayogam*.

Overall, the *Vishaghna Kalpas* described in *Sahastrayogam* represent a valuable resource for Rasashastra and Bhaishajya Kalpana, offering insights into classical formulation design and Ayurvedic pharmaceutics. Further pharmaceutical standardization, pharmacological validation, and well-designed clinical studies are required to support their evidence-based application in contemporary healthcare.

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