ABSTRACT

Aconitum, the "Queen of Poisons" commonly known as Monkshood or Wolf's bane, is a genus of perennial plants belonging to the family Ranunculaceae. In Ayurveda also few species of Aconitum are used for its therapeutic actions and the most potent of them is Aconitum Ferox, also known as Indian aconite or Vatsanabha, and it has the ability to function as both the ultimate poison and an elixir. In Ayurveda, Vatsanabha is considered as Mahavisha included among Sthavara Visha by Acharya Charaka, and in Kanda Visha by Acharya Susrutha. Aconitum Ferox is a highly toxic with the estimated fatal dose of 1g of root powder with a fatal period of 6 hours which contains a potent cardiotoxic agent and neurotoxin known as Aconitine. Ingesting even a small amount of the plant can result in severe symptoms and even death. As a result of the high toxicity of Vatsanabha, prior to any therapeutic use, the roots should undergo proper Sodhana process. Rasayana (rejuvenating), Deepana (improves digestion), Balavardhana (improves strength) Agnimandyahara (relieves indigestion) Pleechodara (useful in splenomegaly), Vatarakthara (useful against gout) Shwasahara (useful respiratory diseases), Kasahara (relieves cough), Gudamayahara (useful in ano-rectal disorders) etc. are just a few of the therapeutic indications of Vatsanabha that have been used successfully to treat a range of medical conditions. Recent Researches have shown that Vatsanabha contains several biologically active compounds that may have numerous potential therapeutic properties. The pharmacological potential of Aconitum Ferox still justifies vast research possibilities.

Key words: Vatsanabha, Mahavisha, Aconitum, Aconitum Ferox, Visha, Indian Aconite, Ayurveda, Plant Poison

INTRODUCTION

Aconitum, commonly known as monkshood or wolf's bane, is a genus of perennial plants belonging to the family Ranunculaceae. The genus Aconitum contains over 300 species and is distributed widely throughout the Northern Hemisphere, including Asia, Europe, and North America. Aconitum species are known for their attractive flowers, which range in colour from white to purple and blue. However, from centuries they are known for their efficacy as a potent medicine as well as for their poisonous alkaloids hence, it is known as the "queen of poisons".

The morphology of aconite is striking and distinctive, making it easily recognizable. They are herbaceous with large, deeply lobed leaves that are often palmate or divided into three to five leaflets. The stem of an aconite plant is erect, branched, and can grow up to 2 meters tall which is typically green or purplish in colour. The flowers are distinctive, with a hooded shape that resembles a monk's cowl. They are typically blue or purple, although some species may have white or yellow flowers. The flowers are generally arranged in long spikes or clusters. They produce dry, elongated fruits that split open to release their seeds. The roots of an aconite plant are fleshy, tuberous, and often spindle-shaped. They are used in traditional medicine but can be toxic if ingested. The plants contain a variety of alkaloids, including aconitine, mesaconitine, and hapaconitine, which can cause severe cardiotoxicity, neurotoxicity and cytotoxicity.

Despite of its toxic nature, aconitum alkaloids are known to have potent analgesic and anti-inflammatory
properties, as well as the ability to regulate the cardiovascular and nervous systems. On the cardiovascular system it has been shown to decrease heart rate, lower blood pressure, and improve blood flow to the heart. It has also been shown to have anti-arrhythmic effects and to be useful in the treatment of atrial fibrillation. On the nervous system it has been shown to have analgesic and anti-inflammatory effects, and has been used to treat conditions such as arthritis and rheumatism. Aconite has also been shown to have sedative and anxiolytic effects, and has been used to treat anxiety and depression.

In Ayurveda also few species of Aconitum are used for its therapeutic actions as Aconitum ferox (Vatsanabha), Aconitum chasmanthum, Aconitum heterophyllum (Ativisha), Aconitum palmatum (Prativisha) etc. The most potent of them is Aconitum ferox, also known as Indian aconite or Vatsanabha, and it has the ability to function as both the ultimate poison and an elixir.

The purpose of this review is to provide an overview of the history, medicinal uses, and safety concerns of Aconitum ferox (Vatsanabha). This review will also explore the current state of research on Vatsanabha, including clinical trials and laboratory studies. By examining the existing literature on Vatsanabha, this review aims to provide a comprehensive understanding of this important plant and its potential uses in various medical conditions.

**VATSANABHA**

**Botanical description**

Vatsanabha botanically identified as Aconitum Ferox is native to the Himalayas and is found in regions such as Nepal, Bhutan, and Tibet. It is a perennial plant that can grow up to 2 meters in height. The leaves are large and palmate, with deeply cut lobes. They are dark green in colour and can reach up to 30 cm in diameter. The flowers of Aconitum Ferox are blue to violet in color and are arranged in a dense, elongated cluster at the top of the stem. Each flower has 5 petals, 2 of which are large and helmet-shaped, while the other 3 are smaller and narrow. The flowers bloom in the late summer and early autumn. The roots of Aconitum Ferox are thick and fleshy, with a cylindrical shape. They are dark brown to black in colour and can grow up to 1 meter in length which contain toxic alkaloids. Overall, the morphology of Aconitum ferox is typical of plants in the Ranunculaceae family, with large, deeply cut leaves and showy, helmet-shaped flowers.

**General Description**

Vatsanabha, its synonyms, and qualities were described by nearly all of Nighantu, but Rasa Shastra’s growth boosted Vatsanabha’s applicability. Rasa Vagbhata specifically indicated that three months of Vatsanabha administration heals all eight primary forms of Kushtha, six months of Vatsanabha administration improves complexion, and twelve months of Vatsanabha administration cures all ailments.

From the time of the Vedic civilization, the plant Vatsanabha has been renowned for its medicinal benefits. Nearly all of the Samhitas in Ayurveda discuss it, and later, Nighantus have provided a full account, including its distinguishing characteristics. Vatsanabha has been used in Ayurveda for a very long time, but its significance enhanced once Rasashasta was flourished.

Derivation of the word Vatsanabha is from the resemblance of the tuber of Aconitum ferox with the umbilicus of Calf. In Ayurveda based on its morphology, properties and therapeutic actions it is popular with various synonyms as Visha (is a poison and it spreads very quickly all over the body (Ksweda) as the consumption makes the individual unconscious, (Garalam) as it kills the person if consumed.

Vatsanabha is remarked with numerous synonyms in Ayurveda Texts which are tabulated below.

<table>
<thead>
<tr>
<th>Table 1: Synonyms in Ayurveda Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms</td>
</tr>
<tr>
<td>Amrutha</td>
</tr>
<tr>
<td>Darada</td>
</tr>
</tbody>
</table>
**Garala**  +  +  +  +

**Kalakuta**  +

**Kakola**  +

**Kshweda**  +  +

**Mahaoous hada**  +  +

**Mahavisha**  +

**Marana**  +  +

**Naga**  +  +

**Nepali**  +

**Pranaharakam**  +

**Shoukilya**  +

**Sindhuvar a**  +  +  +

**Saurasthraka**  +

**Thoka**  +

**Tailakanda**  +

**Ugram**  +  +

**Vatsanabha**  +  +  +  +  +  +

**Visham**  +  +  +  +  +  +

**Vishamugram**  +  +

---


**Taxonomical Classification**[19]

**Kingdom**: Plantae

**Class**: Magnoliopsida

**Order**: Ranunculales

**Family**: Ranunculaceae

**Genus**: Aconitum

**Species**: Aconitum ferox Wall.

In Ayurveda, **Vatsanabha** considered as Mahavisha is included among Sthavara Visha by Acharya Charaka, and in Kanda Visha by Acharya Susrutha.[20] Vatsanabha is also classified under different Vargas in various Nighantus as enlisted in Table 2.

**Table 2**: Classification of Vatsanabha in Nighantus[21,22]

1. **Bhavaprakasha**  |  Dhatvadi Varga
2. **Raja Nighantu**  |  Pippalyadi Varga
3. **Sodala Nighantu**  |  Candanadi Varga
4. **Dhanwanatari Nighantu**  |  Mishrakadi Varga
5. **Shaligrama Nighantu**  |  Visa Varga
6. **Saraswati Nighantu**  |  Candanadi Varga
7. **Priya Nighantu**  |  Shatapusphadi Varga
8. **Kaiyyadeva Nighantu**  |  Mishrakadi Varga

**Pharmacological Properties**[23]

**Rasa**: Madhura

**Guna**: Ruksha, Tikshna, Laghu, Vikasi, Sukshma, Vyavayi

**Virya**: Ushna

**Vipaka**: Katu

**Dosha Karma**: Tridosha Shamaka (especially Kapha Vata Shamaka)

**Chemical composition**[24]

Aconitum ferox root contains the alkaloids Aconitine, Pseudoaconitine, Chasmaconitine, Indaconitine, Hypoaconitine, Mesoaconitine, Lycoctonine, Delphinine and Bikhacontine.
Toxic effects

*Aconitum Ferox* is a highly toxic with the estimated fatal dose of 1g of root powder with a fatal period of 6 hours which contains a potent cardiotoxin and neurotoxin known as Aconitine. Ingesting even a small amount of the plant can result in severe symptoms and even death. Symptoms of *Aconitum Ferox* poisoning can occur within minutes to hours after ingestion and may include, Numbness and tingling in the mouth and throat, Severe gastrointestinal symptoms, such as nausea, vomiting, and diarrhoea, Irregular heartbeat, heart palpitations, and chest pain, Muscle weakness, paralysis, and respiratory failure, Confusion, dizziness, and loss of consciousness.[25]

In *Ayurveda*, Acharya Susrutha[26] explains *Greevasthambha* and *Peeta Vid Mutra Netra* as the toxic effects of *Vatsanabha*. Rasaratna Samucchaya describes 8 stages of toxic effects of *Vatsanabha* based on the spreading of poison in different parts of the body. These stages are also dependent on the level of toxicity and dosage of *Vatsanabha*.[27]

### Table 3: The stages of *Vatsanabha Visha*

<table>
<thead>
<tr>
<th>SN</th>
<th>Text</th>
<th>Purifying Media</th>
<th>Method</th>
<th>Process Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rasa Tarangini[28]</td>
<td>Gomutra (Cow’s urine)</td>
<td>Pieces of <em>Vatsanabha</em> in size of Chanaka immersed Ghatayantra (pot) with media, placed under bright sunlight for 3 days, every replacing with fresh Gomutra. 4th day, dried after removing the outer layer and stored.[33]</td>
<td>4 days</td>
</tr>
<tr>
<td>2.</td>
<td>Rasa Tarangini[28]</td>
<td>Godudha (cow’s milk)</td>
<td>Swedana (Steam cooking) of Pottali (pack) with small pieces of <em>Vatsanabha</em> in size of Chanaka (size of chick pea) in Dolayantra (vessel), later collected after it cools on its own, dried and stored.</td>
<td>1 or 2 Yama (3 or 6 hours)</td>
</tr>
<tr>
<td>3.</td>
<td>Rasa Tarangini[28]</td>
<td>Aja Dugdha (goats milk)</td>
<td>Swedana of Pottali with small pieces of <em>Vatsanabha</em> in size of Chanaka in Dolayantra, collected after it cools on its own, dried, stored.</td>
<td>3 hours</td>
</tr>
<tr>
<td>4.</td>
<td>Rasendrasara Sangraha[29]</td>
<td>Gomutra</td>
<td>Pieces of <em>Vatsanabha</em> in size of Chanaka are given Bhavana (trituration) in Kholwayantra (mortar and pestle)</td>
<td>3 days consistent</td>
</tr>
<tr>
<td>5.</td>
<td>Rasendrasara Sangraha[30]</td>
<td>Triphala Qwatha alone or with Ajadugdha</td>
<td>Swedana of Pottali with small pieces of <em>Vatsanabha</em> in size of Chanaka in Dolayantra, collected after it cools on its own, dried and stored.</td>
<td></td>
</tr>
</tbody>
</table>
Pratyoushadha

Several medications have been listed in the literatures which have the potential to counteract the harmful effect Vatsanabha poisoning symptoms and signs in affected individuals. As per modern medicine the use of emetics or stomach wash with the solution containing charcoal or tannic acid or milk is advised.

Table 5: Pratyoushadha according to different texts

<table>
<thead>
<tr>
<th>S N</th>
<th>Text</th>
<th>Pratyoushadha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rasendra Chintaman(^{(3)})</td>
<td>Haridra (Curcuma longa Linn.) and Meghanada (Amaranthus tricolor) Swarasa (juice extract). Sarapakshi (Ophiophrriiza mungos) or Tankana (borax), Putranjivaka Majja (Pulp of fruits of Putranjiva roxburghii. Wall.) along with Nimbu (Citrus medica Var. acida) Swarasa.</td>
</tr>
<tr>
<td>2.</td>
<td>Rasendra Sambhava(^{(4)})</td>
<td>Patavanavruthshayasara Rasa (Erythrina variegata L.)1 pala and sharkara (sugar)</td>
</tr>
<tr>
<td>3.</td>
<td>Rasa Jalanidhi(^{(5)})</td>
<td>Jati (Jasminum officinale L.), Neeli (Indigofera tinctoria Linn.), Saindhava (Rock salt), kakamachi (Solanan nigrum Linn.), Aparajita (Clitoria ternatea Linn.), Triphala, Kustha (Sauusurea lappa CB Clarke), Madhuka (Yastimadhu- Glycehrinia glabra Linn.), Jiraka (Cuminum cymminum Linn.), Kshiravruxha Powdered Bark of Arjuna (Terminalia arjuna W. &amp; A.) mixed madhu (honey) and dadhi (curds). Tankana mixed with honey and juice of meghanahan (Amaraanths tricolor).</td>
</tr>
<tr>
<td>4.</td>
<td>Rasa Jalanidhi</td>
<td>Goghrita along with bhargi, Dadhi, Snuhi kshara (Alkali of Euphorbia nerifolia Linn.), Sariva (Hemidesmus indicus R.Br), Tanduliya, Dhooma, Manjista (Rubia cordifolia Linn), and Yastimadhu (Glycehrinia glabra Linn.)</td>
</tr>
<tr>
<td>5.</td>
<td>Prayoga Samuchyya(^{(5)})</td>
<td>Triphala Kwatha, Neelimula (roots of Indigafera Tintorica Linn.)Maricha Kwatha (Piper nigrum Linn.) Triphala kwatha, Ghritha and Kshira</td>
</tr>
<tr>
<td>6.</td>
<td>Visha Vaidya Jyotsnika(^{(5)})</td>
<td>Nirvisha (Delphinium Denudatum Wall.) Neeloomala (Indigofera Tintorica Linn.).</td>
</tr>
<tr>
<td>7.</td>
<td>Kriyakaumdi(^{(4)})</td>
<td>Maricha (Piper nigrum Linn.) Kashaya, Tandulodaka, Triphala Kashaya. Chitrika swarasa (Plumbago zeylinica)</td>
</tr>
</tbody>
</table>
**Therapeutic Uses**

Therapeutic actions of *Vatsanabha* are elaborated in different *Ayurveda* texts and *Nighatus* with the therapeutic dose 1/16 to 1/8 *Ratti*, which is approximately 8-16mg\(^{[41]}\). In *Ayurveda* the therapeutic uses of *Vatsanabha* is described as *Pranahara* (which takes away life), *Vyavayi* (spreads to all parts of the body) *Vikashi* (Loosens joints), *Agneya* (hot in potency), *Yogavahi* (acts as a catalyst) *Brumhana* (nourishing) *Veeryavardhana* (improves sperm quality and quantity) *Kantharuk* (useful in throat disorders), *Sannipataghna* (useful in fatal disorders), *Rasayana* (rejuvenating), *Deepana* (improves digestion), *Balavardhana* (improves strength) *Agnimandyahara* (relieves indigestion) *Pleehodara* (useful in splenomegaly), *Vataraktahara* (useful against gout) *Shwasahara* (useful respiratory diseases), *Kasahara* (relieves cough), *Gudamayahara* (useful in ano-rectal disorders), *Grahanihara* (useful against IBS), *Gulmahara* (useful in abdominal tumors) *Kushtahara* (useful in skin diseases) *Panduhara* (useful in anemia) *Jwarahara* (useful in fever) *Amavatavar* (useful in rheumatoid arthritis) *Vataghna* (Balances Vata), *Timirahara* (useful in eye disorder) *Nishandhyahara* (useful in night blindness) *Abhishyanda* (useful in conjunctivitis) *Netrashotha* (relieves eye swelling) *Karnashotha* (relieves ear swelling) *Karnashoholahara* (useful in ear ache) *Shirasoholahara* (useful in headache) *Grudhrasi* (useful in sciatica) *Kativeda* (relieves lower back pain), *Aku*, *Vrushchika*, *Sapra vishahara* (Useful in rodent bite, scorpion bite and snake bite).\(^{[42,43,44]}\)

**Recent researches in Aconitum ferox**

There have been several recent research studies on *Aconitum ferox*, which have focused on its chemical composition, traditional uses, and potential therapeutic applications.

**Chemical Composition\(^{[45]}\)**

A study published in 2021 analyzed the chemical composition of *Aconitum ferox* using high-performance liquid chromatography (HPLC) and found that it contained several biologically active compounds, including alkaloids, *Aconitine*, *Pseudoaconitine*, *Chasmaconitine*, *Indaconitine*, *Hypoaconitine*, *Mesoaconitine* etc. The researchers suggested that these compounds could have potential applications in drug development.

**Anti-inflammatory Activity\(^{[46]}\)**

Another study published in 2021 investigated the anti-inflammatory activity of *Aconitum Ferox* extract in vitro and in vivo. The researchers found that the extract was able to reduce inflammation in animal models and suggested that it could be used to develop new anti-inflammatory drugs.

**Traditional Use\(^{[47]}\)**

A review published in 2020 examined the traditional uses of *Aconitum Ferox* in *Ayurvedic* and *Tibetan* medicine. The authors found that the plant has a long history of use for treating pain, inflammation, and neurological disorders. They suggested that further research could help to validate these traditional uses and identify new therapeutic applications.

**Toxicity\(^{[48]}\)**

A study published in 2019 investigated the toxicity of *Aconitum Ferox* extract in rats. The researchers found that high doses of the extract could cause liver and kidney damage, highlighting the need for caution when using this plant for medicinal purposes.

**DISCUSSION**

*Vatsanabha*, a versatile medicinal plant in *Ayurvedic* literature, has been skillfully employed to address various minor and challenging health conditions. However, if not utilized in accordance with the principles governing its formulation and dosage, it can result in severe adverse reactions. Both modern and ancient texts describe symptoms that closely align, ultimately pointing towards the risk of death due to cardiac arrest. Therefore, a thorough understanding of *Shodhana* methods and *Prathyaooshada* is essential for managing potential issues. *Rasayana* (rejuvenating), *Deepana* (improves digestion),
**Balavardhana** (improves strength) *Agnimandyahara* (relieves indigestion) *Pleehodara* (useful in splenomegaly), *Vataraktahara* (useful against gout) *Shwasahara* (useful respiratory diseases), *Kasahara* (relieves cough), *Gudamayahara* (useful in ano-rectal disorders) etc. are just a few of the therapeutic indications of *Vatsanabha* that have been used successfully to treat a range of medical conditions. Recent Researches have shown that *Vatsanabha* contains several biologically active compounds that may have numerous potential therapeutic properties.

**CONCLUSION**

In conclusion, *Vatsanabha* emerges as a versatile and valuable Medicinal Plant in *Ayurveda*, with a rich history of application across a spectrum of ailments. Its judicious use, adhering strictly to the principles outlined in *Ayurvedic* literature regarding formulation, preparation, and posology, reveals its therapeutic potential. However, it is crucial to underscore the importance of responsible and informed usage, as deviating from these guidelines may result in severe adverse reactions. In the pursuit of integrating traditional knowledge with contemporary practices, further research and collaboration are warranted to bridge the gaps in our understanding. This not only enhances the credibility of *Ayurveda* but also ensures the safety and efficacy of *Vatsanabha* as a therapeutic agent. Ultimately, a balanced and informed approach to the utilization of *Vatsanabha* will contribute to its continued relevance and significance in the realm of *Ayurvedic* medicine. Overall, these studies suggest that *Aconitum Ferox* has significant potential for therapeutic applications, but also highlight the need for further research to fully understand its chemical composition, safety, and efficacy.

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