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Vatsanabha (Aconitum Ferox): A Review Of Its Toxicity And Therapeutic Potential In Ayurveda

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Abstract: Ayurveda holds the belief that every plant on Earth possesses medicinal potential. Essentially, no plant material is devoid of therapeutic value. Plants can be broadly classified into two categories: poisonous and non-poisonous. Among the most toxic is *Vatsanabha*, a plant native to the Himalayan region, which has been utilized in Ayurvedic medicine since ancient times. A substance can serve as a powerful remedy when administered in the correct dosage. In the case of toxic plants, Ayurveda outlines specific purification techniques aimed at neutralizing or minimizing their harmful effects. Poisons, or Visha, are known for their rapid physiological action, and leveraging this characteristic, certain Ayurvedic formulations incorporate such substances to achieve quick therapeutic effects. This article reviews classical Ayurvedic texts concerning *Vatsanabha*, including its purification methods and both toxicological and medicinal properties. A thorough understanding of any drug, particularly the clinical applications and boundaries of poisonous substances, is crucial for their safe and effective use.

Key words: *Vatsanabha*, Aconitum ferox, *Shodhana*, Aconite, Plant poison

I. INTRODUCTION

Ayurvedic medicine relies heavily on herbal mineral and herbo-mineral preparations. Every material in this world has the potential to be used as medicine. Our traditional Ayurvedic text books give us advice when we use materials that we don't fully understand. [1] When all plant, animal, and mineral matters are fully understood, particularly their nomenclature, properties, identification, and uses, they can be included in Ayurvedic Pharmacopia. [2] A member of the Ranunculaceae family, *Vatsanabha* (Aconitum ferox Wall.) is a deciduous perennial herb with tall, upright stems topped by racemes of zygomorphic flowers that are blue, purple, and white and have many stamens. [3]

It is classified as a *Mahavisha*[4] (very toxic) plant that grows in Nepal and the Himalayan Alpine, particularly in Sikkim, between elevations between 10,000 and 14,000 feet. [5] Toxic alkaloids, including pseudo aconitine, bikhaconitine, chasmaconitine, indaconitine, and others, are found in *Vatsanabha* roots. [6] The traditional toxicology dictum, "All things are poison, and nothing is without poison; the dosage alone makes it, so a thing is not a poison," is attributed to Paracelsus.[7] According to Ayurveda, "even a strong poison can become an excellent medicine if administered in the wrong dose; yet, if administered in a higher dose than recommended, even the nectar can act as a poison." [8]

Vatsanabha, its synonyms, and its attributes were described in nearly every *Nighantu*, but its usefulness grew with the advent of Rasa Shastra. *Rasa Vagbhata* made special mention of the fact that administering *Vatsanabha* for three months cures all eight major types of *Kushtha*, six months improves complexion, and twelve months cures all diseases.[9]

Material And Methods:

Charaka Samhita and Sushruta Samhita are two examples of the Rihad-Trayi that contain descriptions pertaining to *Vatsanabha*. In their individual texts, the Ayurvedic Nighantus—*Dhanwantari Nighantu, Sodhala Nighantu, Kaiyadev Nighantu, Bhava Prakash Nighantu*, etc.—explained *Vatsanabha*. For this article, references from these texts were examined.

Identification:

At first, locating and identifying the *Kanda Visha* was extremely challenging and contentious. For their knowledge, the local tribes of the Himalayan range may be consulted.[10] Later *Acharyas* such as *Bhavamishra* and Rasa *Vagbhata* mentioned specific *Vatsanabha* identifying characteristics. *Rasa Vagbhata* said that its root resembles the calf's navel, and *Bhava Mishra* said that its leaves resemble *Sindhuvara*'s leaves[11][12] According to *Rasatarangini*, *Vatsanabha* is the only plant that grows nearby. [13] The root's circumference is 1.0 to 2.5 Angula, and its size is described as 5-7 *Angula* in the same text.

Table 1 lists several synonyms for *Vatsanabha*. It is called *Vatsanabha* because it resembles the navel of a calf; it is called *Visha* because it causes toxic effects; it is called *Ksweda* because it causes mental disorders or intoxication in those who consume it; it is called Garala because it takes away life; it is called *Sindhuwar* because its leaves resemble those of *Sindhuwar*; and it is called Amruta because it is highly beneficial to the body when used judiciously.

Table1: Synonyms of *Vatsanabha* according to different authors.

Synonyms	D.N.[14]	B.P.N.[15]	R.N.[16]	P.N. [17]
Amruta	+	-	+	-
Garala	+	-	+	-
Mahoushadha	+	-	+	-
Mahavisha	-	-	-	+
Marana	+	-	+	-
Naga	+	-	+	-
Pranaharakam	+	-	-	-
Sindhuvara	+	+	-	-
Sthoka	+	-	-	-
Tailakanda	-	-	-	+
Ugram	+	-	+	-
Vatsanabha	+	+	+	+
Visham	+	-	-	+
Vishamugram	+	-	+	-

Classification and categorization :

Vatsanabha was categorised by *Acharya Charaka* under *Sthavara Visha* (vegetable poison). Additionally, he identified it as *Visha* and explained that it is one of the components of *Ainda Rasayana*.[18] *Sushruta* was the first to quote four different forms of *Vatsanabha* and classify them under thirteen different forms of *Kanda Visha*, or tuber root poison.[19]

The classical citations of Vasanabha were outlined in Table 2:

SN	Classical Text	Category
1.	*Charaka Samhita*	*Sthavaravisha*
2.	*Sushruta Samhita*	*Kandavisha*
3.	*Dhanvantari Nighantu*	*Mishrakavarga*
4.	*Sodhala Nighantu*	*Chandnadivarga*
5.	*Shaligrama Nighantu*	*Vishavarga*
6.	*Bhava Prakasha Nighantu*	*Dhatwadivarga*
7.	*Raja Nighantu*	*Mishrakavarga*
8.	*Priya Nighantu*	*Shatapushpadivarga*

The four types of *Vatsanabha* were mentioned by *Maharshi Sushruta*, but *Rasa Vagbhata* and *Yogaratnakara* clarified them as *Brahmana, Kshatriya, Vaishya,* and *Shudra*. [20]

Table 3 Displays each variety's colour and characteristics.

SN.	Variety	Colour	Property
1	*Brahmana*	*Pandu*	*Rasayana*
2	*Kshatriya*	*Rakta*	*Deha-pushti Kara*
3	*Vaishya*	*Peeta*	*Kushthaghna*
4	*Shudra*	*Krishna*	*Kushthaghna*

Ayurvedic properties[21]

Table 4: Ayurvedic properties of *Vatsanabha*.

Rasa	*Madhura*
Guna	*Laghu, Ruksha, Tikshna, Vyavayi, Vikashi*
Virya	*Ushna*
Vipaka	*Katu*
Karma	*Vata-kaphahara, Jwarahara, Jangama Vishahara, Madakari, Kushthaghna*
Prabhava	*Rasayana*

***Shodhana*:**

Purification is required before administering it as medicine to the human body because of its extremely poisonous qualities, which place it under the *Mahavisha* category. In their writings, the majority of *Rasa Shastra* authors discussed *Vatsanabha* purification techniques. A list of different purification techniques is provided below:

▪ Tiny bits of *Vatsanabha* submerged in a pot of *Gomutra* (cow's urine) and exposed to direct sunlight for three days, with new *Gomutra* added each day. After removing the outer layer, let it dry on the fourth day and store it.[22]

Spend five hours doing *Swedana* with *Godugdha* in *Dolayantra* while keeping tiny bits of *Vatsanabha* in a small *pottali*. After it has cooled and dried, store it.[25]

▪ Little pieces of *Vatsanabha* were packed in a ball and burned for three hours at a high temperature using *Karisha* after being tarnished with *Mahisha Shakruta* (Buffalo dung). The pack is opened to gather the purified *Vatsanabha* once it has cooled naturally and is then stored. [26] Keep small pieces of *Vatsanabha* in a small *pottali* and spend three hours doing *Swedana* in *Dolayantra* with either *Godugdha* or *Godugdha* + Jala. After it has cooled and dried, store it. [27]

Toxic effect:

The toxic effects of *Vatsanabha*, namely *Grivastambha* (torticollis) and *Peetavit-Mutra-Netrata* (deep yellowish discolouration of stool, urine, and eyes), were documented by *Sushruta Samhita* in *Kalpasthana* 2nd chapter. [28] Bradycardia and hypotension may result from taking too much of an Ayurvedic formulation that contains *vatsanabha*. [29] *Vatsanabha Moola Choorna's* calculated LD50 for acute oral toxicity was 29.57 mg/kg bodyweight. [30] *Rasa Vagbhata* listed the eight stages of *Ashta-Vegas* poisoning and explained the symptoms, which are listed in Table 5: [31]

Table 5: Stages of Poisoning and their respective symptoms

Stages	**Symptoms**
1st Stage (*Prathama Vega*)	*Twak Vikara* (Skin Diseases)
2nd Stage (*Dwitiya Vega*)	*Vepathu* (Tremors)
3rd Stage (*Tritiya Vega*)	*Daha* (Burning all over the Body)
4th Stage (*Chaturtha Vega*)	*Vikrutavastha* (Deformities)
5th Stage *Panchama Vega*)	*Phenodgama* (Froth from Mouth)
6th Stage (*Shashtama Vega*)	*Skandha Bhanga* (Drooping of Shoulders)
7th Stage (*Saptama Vega*)	*Jadata* (Comatose)
8th Stage (*Ashtama Vega*)	*Marana* (Death)

Antidotes:

Toxic effects may result from administering *Vatsanabha* inadvertently or in excess. *Rasa Vagbhata* explicitly said that poisoning can only be treated up to the fifth *Vega*. *Lepa*, *Kwatha*, or *Anjana* of *Vishaghna* Gana should be administered after inducing *Vamana* (vomiting). Considered the primary antidote, *Tankana Bhasma* (Borax clax) [32] can be taken with ghee or with honey and *Meghanada* (Amaraanthus tricolour) juice. Another possible antidote is a mixture of honey, *dadhi* (curd), and *arjuna* bark (Terminalia arjuna). *Tankana Bhasma* should be added in an equal amount to any composition that contains *Vatsanabha* in order to counteract its harmful effects. *Maricha* (Piper nigrum) can be used twice as much as *Vatsanabha* if *Tankana* is not available. [33]

Discussion and Result:

Every substance in the world has the potential to be a medicine, according to Ayurveda. Before a substance or drug is administered to the human body, its properties, mode of action, etc., must be fully understood in order to prevent unexpected actions. If not taken in the right dosage, anything could be poisonous. According to Ayurveda, when administered correctly, even a potent poison can function as nectar. A member of the

Ranunculaceae family, *Vatsanabha* (Aconitum ferox Wall.) grows between 10,000 and 14,000 feet tall in the Himalayas. Because its root tuber is a useful but extremely poisonous part, *Mahavisha Sushruta* categorised it under the thirteen *Mahavisha* (extremely poisonous) *Kanda Visha*. Ayurvedic classics mention a number of synonyms and identifying characteristics for *Vatsanabha*.

Its identification occasionally causes controversy, but *Rasa Vagbhata* and *Rasatarangini* explained that its root resembles a calf's navel and that no other plant grows near *Vatsanabha*. The root's size is described as 5-7 Angula, and its circumference is 1.0 to 2.5 Angula. The four types—Brahmana, Kshatriya, Vaishya, and Shudra—were explained by *Rasa Vagbhata* and *Yogaratnakara*. Due to its toxic nature, *Vatsanabha* should only be taken after the *Shodhana* process and in small, precise doses. Ayurvedic classics mention the *Shodhana* process, which may lessen or eliminate a drug's harmful effects and make it safer to use.
Ayurvedic classics mention the *Shodhana* process, which may lessen or eliminate a drug's harmful effects and make using it safer. *Rasa Granthas* describes particular *Shodhana* processes, demonstrating the science's advanced state. *Rasa Vagbhata* described the clinical signs and symptoms of the Ashta-Vegas (eight stages) of poisoning. Toxic symptoms can arise from administering *Vatsanabha* or its formulations inadvertently or in excess. As a result, a thorough explanation of antidotes and patient care was provided. One of the best remedies for *Vatsanabha* poisoning was thought to be *Tankan Bhasma* combined with *Goghrita*

Conclusions:

Amruta is a synonym for *Vatsanabha*, which means that if taken logically, it can act as nectar and cure all illnesses within a year. The identification, toxic effects, purification techniques, antidotes, and management of *Vatsanabha* poisoning will all be better understood with the help of this article. Physicians may avoid its irrational use and prompt poisoning management if they have accurate and correct information.

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