

A Review Study on Therapeutic Potential of *Vatsanabha* (*Aconitum ferox* Wall. Ex Seringe.)

Awanish Pandey^{1*}, Gyan Chand Kr.Morya¹, H.S. Mishra², R.B.Yadav³ and K.N. Yadav⁴

^{1,2,3,4}P.G. Department of Dravyaguna, LalitHari State P.G. Ayurvedic College & Hospital, Pilibhit, U.P., India

Abstract

Vatsanabha (*Aconitum ferox* Wall. ex Seringe) belongs to family Ranunculaceae, is a poisonous herb and widely used in therapeutics of *Ayurveda* and other traditional medicine after the purification methods (*Shodhana* /elimination of toxic components). The aim of the present study is to review the therapeutic importance of *Vatsanabha*. It is referred as ‘the king of poisons’ in *Ayurveda* due to the presence of highly poisonous alkaloids in its tubers. It is categorized in *Mahavishavarga* (Collection of deadly poisonous herbs) in all Ayurvedic texts. *Acharya Charak* has mentioned under “*Sthavara Visha*” by the name of ‘*Visha*’ and one of the ingredient of *Aindra Rasayana*. *Acharya Sushruta* has mentioned as prime among the thirteen varieties of *Kanda Visha* (Poisonous tuberous root). Recent studies have proved it has anesthetic, anti-arthritic, de-obstruent (*Shroto-Vishodhana*), diaphoretic, diuretic, sedative, nerve stimulator, analgesic, anti-inflammatory and cardiac stimulant properties.

Keywords

Aconitum ferox, *Diaphoretic*, *Nerve stimulator*, *Analgesic*, *Cardiac stimulant*



Greentree Group

Received 20/12/16 Accepted 29/01/17 Published 10/03/17

INTRODUCTION

Vatsanabha (*Aconitum ferox* Wall. ex Siringe, Family – Ranunculaceae), also called ‘Monk’s Hood’ and is widely distributed in the alpine and sub-alpine regions of tropical parts of Northern hemisphere¹. It is a deciduous perennial herb with tall and erect stems crowned by racemes of large eye-catching blue, purple, white zygomorphic flowers with numerous stamens¹. Generally, tuberous root of *Vatsanabha* is extremely poisonous but after

Ayurvedic purification methods, it is used in various diseases such as fever, rheumatoid arthritis, sciatica and hypertension and also act as a *Rasayana*(rejuvenation). In Ayurvedic therapeutics not only medicinal herbs are used but also poisonous herbs are used for thousands of years. Special precautions during its administration are it should be purified with the Ayurvedic *shodhan* process and used in minimal doses.

Synonyms:

Visha – poisonous herb, *Amrita* – acts as nectar if used in a suitable dose, after purification. *Garala*, *Pranahara*, *Kshveda*².



Fig.1. *Vatsanabha* (*Aconitum ferox* Wall. ex Siringe)

(Whole plant)



Fig.2. *Vatsanabha* (*Aconitum ferox* Wall. ex Siringe)

(Tubers)

Classical Categorization:

Charaka– Acharya Charaka has mentioned under “*Sthavara Visha*”³ and used by the name of ‘*Visha*’ in *Aindra Rasayana*⁴ (rejuvenative formulation) and *Vishadharana*

(wearing aconite) as a prophylactic measures in *Vishamjwara chikitsa*⁵.

Sushruta– Acharya Sushruta described under thirteen varieties of *Kanda Visha* (Poisonous tuberous root)⁶.

Collection time of *Vatsanabha*:

The best time for collection of tuberous roots of *A. ferox* is between Decembers to April. The therapeutic potency (alkaloids) of *Vatsanabha* is more potent during winter season⁷.

Part used: Tuberous root.

Dosage: Purified *Vatsanabha* dose should be 15-20 mg.²

Phytochemistry: The tuber of *Vatsanabha* contains 0.4–0.8% diterpene alkaloids. The concentration of aconite alkaloids is between 0.3% and 2.0% in tubers and 0.2% and 1.2% in the leaves of the fresh plant. The major alkaloids present in aconite are aconitine, pseudoaconitine,

bikhaconitine, diacetylpseudoaconitine, aconine, picro-aconine, veratrylpseudoaconitine, chamaconitine, veratrylgamaaconine, and di-Ac-Y-aconitine⁸.

Classical phytochemistry and pharmacology of *A. ferox*⁹:

Rasa	<i>Madhura</i> (sweet), <i>Katu</i> (pungent), <i>Tikta</i> (Bitter), <i>Kashaya</i> (astringent)
Guna	<i>Ruksha</i> , <i>Tikshna</i> , <i>Laghu</i> , <i>Vyavayi</i> , <i>Vikashi</i>
Virya	<i>Ushna</i> – hot in potency
Vipaka	<i>Katu</i> – pungent taste after final digestion.
Dosha-karma	<i>Tridosahar</i> (balances three <i>doshas</i>), especially <i>Vata</i> and <i>Kapha</i> <i>Dosha</i> .

Classical pharmacology⁹:

<i>Pranahara</i>	Life threatening, poisonous (if used without purification procedure).
<i>Vyavayi</i>	Spreads to all over the body just after ingestion
<i>Vikashi</i>	Looses all joints
<i>Deepana</i>	Improves digestion
<i>Balavardhana</i>	Improves strength and immunity
<i>Agnimandyahara</i>	Relieves indigestion
<i>Agneya</i>	Hot in potency
<i>Yogavahi</i>	Acts as catalyst for other herbal ingredients
<i>Brimhana</i>	Improves nourishment
<i>Pleehodara</i>	Reduces spleenomegaly
<i>SannipatajJwarahara</i>	Relieves chronic fever
<i>Timirahara</i>	Relieves eye disorder
<i>Rasayana</i>	Rejuvenating, anti aging
<i>Amavatahara</i>	Relieves rheumatoid arthritis
<i>Vataraktahara</i>	Relieves gout
<i>Grudhrasi</i>	Relieves sciatica

<i>Kativedana</i>	Relieves lower back pain
<i>Vataghna</i>	Balances <i>Vata</i> and useful in neurological disorders such as paralysis, hemiplegia, neuropathy.
<i>Shwasahara</i>	Relieves asthma, COPD, and other respiratory diseases
<i>Kasahara</i>	Relieves a cough, cold
<i>Grahanihara</i>	Relieves IBS, Malabsorption syndrome
<i>Panduhara</i>	Relieves anemia, first stage of liver disorders
<i>As antidote</i>	Antidote for <i>Aakhu</i> (rat bite), <i>Vrishchika</i> (scorpion), <i>Sarpadansh</i> (snakebite)

Ayurvedic Toxicology regarding

Aconitum ferox:

Sushruta has explained Torticollis (neck stiffness) and yellowish discoloration of eyes, stools and urine as the toxic effect of *Vatshanabh-* “*grivastambho, vatsanabhepeetvinmutranetrata*”¹⁰

RasaratnaSamucchaya has explained eight stages of *Vatsanabha* toxicity depend on the affected parts of the body. These stages are also a measure of level of toxicity and dosage of *Vatsanabha*¹¹.

Stage	Symptoms
1st stage	<i>TwakVikara</i> (skin rashes)
2nd stage	<i>Vepathu</i> (tremors)
3rd stage	<i>Daha</i> (burning sensation all over the body)
4th stage	<i>Vikrata</i> (deformity)
5th stage	<i>Phenodgati</i> (frothing)
6th stage	<i>Skandhabhanga</i> (drooping and wasting of shoulders)
7th stage	<i>Jadyata</i> (wasting and comatose of the whole body)
8th stage	<i>Marana</i> (death)

Classical Antidotes:

According to *RasaratnaSamucchaya* treatment of *Vatsanabhatoxicity* is possible only upto 5th stage¹¹.

- Due to over-dosage or use without purification procedure-

1. Ghee along with *Tankanabhasma* should be given.

2. The combination of honey, *ghee*, and bark of *Arjuna* (*Terminaliaarjuna*) also used as an antidote.

3. Whenever *Vatsanabha* is used in any formulation, *TankanaBhasma* (Borax calyx) is always used in equal quantity because it nullifies all the toxic effects of the *Vatsanabha*. Example: *TribhuvanaKirtiRas* – a potent Ayurvedic medicine used in fever, contains both *Vatsnabha* and *Tankana*. *Vatsnabha* mixed with *Tankana* (purified borax) and black pepper (*Maricha* / *Ushana*) in the ratio of 1:2 nullify all toxic effects.

Classical purification procedure (*VatsanabhaShodhana*)

Any one of the following procedure should be used for detoxification.

1. *Aconitum* roots are tied in a piece of cloth, kept dipped in cow urine and exposed to sunlight for three days. Cow urine is replaced daily with a fresh one and after the third day dried and preserved.
2. Roots cut into pieces, tied in a piece of cloth, suspended in goat milk or cow milk, and heated for three hours.
3. Roots should be boiled by suspending in *Triphala* decoction for three hours¹².

Benefits of Shodhana:

The cow urine, cow milk or cow dung is the classical detox medium of *Shodhana*, but it is now acceptable to all. Recent researches reported that *Gomootra* (cow urine) converts aconite into a compound with a cardiac stimulant property, whereas aconite is a cardiac depressant. *Shodhanaby* both *Gomootra* and *Godugdha* (cow milk) reduces cardiac and neuromuscular toxic effects of aconite without affecting antipyretic activity. Soaking and boiling with cow urine, cow milk or decoction hydrolyze aconite alkaloids into less toxic and non-toxic derivatives. In *Shodhanaprocess* less toxic substances such as aconine, hypoaconine, and benzyl hypoaconine increases possibly due to the conversion of

the toxic aconitine into aconine due to hydrolysis. The toxicity study of Ayurvedic purification procedures was carried by Thin layer chromatography (TLC) studies and showed that pseudoaconitine and aconitine were converted into less toxic form veratroylpseudoaconine and benzoylaconine respectively⁸.

Precautions during uses of Vatsanabha:

While taking *Vatsanabha*, one should take cow milk, ghee, honey, sugar and rice. Foods like hot, pungent, sour and salty items food should be avoided because it increases *Pitta*. It should be avoided in people with *Pitta* symptoms like anger, excessive thirst, hunger, excessive sun exposure and also not be taken during summer and rainy season. *Pitta Doshas* aggravate hot potency of aconite. It is also contraindicated in pregnancy, lactation, early childhood and patients of cardiac, liver, kidney and brain diseases. *Vatsanabha* can get subcutaneous absorption, so it should be handled very carefully.

Important Vatsanabhapreparationin Ayurveda:

- *Tamraparpati* – used in the treatment of *Pandu* (anemia), skin diseases.

- *Sanjivanivati* – used in the treatment of dyspepsia, indigestion and gastroenteritis.
- *TribhuvanKirtiRas* – used in the treatment of acute and chronic fever.
- *KaphaketuRas* – used in the treatment of *Pratishyaya*(Rhinitis), *Kasa* (Cough) and *Tamakashwas* (Asthma).
- *AgnitundiVati*- used in the treatment of *Agnimandya*, *Ajirna*, *Vatavyadhi*.
- *Ekangaveer Rasa*- used in the treatment of *Vatavyadhi*, *Pakshaghata* (Hemiplegia).

inflammatory, analgesic, astringent and anti-diarrhoeal activities. It has been used in the treatment of pyrexia, indigestion, anorexia, spleen disorders, gout, cough, asthma, vision problems, night blindness, eye infections, inflammation, otitis, headache, sciatica, backache and joint disorders. It is also used as an antidote in rats, rodents, scorpion and snake bites poisoning.

CONCLUSION

AcharyaCharaka has clearly mentioned that a strong poison can become an excellent medicine if administered properly and even the most useful medicine act as a poison if not used properly¹³. *Vatsnabha* is highly toxic but after purification it is used in therapeutics with minimal dose and precautions. *A. ferox* is pungent, bitter and astringent in taste and *UshnaVirya*it balances *tridosha*, especially *Vata* and *Kapha*. It acts as *Yogavahi* (catalyst for other medicines), *Rasayana*(rejuvenation), *Deepana*(improves digestion power) and relieves coldness. *A. ferox* exhibits antioxidant, antimicrobial, antipyretic, anti-

REFERENCES

1. Shastri J.L.N., Dravyagunavijnana, (2004), ChaukhambhaOrientalia, Varanasi, Ed.1st,vol.2,pp-9.
2. Sharma P.V.,Dravyagunavigyana,(2006), ChaukhambhaBharti Academy, Varanasi, Vol-2
3. CharakSamhita of Agnivesh edited by PandeyKashiNath&ChaturvediGorakhNath,(2009),Vidyotani Hindi Commentary ChaukhambaBharatiAcademy, Varanasi, India(C.S.Ci.23/11).
4. CharakSamhita of Agnivesh edited by PandeyKashiNath&ChaturvediGorakhNath, (2009),Vidyotani Hindi Commentary ChaukhambaBharati Academy, Varanasi, India(CS.Ci.1.2.6-7).
5. CharakSamhita of Agnivesh edited by PandeyKashiNath&ChaturvediGorakhNath, (2009),Vidyotani Hindi Commentary ChaukhambaBharati Academy , Varanasi, India (CS.Ci.3.6-7).
6. SushrutaSamhita of Sushruta edited by ShastriAmbikaDutta,(2007), Ayurveda TatavaSandipika Commentary Chaukhamba Sanskrit Sansthan, Varanasi, India (SS.Ka.2/5).
7. Shastri K., Sadananda Sharma, (2012), Rasa Tarangani,,MotilalbanarasiDas, New delhi, 11th ed., (R.T.24/13).
8. AmlaJyoti et al (2016), IAMJ: Volume 4; Issue 07; July, pp.1235-1241
9. Bhav Mishra; (2013), BhavaPrakashNignantu, Hindi Commentary ByChuneker K. C. ChaukhambhaBharti Academy.
- 10.SushrutaSamhita of Sushruta edited by ShastriAmbikaDutta, (2007), AyurvedaTatavaSandipika Commentary Chaukhamba Sanskrit Sansthan, Varanasi, India(SS.Ka.2/12).
- 11.Shastri A., Vagbhattacharya, (1978), Rasa RatnaSamucchya, Chaukhamba Sanskrit series Varanasi, 6thedt.
- 12.Shastri K., Sadananda Sharma,(2012), Rasa Tarangani, Motilalbanarasi das, New delhi11th ed.,
- 13.CharakSamhita of Agnivesh (2009), PandeyKashiNath&ChaturvediGorakhNath, Vidyotani Hindi Commentary ChaukhambaBharati Academy, Varanasi, India (C.S.Su.1/127).