

Available online on 15 Jun, 2024 at <http://www.hjhs.co.in/index.php/hjhs>

Himalayan Journal of Health Sciences

Published by Himalayan Group of Professional Institutions

Associated with Himalayan Institute of Pharmacy

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Review Article

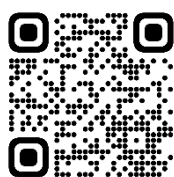
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Ayurvedic poisonous plants and their medicinal values

Zahid Urrehman^{*,a}, Akila Begum^b^a Associate Professor & HOD, Dept. of Agad Tantra, Government Autonomous Ayurveda College & Hospital, Gwalior Madhyapradesh, India^b Associate Professor, Dept. of Rasa Shastra & Bhaisajya Kalpana, Government Autonomous Ayurveda College & Hospital, Gwalior Madhyapradesh, India

Abstract

A poisonous plant is one that, when touched or consumed in large enough quantities, can be hazardous or lethal to humans or other animals. These plants can be utilized as herbal medicines with therapeutic effects when used in the right proportions and in small doses. Many plants are harmful to people when consumed or through skin contact with plant chemicals. Poisonous medicinal herbs are used to treat a variety of illnesses, including diabetes, cancer, infections, and fungal growth. According to the review, numerous phytochemical components that have diuretic, purgative, laxative, anti-allergic, and other significant therapeutic effects have been identified in a variety of medicinal plants. If utilized appropriately, poison can be life-giving, calming to the three Doshas, encouraging, and regenerating. The poisonous plants are categorized as *Visha* and *Upvisha* in Ayurvedic texts. Agadtantra is an important branch of *Ashtanga Ayurveda*. The importance of this branch has been described in our Vedas, Epics, and Samhita. Proper description, classification, clinical features, and management of any kind of *Visha* have been described in this branch. Some poisonous plants are *Dhatura*, *Bhallataka*, *Vatsanabha*, *Bhanga*, *Vach*, *Kuchala*, and *Gunja*, etc. The *Shodhana* process is the only bridge between *Visha* and *Aushadhi*. *Shodhana* is the process by which physical, chemical, and natural impurities are removed. It will intensify the potency and effectiveness of the drug and nullify its toxicity. The aim of this review article is to provide a brief overview of the numerous medicinal uses of some poisonous plants.

Keywords: Poisonous plant, Jaipala (seed), *Dhatura*, *Bhallataka*, *Vatsanabha*, *Bhanga*, *Vach*, *Kuchala*, *Gunja***Article Info:** Received 20 May 2024; Review Completed 14 Jun 2024; Accepted 15 Jun 2024

Cite this article as:

Urrehman Z, Begum A. Ayurvedic poisonous plants and their medicinal values. Himalayan J H Sci [Internet]. 2024 Jun 15 [cited 2024 Jun 15]; 9(2):45-48. Available from: <http://www.hjhs.co.in/index.php/hjhs/article/view/210>**DOI:** 10.22270/hjhs.v9i2.210

*Corresponding author

1. Introduction

Since the dawn of civilization, humans have relied on plants for all their basic needs such as food, shelter, etc. They also use plants for medicinal purposes. Since the beginning of recorded history, poisonous plants have been used by humans to kill animals and humans. Later, people's understanding of poisonous plants improved and their medicinal uses began to be implemented. According to the World Health Organization, approximately 70 - 80% of the world's population is dependent on herbal medicines. The constant use of limited natural resources has led to the near death of many popular plants. Poisonous plants are more common because they are used less frequently. If medical costs can be covered, the burden of effective medicine can be controlled to some extent. (1)

According to the principles of *Ayurveda*, even strong poisons can be effective medicines when taken correctly.

On the other hand, even the most effective medicine can turn into poison if not used properly. (2)

In India, it is an old tradition to use poisonous plants after cleaning them to treat diseases. Due to their suitability, many formulas have been included in the AFI (Indian Ayurvedic Formulas). (3) Also, the names of poisonous plants are given in Schedule E (1) of the Drugs and Cosmetics Act, 1940. poisonous) and *Upavish* (poisonous), among them *Upavisha*, *Vishatinduka* (nux vomica) and others. It is widely used in practice along with *Vatsanabh* (Aconite), which is *Visha*. (4)

According to Acharya Sushruta, there is no substance in the universe that does not have some form of healing. Medicines that treat disease or substances used in special combinations prove the existence of medicinal substances due to their good and powerful results. (5)

Visha and *Upavishas* are used for fever, pain, inflammation, poisoning, etc. It is used as or in combination with medicine in various medical conditions

such as: Keeping this in mind, the purpose of this article is to review the medicinal potential of poisonous plants described in Indian medicine.

2. Objective

This is a literature review to explore the treatment of poisonous plants described in Indian medicine with the help of literature from classical and modern Ayurvedic texts and published scientific articles.

3. Discussion on Effects of Sodhana of Toxic herbs

Plants According to Ayurvedic scriptures, poisons should be washed thoroughly before use. There are some exceptions where toxic chemicals are used. This is how *Sthavar Visha* Dravya (Inanimate) is used as an antidote to prevent the effects of *Jangam Visha* (Animal Poison). Many scientists have conducted various studies to prove the results of the *Shodhna* (purification) process. Research data shows that detoxification of toxic substances removes the body and chemical impurities and increases potency. It also reduces toxicity and also affects the form and properties of drugs. For example, unpurified *nux vomica* seeds can cause convulsions, while purified *nux vomica* seeds show anticonvulsant activity. (6)

Visha as Medicine

Visha Dravya can be used for treatment due to its following properties:

- **Vyavayi (Instant Absorption) (7):** This property allows *Dravya* to spread throughout the body before chewing. This equipment facilitates the absorption and delivery of medicine to small bodies such as: - Cells, tissues, etc., which is useful in severe cases.
- **Aashukari (Quick Action) (8):** This tool by *Visha* Dravya helps in fast delivery in *Sharira*. This action is very fast, it spreads immediately, like a drop of oil dripping into water. The main difference between *Vyavayi* and *Ashukaari* is that the *Vyavayi Guna* medicine is first spread throughout the body and then digested; *Ashukari Guna* medicine is digested very quickly and then spreads rapidly.

- **Yogavahi:** *Acharya Shaargdhara* says *Yogavahi* is a *Guna* of *Pranahara Ausadha* (Poison). The word *Yogavahi* indicates that *Visha* Dravya develops the qualities of *Guna* with *Anupana*. It appears that *Visha* can improve the performance of other medications taken together. In short, the decision to use purified *Visha* may act as a bioavailability enhancer. (9)
- **Vishaghna (Detoxification) Effect:** According to *Acharya Charaka*, *Visha* shows the detoxification effect of *Prabhava*. (10) *Acharya Shivadas Sena*, in his commentary on *Charaka Tattva Pradipika*, sees *Visha* as *Vishaghna* while *Sthavar* and *Jangama* destroy each other. (11) Commenting on *Visha gati* (i.e. *Jangama Visha* moves upwards and *Sthavar Visha* moves downwards) and *Vishaghna Karma* (detoxification effect), *Acharya Chakrapani* observed that in the case of *Sthavar Visha*, *Jangama Visha* is used as an antiseptic etc. He explains that the reason behind the detoxification power of *Visha* is *Prabhava* (special power of the medicine). (12)
- **Rasaayan:** According to *Shri Haridatta Shashtri Prasadani* commentary on *Rasatarangini* in the context of *Visha* Rasayana. It is said that *Visha* (*Vatsnabh*) works like *Amruta* (nectar) and when used in the right dose can prolong life but when used improperly it can cause death. *Bala*, *Desha*, *Kaka*, *Avastha*, *Prakruti*, *Satmya* etc. before taking *Vatsnabh*. should be considered. *Visha*. The above strategy can be used in cases where other *Visha* Dravyas can also be used as *Rasayanas*, such as *Bhallatak Rasayana* in Various Treatments. (13)
- **Indication of Poisonous plants in various disorders:** In many classical books, we find references to *Visha* Dravyas References explaining its use, importance and treatment. According to *Acharya Bhavmishra*, when taken with *Yukti*, *Visha* will follow *Pranadayi*, *Rasayana*, *Tridoshaghna*, *Yogvahi*, *Brihmana* and *Veerya Vardhaka* to purify *Dravya*. (14)

Table 1. List of Various Poisonous plants Mentioned in schedule e (1) of the drugs and cosmetics act, 1940 used in Ayurved (15)

S. No.	Visha Dravya (Poisonous plants)	Latin Name
1	<i>Ahipena (Except seeds)</i>	<i>Papaver somniferum</i> Linn.
2	<i>Arka</i>	<i>Calotropis procera</i> (Ait.) R.Br. ex.
3	<i>Bhallataka</i>	<i>Semecarpus anacardium</i> Linn. F.
4	<i>Bhanga (Except seeds)</i>	<i>Cannabis sativa</i> Linn. (Except seeds)
5	<i>Danti</i>	<i>Baliospermum montanum</i> Mull. Arg.
6	<i>Dhattura</i>	<i>Datura metal</i> Linn.
7	<i>Gunja (seed)</i>	<i>Abrus precatorium</i> Linn. (seed)
8	<i>Jaipala (seed)</i>	<i>Croton tiglium</i> Linn.
9	<i>Karaveera</i>	<i>Nerium indicum</i> Mill.
10	<i>Langali</i>	<i>Gloriosa superba</i> Linn.
11	<i>ParasikaYavani</i>	<i>Hyoscyamus niger</i> Linn.
14	<i>ShringiVisha</i>	<i>Acontium chasmanthum</i> Stapf ex Holm.
12	<i>Vatsanabha</i>	<i>Acontium chasmanthum</i> Stapf ex Holm.
13	<i>Vishamushti</i>	<i>Strychnox nuxvomica</i> Linn.

Table 2. List of Poisonous plants as per *Ayurveda* with their indication and Formulation (16-18)

S. No.	Visha Dravya (Poisonous plants)	Therapeutic Uses /Action	Formulations
1.	Ahipena (Except seeds)	Dhatu Shoshaka, Grahi, Kaphaghna, Vata- Pitta karaka	Ahiphenasava, Nidrodaya Vati, Karpurarasa, Mahavataraj Rasa
2.	Arka (Rakta and Shukla)	Udararoga, Kustha, Kandu, Vrana, Pliharoga, Gulma, Arsa, Krimiroga.	Abhaya Lavana, Arka Lavana
3.	Bhallataka	Shukrala, Vata -Sleshmahara, Udara, Anaha, Kustha, Grahani, Gulma, Jwara, Switra, Agnimandya, Krimi, Vrana	BhallatakaRasyan, Amrita Bhallataka, Bhallatak Taila, Tilarushkar Yoga
4.	Bhanga (Except seeds)	Grahi, Kaphaghna, Pachana, Moha, Mada, Vaakvardhak, Agnivardhana	JatiphaladiChurna, Madananada Modak
5.	Danti	Deepana, Gudaankur, Ashmari, Shoola, Rakta Vikara, Kandu, Kustha, Vidaha, Sotha, Udar Roga, Kriminashaka	Dantadyarishta, Punarnava Mandura, Abhayarishta, KaakayanaGutika, Dantiharitaki
6.	Dhattura	Jwaraghna, Kusthaghna, Yuka LikshaNashhaka, Krimi and Vishapaha	Kanakasava, Sutashekhara Rasa, Jvarankusha Rasa, LakshmiVilasa Rasa (Naradiya)
7.	Gunja (seed)	Keshya, Vata-Pitta-Jawara Nashaka, Relives Mukhasosha, Bhrama, Shwas, Trishna and Mada, Netra Rogahara, Vrishya Balya, Kandughna	Gunjabhadra Rasa
8.	Jaipala (seed)	Krimihar, Virechak, Deepan, Kapha Vataghna, Jalodara Nashak	Icchabhedi Rasa, jalodaradi Rasa, Jwaamurari Rasa
9.	Karaveera	Vrana Laghavakar, Nterakopa, Kustha, Krimi, Vrana, Kandughna	Karveraadya Taila
10.	Langali	Kustha, Krimi, Arsha, Vrana, Shoola, Garbhapatana	Kasheesadi Taila, Langali Rasayana
11.	ParasikaYavana	Pachana, Ruchya, Grahi, Madakari	ParashiyadiChurna
12.	ShringiVisha	Rasayana, Yogvahi, Tridoshaghna, Veeryavardhana, Kustha, Sotha Nashaka, Madhumeha Hara	Anand Bhairav Rasa, Mritunjay Rasa, Jwaramurari Rasa, Rambana Rasa
13.	Vatsanabha	Vataroga, Sannipata, Vatakaphajvara, Jvartisara, Kanharoga	Tribhuvanakirti Rasa, Anandabhairava Rasa, Sutasekhara Rasa, Vatavidhwansana Rasa
14.	Vishamushti	Madakari, Vyathahar, Grahi, Rakta Vikara,	Agnitundi Vati, Vishamushti Vati, Krimimudgar Rasa, Laxmivilas Rasa

4. Conclusion

The famous western toxicologist Paracelsus said the phrase "medicine makes poison" or "Sola dosisfacitvenenum" in Latin. He explained: "Everything is poisonous; Everything is poison." Only dose causes toxicity. Acharya Charaka had expressed the same idea before Paracelsus but in a different way. It is said that if a strong poison is used in a decision, it will be a good medicine. (19)

The above points support that the chemical can be used as medicine after purification. Our research shows that the use of toxic chemicals is prevalent in almost all Indian systems of medicine. Government agencies also expressed their concerns and added these plants to e (1) of the Drugs and Cosmetics Act of 1940. Many of these herbs are mentioned as gold in Ayurvedic scriptures, but Acharya still use them as medicine. It is believed that Acharyas consider Guna and Visha Karma as medicine.

Paracelsus a famous toxicologist of western science quoted that "The dose makes the poison" or in Latin, "Sola

dosisfacitvenenum". He explained that "All things are poisons; there is nothing without poisonous qualities. It is only the dose which makes a thing poison." It means that a substance can produce the harmful effect associated with its toxic properties only if it reaches a susceptible biological system within the body in a high enough concentration (i.e., dose). Acharya Charaka mentioned the same concept much earlier than Paracelsus but in a diverse manner. He quoted that if a potent poison is used in a judicious way it will act as a good medicine. (19)

Above said supports the use of poisonous herbs as a medicine after proper purification. Our study suggests that use of poisonous herbs is common in almost all Indian system of medicine. Government bodies also shown concern regarding the same and added these Herbs in schedule e (1) of the drugs and cosmetics act, 1940. The main motto behind it to regulate use these drugs for medicinal use. In *Ayurveda* classics numerous poisonous herbs have been mentioned but still Acharyas used them as medicine. It can be opined that Acharyas might have

noticed Guna and Karma of *Visha* from the point of their possible medicinal use. Therefore, it can be concluded that Ayurvedic Poisonous plants have therapeutic potential after proper purification as mentioned in *Ayurved*.

Acknowledgements

We would like to express our gratitude to Himalayan Journal of Health Sciences who gave us the opportunity to publish the article.

Financial Disclosure statement: The authors received no specific funding for this work.

Conflict of Interest

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

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