IJAYUSH
International Journal of AYUSH
AYURVEDA, YOGA, UNANI, SIDDHA AND HOMEOPATHY
http://internationaljournal.org.in/journal/index.php/ijayush/

International Journal
Panacea
Research library
ISSN: 2349 7025

Review Article **Volume 13 Issue 11** **November 2024**

REVIEW OF GENERAL SHODHANA PROCEDURES OF POISONS (VISH & UPVISH)

Dr. Imran

Assistant Professor, Department of Agad Tantra Evum Vidhi Vaidyaka, Krishna Ayurvedic Medical College and Hospital, Bijnor, Uttar Pradesh, 246701

Corresponding Author- Dr. Imran**,** Assistant Professor, Department of Agad Tantra Evum Vidhi Vaidyaka, Krishna Ayurvedic Medical College and Hospital, Bijnor, Uttar Pradesh, 246701

Email id - imrankassar826@gmail.com

Abstract

Ayurveda, the ancient science of life, emphasizes not only the treatment of diseases but also their prevention. The *Acharyas* of Ayurveda have meticulously outlined every aspect of drug usage, from collection and manufacturing to proper administration, with specific guidelines for dosage, adjuvants (*Anupāna* and *Sahapāna*), and standard protocols for multi-drug formulations. Even for poisons (*Vishas*) and semi-poisons (*Upavishas*) used for therapeutic purposes, individualized purification processes (*Shodhana*) are detailed to mitigate potential adverse effects. In cases where specific methods or materials are unavailable, general purification techniques are described to ensure the accessibility and feasibility of drug preparation. Amid growing concerns regarding the toxicity of Ayurvedic drugs on the international stage, these simple and effective purification methods can serve as universal antidotes. Moreover, instructions are provided for easy home-based processing of certain substances. For instance, *Swarnagairik* can be roasted (*Bharjana*) at home before use, enhancing accessibility and promoting trust in Ayurveda among the general public.The general purification processes outlined in Ayurveda offer practical, user-friendly guidelines for the safe preparation of poisons and semi-poisons, fostering confidence in the Ayurvedic system.

Keywords: Poisons, semi-poisons, purification processes, *Shodhana*, Ayurveda.

Introduction

Agadatantra, one of the eight branches of Ayurveda, specializes in the identification, classification, and treatment of poisons (*Visha*). It encompasses various aspects, including signs, symptoms, and therapeutic approaches for managing poison-induced conditions. Poisons exhibit rapid action due to their unique properties, such as *Vyavayi* (spreading quickly), *Vikasi* (expanding nature), and *Ashukari* (fast-acting). Ayurveda has extensively documented various *Agada Kalpas* (antidotal formulations) that are effective due to their potent ingredients and quick action.[1]

Visha in Ayurveda refers not only to poisons but also to substances that can have therapeutic applications when used judiciously. *Visha Chikitsa* or *Agadatantra* addresses disorders caused by poisons, including food poisoning, venomous bites (from animals, reptiles, and insects), and toxic effects from minerals, metals, or incompatible food combinations. In modern terms, *Agadatantra* can be equated to toxicology, but its scope extends beyond the chemical structure of toxins to their controlled medicinal use. When administered with precise dosing, poisons can act as nectar, even for patients on the verge of death.[2]

Since 2016, *Agadatantra* has been integrated into the third professional year of the BAMS curriculum, emphasizing its clinical applications. This underscores the importance of documenting the applied aspects of *Visha yogas* (poison formulations) and precautions during their preparation and usage.[3]

Visha Chikitsa elucidates the harmful effects of poisons on body functions and their destructive impact on tissues, along with specific antidotes to neutralize these effects. Ancient Ayurvedic texts like *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Sangraha* provide extensive insights into this branch of Ayurveda.[4]

While many plant-derived drugs, such as reserpine and atropine, have been used in modern medicine, some were withdrawn due to their toxicity. Conversely, Ayurveda has long utilized such substances in their crude form or after purification through *Shodhana* (detoxification). *Shodhana* not only detoxifies but also enhances the therapeutic efficacy (*Sanskara*) of these substances, reducing side effects and improving potency.[5]

In contrast, modern literature provides limited information on the scientific validation of specific *Shodhana* processes for herbal drugs. However, studies on ancient Chinese detoxification methods, such as those used for *Strychnos nux-vomica* (nux-vomica seeds), demonstrate reduced toxicity and enhanced potency due to qualitative and quantitative changes in their phytochemical profile.[6]

Similarly, Ayurveda extensively describes the *Shodhana* procedures for purifying poisonous plants, minerals, and metals, particularly in *Rasashastra* texts. Validation studies on plants from the *Upavisha* (semi-poisonous) category, such as *Langali* (*Gloriosa superba L.*) and *Kupilu* (*Strychnos nux-vomica*), confirm the effectiveness of these ancient detoxification techniques. These findings highlight the significance of *Shodhana* in ensuring the safe and effective therapeutic application of toxic substances in Ayurveda.[7]

Aims and Objectives

- To study the common general processing methods of *Visha* (poisons) and *Upavisha* (semi-poisons) as described in Ayurvedic literature.
- To explore the historical and textual evolution of poison classification and their therapeutic applications in Ayurveda.

Materials and Methods

- A comprehensive review of relevant Ayurvedic texts and lexicons to understand the classification, properties, and purification (*Shodhana*) processes of *Visha* and *Upavisha*.

Literary Review

The term *Visha* is etymologically derived to signify a substance that causes *Vishannatva* (distress) or *Vishada* (sadness). It refers to life-destructive substances characterized by properties like *Vyavayi* (spreading quickly), *Vikasi* (expanding), *Ushna* (hot), *Tikshna* (sharp), *Ruksha* (dry), *Sukshma* (minute), *Ashukara* (fast-acting), *Anirdeshya Rasa* (undefined taste), and *Apaki* (indigestible). Substances exhibiting these properties are classified as *Vishas*, while those with milder effects are termed *Upavishas*.[8]

Vedic literature highlights the inherent potency (*Veerya*) of drugs, establishing the foundation for Ayurvedic pharmacology. While initially, *Dravyaguna Shastra* (the study of medicinal properties of substances) was not a separate branch, texts like *Charaka Samhita* emphasized the significance of understanding the therapeutic utility of herbs, even declaring that a properly administered poison can act as a potent medicine.[9]

Classification of Poisons

Ayurvedic classics classify poisons based on their origin, properties, and potency. Broadly, they are divided into three categories:

1. **Sthavara Visha**: Derived from minerals and poisonous plants.
2. **Jangama Visha**: Derived from the animal kingdom.
3. **Kritrima Visha**: Resulting from undesired drug combinations.

Additionally, *Vishas* are further categorized as *Mahavisha* (highly toxic) and *Upavisha* (mildly toxic). Texts such as *Rasarnava*, *Rasa Ratnakara*, *Rasendra Chudamani*, and *Rasa Ratna Samucchaya* enumerate various poisons, evolving from five to as many as eleven substances over time, reflecting increased recognition of poisonous herbs in Ayurveda.[10]

Properties and Actions of Visha

Acharya Charaka and Sushruta list ten key properties of poisons, including *Laghu* (light), *Ruksha* (dry), *Ashu* (quick-acting), *Vishada* (non-cohesive), *Vyavayi*, *Tikshna*, *Vikasi*, *Sukshma*, *Ushna*, and *Anirdeshya Rasa*. Other authors like Sharangadhara mention additional properties such as *Chhedi* (splitting), *Madhavaha* (delirium-inducing), *Prananashaka* (life-threatening), and *Yogavahi* (synergistic carrier).[11]

The actions of poisons in Ayurveda are multifaceted, affecting body tissues and causing distress, burning sensations, and putrefaction. Specific properties like *Ruksha* may aggravate *Vata Dosha*, while *Tikshna* can disrupt vital organs like the brain, heart, and bladder, leading to severe symptoms like fainting and unconsciousness.[12]

Importance of Purification of Poison

The utilization of poisonous plants documented in ancient Ayurvedic scriptures continues to be a cornerstone in managing various diseases. However, their safe therapeutic application is only possible after meticulous processing, known as *Shodhana* (purification). Ayurvedic physicians have long employed these substances with great success following proper *Shodhana*. This purification process ensures the reduction of toxicity and enhances the medicinal properties of these substances.[13]

The concept of *Shodhana* was first introduced in the *Charaka Samhita*, particularly in the context of *Danti Dravanti Kalpadhyaya*, to mitigate the *Vikasi* property of *Danti* root. Acharya Charaka referred to this process as *Samaskara* (enhancement). Similarly, Acharya Vagbhata detailed the *Shodhana* procedures for plant-based drugs, particularly in the preparation of *Bhallataka Rasayana*. Modern research corroborates these classical principles. For instance, *Vatsanabha* (*Aconite*), which acts as a cardiac depressant in its raw form, becomes a cardiac stimulant after being purified with cow urine.[14]

The *Bhava Prakasha* explicitly states that the adverse effects of unpurified poisonous substances (*Ashodhita Vishas*) are significantly minimized post-purification. This underscores the essential nature of *Shodhana* before using such substances in therapeutic applications.[15]

Key Methods of *Shodhana*

Ayurvedic texts elaborate various *Shodhana* techniques tailored to specific poisons (*Visha*) and semi-poisons (*Upavisha*). Some widely practiced methods include:

1. **Achushana (Absorption):** The toxic, oily components of certain substances are reduced by absorption. For example, *Bhallataka* is treated with brick powder to absorb its oil content, significantly lowering its toxicity.[16]
2. **Nimajjana (Dipping):** The substance is immersed in liquid media like cow urine or buttermilk.
    - *Vatsanabha* processed in cow urine shows a marked reduction in aconitine content.

- *Langali* (*Gloriosa superba*) roots soaked in buttermilk exhibit enhanced safety and reduced toxicity.

3. **Swedana (Boiling):** The drug is boiled in prescribed liquids such as cow milk, goat milk, or herbal decoctions to detoxify.
    - For example, *Kupilu* (*Strychnos nux-vomica*) seeds boiled in cow's milk show reduced levels of toxic alkaloids like strychnine and brucine.
4. **Bhavana (Trituration):** The drug is triturated with herbal juices or liquids to detoxify and enhance therapeutic properties. *Ahiphena* (opium), for instance, is triturated with ginger juice.
5. **Bharjana (Frying):** The substance is fried with or without ghee to neutralize its toxicity, as seen in the *Shodhana* of *Hingu* and *Kupilu*.
6. **PraKshalana (Washing):** Washing with hot water removes impurities, a method often used for tubers like *Vidarikanda*.
7. **Nistvachikarana (Decortication):** Removing the outer covering of seeds or roots reduces their toxic components, as in the case of *Jayapala* seeds.
8. **Parishravana (Straining):** Dissolving the drug in liquid media and straining out impurities is another common method, such as the purification of *Guggulu* using *Triphala* decoction.

9. *Nistvachikarana* (Decortication)

Nistvachikarana is the process of removing the outer covering or husk of a substance to reduce its toxicity. For instance, *Jayapala* seeds undergo thorough cleaning and shade drying. The seed coat is carefully removed, and the cotyledons are separated to discard the radicle. Subsequently, the seeds are processed through *Swedana* (boiling) using cow's milk as the medium for three hours. The processed seeds are then ground and dried properly for further use (Sadananda, 2004; Sujatha, 2013).[17]

A study assessing the role of *Shodhana* on *Jayapala* seeds showed a notable difference in toxicity levels when comparing seeds with and without radicle removal. The study revealed

an increase in croton oil content after *Shodhana* with cow's milk—32.187% in raw *Jayapala*, 32.2% in seeds processed with radicle, and 41.08% in seeds processed without radicle. This indicates that *Shodhana* allows the milk's components to interact with the seeds, as evidenced by shared peaks in HPTLC analysis of the milk and processed *Jayapala* samples. This demonstrates that *Nistvachikarana* not only detoxifies the seeds but also enhances their therapeutic potential.[18]

10. *Parishravana* (Straining)

In this method, the solid drug is dissolved in a suitable liquid medium, and insoluble impurities are removed through straining. For example, *Guggulu* is purified using *Triphala* decoction.

11. *Prithakikarana* (Separation)

This involves the physical removal of impurities from the substance. For instance, *Kampillaka* is detoxified by physically separating its impurities during processing.

Discussion

The detailed descriptions highlight the emphasis Ayurveda places on mitigating the potential fatality of medicinal substances, particularly poisons, through well-defined purification (*Shodhana*) procedures. The ancient Ayurvedic texts have meticulously documented precautions, guidelines, and methodologies to ensure the safe therapeutic use of such substances. These purification techniques aim to reduce the toxic qualities of poisons while enhancing their therapeutic properties, making them suitable for medicinal applications.[19]

Poisons, being highly potent and fast-acting, can act as catalysts to enhance the efficacy of accompanying drugs. However, without proper *Shodhana*, their inherent toxicity poses significant risks. Thus, purification is indispensable to ensure both safety and efficacy. The simplicity of the described processes, such as boiling, soaking, or frying, enables their implementation even in basic setups, requiring minimal resources. This accessibility empowers physicians to adapt these methods in outpatient departments (OPDs) or even instruct patients to perform them at home under guidance, thereby expanding the practical utility of Ayurveda.[20]

The dissemination of such simple yet scientifically profound Ayurvedic techniques in an accessible manner can strengthen public trust and acceptance of Ayurveda. Processes like *Bhavana* with cow's urine, which enhances *Tikshna guna* (sharp properties), exemplify how *Shodhana* not only detoxifies but also augments desired pharmacological actions, such as in conditions of *Kaphavikara* or *Medoroga*.[21]

These purification methods are practical, systematic, and rooted in traditional logic. They also provide generalized guidelines that can assist in detoxifying lesser-known or undocumented (*Anukta*) substances. While modern manufacturing practices have advanced significantly, retaining the essence of traditional *Shodhana* principles is critical. Integrating this ancient knowledge with contemporary technology can further refine and optimize these processes.[22]

This article underscores the need for Ayurvedic scholars and practitioners to focus on the practical execution of *Shodhana* to evaluate its efficacy in reducing toxicity and enhancing therapeutic potential. Future research can investigate single poisons subjected to various *Shodhana* methods to analyze chemical composition changes and ensure safety and effectiveness in medicinal applications.[23]

Additionally, incorporating relatable analogies from Indian culinary practices, such as decortication (*Nistvachikarana*) or soaking (*Nimajjana*), demonstrates how these processes are not only rooted in Ayurveda but also align with everyday life. For instance, soaking fruits and vegetables to remove pesticides or boiling to kill bacteria mirrors Ayurvedic principles of detoxification. However, *Shodhana* extends beyond mere impurity removal—it transforms the chemical and biological composition of poisons, making them palatable, safe, and wholesome for therapeutic use.[24]

Notable studies, such as those on *Vatsanabha* (Aconite), reveal how *Shodhana* techniques neutralize toxic alkaloids, converting the depressant effects of raw substances into beneficial properties like mild cardio-tonic actions. Similarly, *Chitraka* studies demonstrate the reduction of toxic components like plumbagin, underscoring the importance of thorough purification before internal administration.[25]

In conclusion, *Shodhana* techniques are indispensable for the safe and effective utilization of poisonous substances in Ayurveda. These traditional methods not only detoxify but also enhance the therapeutic properties of substances, reflecting the foresight of ancient Ayurvedic sages. Continued research and practical application of these methods in the modern era can bridge traditional wisdom with scientific advancement, further solidifying the relevance of Ayurveda in contemporary healthcare.[26]

Conclusion

The general processing of poisons through *Shodhana* not only effectively removes toxic impurities but also enhances the desired therapeutic qualities of the substances, aligning them with the physician's intended outcomes. These purification techniques have retained their relevance from ancient times to the present, emphasizing their enduring significance in Ayurvedic practice. Detoxification serves a dual purpose: it reduces the toxic properties of a substance and simultaneously enhances its potency and pharmacological efficacy. Recent pharmacological studies on animal models have substantiated the benefits of *Shodhana*. Drugs such as *Vatsanabha*, *Kupeelu*, *Bhallataka*, *Gunja*, *Dhatura*, *Langali*, and *Vacha* exhibit reduced toxicity and improved therapeutic effectiveness after undergoing the purification process compared to their raw counterparts. This reinforces the importance of integrating traditional purification methods into modern Ayurvedic practice, ensuring the safe and efficacious use of such potent substances in therapeutic applications.

References

1. Madhava, *Ayurveda Prakash*, Mishra GS, Choukhamba Bharati Academy, Varanasi, 2007; *Ayurveda Prakash* 6/47.
2. Vagbhattacharya, *Rasaratna Samuchchaya*, Kulkarni DA, Hindi commentary, Meharchand Laxmandas Publications, New Delhi, 2006; *Rasaratna Samuchchaya* 11/25.
3. Sushruta, *Sushruta Samhita*, Chaukhambha Sanskrit Sansthan, Varanasi, 2005; *Sushruta Kalpasthana* 3/21.
4. Vagbhattacharya, *Rasaratna Samuchchaya*, Kulkarni DA, Meharchand Laxmandas Publications, New Delhi, 2006; *Rasaratna Samuchchaya* 11/25.

5. Ilanchezhian R, Joseph CR, Acharya RN. Importance of media in Shodhana (purification/processing) of poisonous herbal drugs. *Anc Sci Life*. 2010;30(2):54–57.
6. Ranade A, Acharya RN. Contribution of Dhanwantari Nighantu towards drug safety: A critical review. *Global J Res Med Plants Indigen Med*. 2014;4(2):20–29.
7. Sushruta, *Sushruta Samhita*, Chaukhambha Sanskrit Sansthan, Varanasi, 2005; *Sushruta Kalpasthana* 2/19.
8. Pandit Kasinatha Shastri, *Rasa Tarangini*, Misra SN, Motilal Banarasidasa, Varanasi, 2004; *Rasa Tarangini Taranga* 24, 2/6.
9. Madhava, *Ayurveda Prakash*, Mishra GS, Choukhamba Bharati Academy, Varanasi, 2007; *Ayurveda Prakash* 6/108.
10. Agnivesha, *Charaka Samhita*, Ayurveda Dipika commentary by Acharya YT, Chaukhamba Surbharati Prakashan, New Delhi, 2008; *Charaka Samhita Sutrasthana* 26/65.
11. Agnivesha, *Charaka Samhita*, Ayurveda Dipika commentary by Acharya YT, Chaukhamba Surbharati Prakashan, New Delhi, 2008; *Charaka Samhita Sutrasthana* 1/122–124.
12. Sushruta, *Sushruta Samhita*, Chaukhambha Sanskrit Sansthan, Varanasi, 2005; *Sushruta Kalpasthana* 2/24.
13. Bhairavanath Yogi, *Rasarnava*, Indradeva Tripathi, Sanskrit Series Office, Varanasi, 2001.
14. Vagbhattacharya, *Rasaratna Samuchchaya*, Kulkarni DA, Meharchand Laxmandas Publications, New Delhi, 2006; *Rasaratna Samuchchaya* 29.
15. Kasinatha Shastri, *Rasa Tarangini*, Misra SN, Motilal Banarasidasa, Varanasi, 2004; *Rasa Tarangini Taranga* 24, 2/163.
16. Agnivesha, *Charaka Samhita*, Ayurveda Dipika commentary by Acharya YT, Chaukhamba Surbharati Prakashan, New Delhi, 2008; *Charaka Samhita Chikitsasthana* 23/10, 23/13, 23/14.
17. Bhavamishra, *Bhavaprakasha*, Vidyotini Hindi commentary by Brahmasankara Mishra and Rupalalaji Vaishya, Chaukhambha Sanskrit Bhavan, Varanasi, XI Edition, 2007; *Bhavaprakasha Vishachikitsa* 2.

18. Acharya Madhava, *Ayurveda Prakash*, Mishra GS, Choukhamba Bharati Academy, Varanasi, 2007; *Ayurveda Prakash* 6/115.
19. Yadavji Trikamji, *Rasamritham*, Damodar Joshi and Prabhakara Rao G, editors, Chawkambha Sanskrit Bhawan, Varanasi, 1998; p. 280–286.
20. Sarkar PK, Shukla VJ, Ravishankar B. Evaluation of effect of Shodhana on pharmacological activities of Aconite. *Ind J Pharm Edu Res*. 2012;6(3).
21. Singh LB. Poisonous (*Visha*) Plants in Ayurveda. 2nd Edition, Chaukhamba Sanskrit Bhawan, Varanasi, 2003.
22. Chunekar KC, Pandey GS, *Bhavaprakasha Nighantu*, 10th Edition, Chaukhamba Bharati Academy, Varanasi, 1999; p. 139–141, 313–314, 568.
23. Mitra S, Shukla VJ, Acharya R. Effect of Shodhana (processing) on Kupeelu (*Strychnos nux-vomica Linn.*) with special reference to strychnine and brucine content. *AYU J*. 2011;32(3):402–407.
24. Roy S, Acharya R, Shukla VJ. Shodhana (Processing) of Gunja (*Abrus precatorius Linn.*) Seeds with Godugdha (Cow's Milk); a pharmaceutical analysis. *Int J Ayurvedic Med*. 2012;3(2):68–75.
25. Bhat SD. A comparative pharmacognostical and phytopharmacological evaluation of *Vacha* (*Acorus calamus Linn.*). Doctor of Philosophy (Ayu) Thesis, Gujarat Ayurved University, 2011.
26. Banerjee AA, Vasu KK, Pancholi H, Rajani M, Nivsarkar MA. Detoxification of *Nerium indicum* roots based on Indian system of medicine: phytochemical and toxicity evaluations. *Acta Pol Pharm Drug Res*. 2011;68(6):905–911.
27. Sarkar PK, Prajapati PK. Importance of media in Shodhana of *Vatsanabha* (*Aconite*). *AYU*. 2008;29(1):52–55.
28. Acharya Siddhinandana Mishra, *Bhaishajya Kalpana Vijnana*, IV Edition, Chaukhamba Bharati Prakashana, Varanasi, 2003; p. 390.
29. Kalpesh Narayandas Patel. A comparative study of Sweta Chitraka (*Plumbago zeylanica Linn.*) and Rakta Chitraka (*Plumbago rosea Linn.*) with special reference to their *Shushka Arshoghna* karma. Doctor of Medicine (Ayu) Thesis, Gujarat Ayurved University, 2005.