

## Efficacy and Usefulness of Visha dravyas in Rasaushadhis (HMPs)

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### Abstract

Ayurveda is oldest medical science known to mankind and mainly aims at healthy living and long life unlike other medical science which simply focus on the treatment of ailments and diseases. There is evidence that using some Ayurvedic medicine, especially those involving herbs, metals, minerals, or other materials involves potentially serious risks, including toxicity. This article discusses about plants (visha-upavisha dravyas) commonly used to improve health and their role in the preparation of making medicines or to treat illness as herbs in single or in a compound formulations.

**Keywords:** Visha Dravyas; Rasaushadhis; Visha gunas

### Introduction

The Pharmacology of Ayurvedic system is divided into three major parts namely

→ Herbs (Sthavara) → Metals & Minerals (Khanija) → Animal kingdom (Jangama).

It is important to have an awareness regarding the Poisonous drugs, when used in the proper form & prescribed dose they acts as a potent therapeutic agents. It is a fact that virtually any substance can be harmful at high enough concentrations as rightly quoted that “All substances are poisons; there is none which is not a poison. The right dose differentiates a poison from a remedy.” **Paracelsus (1493-1541)**.

In many Classical literatures we are able to recognize the explanation regarding the use, importance, and therapeutic consideration of visha dravyas (poisonous substances). In Ayurvedic Science-origin, properties, purification, uses, toxic symptoms etc detail descriptions are available, especially in Rasashastra the use of Visha-Upavisha dravyas (poisonous & semi-poisonous substances) in the Rasa karma as well Rasa bhandhan has got prime importance. They included and classified visha dravyas on the basis of its usefulness in Rasa karma [1].

Visha-Upavisha dravyas from therapeutic point of view are considered highly valuable on accordance of their quick effectiveness even in smaller doses. But at the same time are very dangerous also as these may prove fatal to human beings if used without proper care & in higher doses. Therefore, understanding the visha dravyas its important uses, medicinal applications, benefits, toxic symptoms and its management. Especially its consideration in the field of Rasashastra is very much important [1,2].

### Visha dravyas-Ancient Time (Brief History)

The history of visha (poison) and its treatment ways back to centuries. The mythological concept regarding origin of visha states that it was created at the time of creation of universe by lord Bramha [3] and some opine that it was obtained during samudra manthana. References regarding visha or poison and poisoning can also be traced in Vedas [4].

Ayurved dedicated as one of its branches as Danshrachikitsa, Agadatantra or Vishatantra, Vishagara vairodhika prashamana which is dedicated solely to the concept and treatment of visha. These references provide ample evidence to prove that toxicology was a well developed branch in ancient India [5-8]. It was believed that Moksha (Salvation) is the ultimate aim of life and it was also believed that this can be attained through Rasa karma with the proper use of Visha-Upavisha dravyas which will fulfill this desire. It is said in the texts that Visha & Upvisha when used properly, would prove

highly beneficial to the body or even as life saving drug like an amrita (Nectar); otherwise they are considered to be fatal to the mankind. Probably because of this reason their use was very much limited in the Ancient times when different Shodhan methods weren't developed, but with the emergence of Rasashastra in the field of Ayurvedic medicines, helped much in making their use safer and more frequent in therapeutics. Use of Visha dravyas as Medicines has been narrated by Acharya Charaka as “Even an acute poison can become an excellent drug if it is properly administered on the other hand even a drug, if not properly administered, becomes an acute poison” [8].

### Categorization of Vishas

The classification of poison is based on certain basic criteria like origin, base, properties, potency etc. Some of the Ayurvedic classics and texts in medieval period have classified all the poisons into two categories as Mahavisha and Upavisha basing on their toxicity and potency. Visha, basing upon its origin, has been classified into two categories viz. Jangamavisha (animal poison) and Sthavaravisha (plant and mineral poisons) where the sites of Sthavaravisha and jangamavisha are narrated as ten and sixteen respectively [9,10]. Further it is also classified as Akritrimavisha (natural poison) and kritrimavisha/Garavisha (unnatural or chemically prepared poison) where Akritrima visha is again sub divided into two i.e. sthavara and jangama [11]. Certain text of Rasashastra and Dravyaguna classified visha in various manners like mahavisha-upavisha etc. [12].

Upavisha are the group of drugs, which are less toxic in nature and not so lethal but produce certain toxic symptoms on consumption or administration. The symptoms produced in the body due to Upavisha are less toxic, less severe, usually not life threatening and their toxicity can be controlled by therapeutic measures. Broadly ‘Vishas’ are classified into three type's viz. [12] Sthavara, Jangam and Kritrima. ‘Sthavara Vishas’ are those which belong to minerals or to group of poisonous herbs, while ‘Jangama Vishas’ are obtained from the animal kingdom. The ‘Kritrima Vishas’ are formed as a result of undesired compounding of drugs. Among the poisonous herbs- tuberous and / or root poisons are more toxic [13].

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## Visha Guna

Acharya Charaka and Sushruta have enumerated ten similar gunas of visha with an exception of apaaki (Sushruta) being replaced by anirdeshya rasa (Charaka). Acharya Vagbhata has attributed eleven gunas to a visha dravya by including apaki and Avyaktarasa (instead of anirdeshya rasa). Sharngadhara has stated certain extra gunas of visha dravya like chhedi, madavaha, jivitahara and yogavahi. The gunas of visha, as described by different authorities is mentioned below (Table 1) [14-17].

## Importance of Purification of Poison

The poisonous plants reported in ancient scriptures of Ayurveda are still being used widely in a number of diseases after processing with proper Shodhana. Ayurvedic physicians successfully employed these drugs after proper Shodhana. The concept of Shodhana was mentioned for the first time in Charaka Samhita in the context of Danti Dravanti Kalpadhyaya. To reduce the 'Vikasi' property of Danti root, Charaka mentioned it as 'Samaskara'. Acharya Vagbhata also mentioned Shodhana of drugs of plant origin in detail, in the context of Bhallataka Rasayana for 'Bhallataka' (Semicarpus anacardium). It is reported that Aconite (Vatsanabha) purified by cow urine is converted to cardiac stimulant, whereas raw Aconite is cardiac depressant. It is clearly mentioned in 'Bhava Prakasha' that the bad/toxic effects attributed to 'Ashodhita Vishas' (unpurified poisonous substances) are minimized when these are used after being subjected to Shodhana. Hence 'Vishas' should be essentially subjected for Shodhana before being used in therapeutics [18-20].

## General processing of poisonous substances before consumption

On Review of Ayurvedic literature it is observed that various Shodhana procedures are mentioned for visha and Upavisha group of drugs. Out of these, following procedures are common for different 'Vishopavisha' drugs.

- Gomutra Nimajjana : soaking in cow urine for a prescribed period.
- Swedana : boiling in different liquids such as cow milk, goat milk, cow urine, vegetable extracts and Kanjika etc.

- Bharjana : frying with or without ghee.
- Bhavana : maceration and/ or trituration with vegetable juices.
- Nihsehana : reduction of oily content.
- Kshalana : washing with hot water.
- Nistvachikarana : is the process of decortications (removal of covering).

Out of the procedures described above, cow urine and boiling with cow milk are the most common procedures applied for almost all the 'Vishopavisha' drugs [21].

## Practice of Visha –Upavishas in Rasashastra

- Use of small amount of Visha in Aindra rasayana.
- Use of Kakodumbara mula kwatha along with Visha in treating Kushta
- Use of Gunja, Karaveera, etc Sthavara Vishas in Sannipatodara
- Use of Sarpa Visha in Sannipatodara
- In Special purificatory method of Parada) – Use of Krishna Dhatura for the removal of Chapalya guna of parada.
- In Rasa bandha- Changing the Real state of Parada from liquid stage to solid or powder form by removing the Chanchalyata & durgrahata (Escaping nature) of parada.
- In making various Parpati kalpana's for e.g. Tamra Parpati, Vijaya Parpati- use of Shuddha Vatsanabha, etc.
- In Shataputa Abhraka Bhasma Nirmana- use of Arka & Snuhi ksheera
- In Gomutra Shilajatu marana- use of Manahashila, Haritala churna.

Above mentioned details ss based mainly on the use of Metallic & Mineral drugs which need some processing before they are internally used so that they may be least toxic & highly absorbable. The processes of Shodhan (Purification) & Marana (Incineration) deserve to be mentioned in this connection since through these processes such drugs

S.N.	Guna (properties)	Charaka	Sushruta	Vagbhata	Sharngadhara
1.	Laghu (lightness)	+	+	+	-
2.	Ruksha (dryness)	+	+	+	-
3.	Ashu (fast acting)	+	+	+	-
4.	Vishada (clearness)	+	+	+	-
5.	Vyavayi (spreading)	+	+	+	+
6.	Tikshna (sharpness)	+	+	+	-
7.	Vikasi (opening channels)	+	+	+	+
8.	Sukshma (fineness)	+	+	+	+
9.	Ushna (hotness)	+	+	+	+ (Agneya)
10.	Anirdeshya rasa (unidentifiable taste)	+		+	-
11.	Apaki (not digesting)	-	+	+	-
12.	Chhedi (cutting nature)	-	-	-	+
13.	Madavaha (producing narcotic effect)	-	-	-	+
14.	Jivitahara (life threatening)	-	-	-	+
15.	Yogavahi (catalyzing action)	-	-	-	+
16.	Avyaktarasa (unidentifiable taste)	-	-	+	-

Table 1: The gunas of visha, as described by different authorities is mentioned in this table.

could be made suitable for internal use. Drugs of Visha-Upavisha groups may also be subjected to some of these processes for reducing their toxicity and making their frequent use possible in therapeutics. Therefore before using vishas in therapeutics steps basic involved are [22-24]:

- Proper identification
- Collection of the therapeutically beneficial part
- Collection in the correct season
- Purification
- Proper storage
- Accurate dosage
- Anupana (Vehicle)
- Diet and regimen

### Examples of Usefulness & Efficacy of Visha-upvisha dravya in Rasaushadhis

#### I. Navajivana Rasa

Ingredients: -	<b>Kupilu-</b>	<b>2 parts</b>
	Loha Bhasma-	2 parts
	Rasa Sindura-	2 parts
	Trayushna-	½ part each
	(Bhavana with Ardraka Swarasa)	

- Action: - Deepan, Pachana, Balasanjanan param, Naadi Balaprajanan, Ratishakti vivardhana, Shulapaham [25].

#### Probable Action of Kupilu (*Strychnous nuxvomica*) in the Formulation

This contains Strychnine, Brucin, Loganin, Vomycin etc. Among these Strychnine is the most toxic ingredient.

- Nuxvomica is one of the drugs used for the diseases of Nervous system
- Strychnine has tonic, stimulant, Relaxant and Aphrodisiac action.
- The absorption of strychnine is rapid from stomach and intestine and elimination through urine, bile, sweat and saliva [26,27].

#### II. Tribhvanakirti Rasa

Ingredients: -	Pippali-	1 Part
	Hingula Suddha-	1 Part
	<b>Visha-</b>	<b>1 Part</b> (Jala Q. S. for mardana)

- Action: -Vatajwara nivritti and Amavatahara [28].

#### Probable Action of Vatsanabha (*Aconitum ferox*) in the Formulation

Aconite mainly contains alkaloids namely Aconitine, Pseudoaconitine, Bikhaconitine etc.

- Pseudoaconitine is highly toxic and biologically more active than Aconitine.

- The antipyretic action is the result of its influence on the circulation and respiration and of its diaphoretic action
- Aconite further depresses the activity of all nerve-terminals, the sensory being affected before the motor, it therefore tends to relieve pain also it acts as stimulant [29].

#### III. Shwasakuthar Rasa

Ingredients: -	Shuddha Rasa-	4 parts
	Shuddha Gandhaka-	4 parts
	<b>Shuddha Vatsanabha-</b>	<b>4 parts</b>
	Shuddha Tankana-	4 parts
	<b>Shuddha Manahashila-</b>	<b>4 parts</b>
	Maricha-	36 parts
	Sunthi-	4 parts
	Pippali-	4 parts

- Action: - Kasa, Shwasa, Mandagni, Vataleshmaayeshu, Sannipata Murcha and Apasmara nashana [30].

#### Probable Action of Manahshila (*Arsenic disulphide*) in the Formulation

Red Arsenic or Realgar is very hot in potency. It acts as Appetiser, Expectorant and Rejuvenator

- It helps in the opening of the (viscous or thicker) mucus present within the bronchial lumen.
- It removes the spasm of the Bronchial smooth muscles [31].

#### Discussion

Whole review reveals that the Vishas and Upavishas are very useful as a part of use in the herbo-mineral preparations though needs to detoxified and purified. The Ayurved classical purification and detoxification classical method makes it suitable to use on human body for the treatment of various ailments.

Classical text of Ayurveda attributed ten common gunas to both Madya and visha, where the intensity of the Guna of visha is more than that of madya. As stated earlier, study of visha gunas is necessary for its treatment. Since the basis of treatment is samanya- visheshha siddhanta a drug or diet which is opposite in the properties as that of the disease should be used for its treatment.

Ayurved has advocated using toxic substances in minute quantity for treating various ailments like udara. In the latter period various texts of Ayurved had been using toxic substances by classifying them into visha and upavisha categories, amongst which upavishas are considered to be having less toxicity than that of vishas. For using these substances in the treatment they were treated with various media, the process being called as shodhana 48. This shodhana procedure was carried out in order to detoxify the toxic substance along with the incorporation of certain other properties to it. It may be considered that the ten gunas which are attributed to these visha dravyas may be getting reduced due to these procedures which allow the toxic substance to be used internally without many complications.

The Ayurvedic multi ingredient compounds are formulated in a way that the ingredients are capable of counter balancing toxic effects, if any, present in the herbs or metals used which are said to be poisonous.

Besides this, the use of these Rasaushadhis preparations is discontinued after a certain period or gap, so that the body can neutralize the effect of the medicine given. The period after which the use of Rasaushadhis should be discontinued may differ from metal to minerals and kind of visha-upavisha dravyas used. Even in classics the intake details has been highlighted as; in some of Rasaushadhis like; Vishamushti Vati- for a period of 15 days-Gap-than start again and Rasakarpura- till the symptoms persists. The proper dose of these medicines is also very important.

There is evidence that using some Ayurvedic medicine, especially those involving herbs, metals, minerals, or other materials involves potentially serious risks, including toxicity. There is a technique of detoxification applied to heavy metals and toxic herbs called Samskaras, which involve prayers as well as physical pharmacy techniques both of which are necessary to transform the toxicity. Samskara with the inclusion of Shodhana plays an important role in removing the unwanted impurities which will hamper the quality of any Rasaushadhi which in turn produces many other complications. By following Samskara even visha-upavisha can be used as amrita by giving proper dose.

## Conclusion

From this study it is evident that after proper detoxification methods as mentioned in our Rasa texts Vishas and Upavishas have potential role and these drugs if used in therapeutic matra can be safely used in various ailments. Poisonous substances can be effectively used in therapeutics. In Rasaushadhi preparations, they are frequently used but after proper processing esp. in chronic diseases when conventional treatment fails. Selection of right condition and dose is very much essential. Dravyas used in certain Rasaushadhis are very poisonous in nature and should only be used with extreme caution and under the supervision of a Qualified Practitioner.

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