

## A REVIEW OF BILWADI AGADA AND APAMARGA MOOLA ON VRISHCHIK DAMSHA CHIKITSA, AN AYURVEDIC MANAGEMENT FOR SCORPION BITE

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<https://doi.org/10.46607/iamj1511092023>

(Published Online: September 2023)

### Open Access

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Article Received: 08/08/2023 - Peer Reviewed: 25/08/2023 - Accepted for Publication: 10/09/2023.



## ABSTRACT

A sort of poison generated by an animal that is actively administered through a wound by way of a bite, sting, or other similar action is known as venom or zootoxin.[1][2][3] The process of envenomation involves the delivery of the poison through a specially evolved venom mechanism, such as fangs or a stinger. National public health data show that there are 1.5 million scorpion envenoming's recorded worldwide each year, resulting in 2000–3000 fatalities. [4,5]. Scorpions (also known as *Vrischika*) are a type of *Keeta* (insect) because of the intensity of their poisoning and illness symptoms. *Vrischika Visha* has received special attention from Ayurveda acharyas and is referred to as a singular entity in the classics. The present work examines the therapeutic effects of Apamarg moola and *Bilwadi agad*, two commonly utilised medicinal herbs by traditional healers in the treatment of *Vrishchik damsha* (scorpions bite).A polyherbal ayurvedic preparation is called Bilwadi agada or gutika. In acute toxicopathological situations, it is a viable medication option.

**Keywords:** scorpions, *Keeta*, *Visha*, *Bilwadi agad*, *Apamarga moola*, *Vrishchik damsha*

## INTRODUCTION

Agada tantra is a part of Ayurveda that consistently requires practical training (*Drushtakarmatwa*) more than any other branch since it deals with deadly situations and emergency care. The Scorpio (*Vrishchik*) is the oldest poisonous animal on Earth. This eight-legged creature causes more than 5,000 fatalities worldwide each year. 30 of the 800-1000 species pose a threat to humanity. The most hazardous scorpions to encounter in India, according to mythology, are red ones. (7). Scorpions are almost always found in warm, dry environments. The majority of scorpions are nocturnal; they spend the day lurking in cracks, tunnels, or beneath rocks, only coming out at night. The scorpion may be found in a variety of environments, including grasslands, savannas, deciduous woodlands, mountain pine forests, rain forests, and caverns, despite the fact that scorpions are often associated with hot, dry places like deserts. In the Himalayas of Asia and the Andes Mountains of South America, scorpions have been found living under snow-covered rocks at elevations of over 12,000 feet. It is a non-enzymatic protein called serotonin that provides scorpion venom with its lethal effects. (8). Poison has the potential to harm and perhaps challenge life itself. The therapy for the bites of *Sarpa*, *Keeta*, *Luta*, and *Vrishchika*, among other animate poisons, and the *Jangama Visha* (animate poisons), are all covered in a branch of Ayurveda called as *Agadatantra*. Even though scorpions are a species of *Keeta* (an insect), due to the severity of their poisoning and illness presentations, Ayurveda Acharyas have given them special attention and have characterised them as a unique entity in the classics. A unique envenomation called *Vrischikdamsha* needs medical treatment.

Although *Apamarga Panchanga* contains several excellent *Vishaghna* characteristics, his Moola contains a unique *Vishaghna* property that is employed in Indian traditional medicine. The Anti-Toxic Effect of *Apamargamoola* in *Vrishchika Damsha* is therefore the subject of our conceptual investigation. A polyherbal ayurvedic preparation is called *Bilwadi agada* or *gutika*. In acute toxico-pathological situations, it is a viable medication option. There are references to it in

the *Sarpa damsha*, *Loota visha*, *Unduru visha*, *Vrishchika visha*, *Visuchika*, *Ajeerna*, *Gara visha*, and *Jwara Bhoota bheda* texts.

### CONCEPTUAL STUDY

General features of *Vrishchik visha* according to *Acharya Vagbhata*. The features of *visha* in *Vrishchik* are:

- *Tikshna* (highly potent) in nature
- *Ushna* (hot potency), so it causes *daha* (burning sensation like fire)
- *Daha* will initially appear on the bite site, or *damsha sthāna*, and then spread upward (generally).
- It is located at the sting site in the end. At the sting location, it causes excruciating agony, a blackish discolouration, and throbbing anguish.(9)

### SCORPION VENOM[10]

Many neurotoxins, cardiotoxins, nephrotoxins, hemolytic toxins, nucleotides, amino acids, oligopeptides, phospholipase-A, hyaluronidase, acetylcholine esterase, histamine, serotonin, 5-hydroxyptamine, and proteins that inhibit protease, angiotensin's, and succinate dehydrogenase are all present in scorpion venom.

### MECHANISM OF ACTION SCORPION VENOM[11] :-

An effective sodium channel activator is scorpion venom. It delays the shutting of sodium channels in neurons, causing an "autonomic storm" that induces an abrupt release of endogenous catecholamines into the bloodstream, stimulating the sympathetic and parasympathetic nervous systems momentarily.

### SCORPION BITE SYMPTOMS[12] :-



Numerous neurotransmitters are released as a result of a scorpion sting, causing different clinical symptoms to appear as a result of envenomation. Symptoms of a scorpion bite

include excessive sweating, vomiting, increased salivation, bradycardia, priapism, cold extremities, or transient hypertension, which may be followed by the emergence of severe cardiovascular symptoms like hypotension, tachycardia, pulmonary oedema, tingling,

numbness, and restlessness. Multi-organ failure, cardiogenic shock, and acute refractory pulmonary oedema all contribute to morbidity and death.

#### ABOUT APAMARGA MOOLA TABLE no-1

*Rakta Apamarga* (Achyranthus aspera Linn.)

#### Chemical composition :-

Betaine, Achyranthine, hentriacontane, ecdysterone, Achyranthus saponins A, B, C,

Classical text	Rasa	Guna	Virya	Vipaka	Karma	Pharmacological activity
<i>Raj Nighantu</i> (13)	<i>Katu</i>	<i>Tikshna</i>	<i>Sita</i>	<i>Katu</i>	<i>Kapha-vatnut, vishaghna</i>	Wounds, pruritic, antidote to poisons, causes vomiting
<i>Dhanwantari Nighantu</i> (14)	<i>Tikta, katu</i>	<i>Tikshna</i>	<i>Usna</i>	-	<i>Kapha-nashana, Vata-Visthambhi.</i>	Useful in wounds (septic), pruritus & poisons Useful
<i>Kaidev Nighantu (Phala)</i> (15)	<i>Madhur</i>	<i>Ruksha</i>	<i>Sita</i>	<i>Madhura</i>	<i>Durjara , vistambha, Vatajnaka</i>	Useful in Raktpitta
<i>Bhavprakash Nighantu (Phala)</i> (16)	<i>Madhur</i>	<i>Ruksha</i>	<i>Sita</i>	<i>Madhura</i>	<i>Durjra , vis-tambhaka,vatajnaka</i>	Useful in Rakipitta

#### PROBABLE MODE OF ACTION:

- The red-flowered *Apamarga* cultivar has a cool potency and a pungent Rasa. It calms the *vata* and *kapha*. It is prescribed for injuries and *privies*, and as a poison antidote. It is astringent and makes people throw up. (17). (RN.)
- There is another red kind of *Apamarga* of which synonyms are *Raktapushah, Vasirah, Kapipippali, Ksdraapamarga, Raktah, Raktapurvakah*. [18]
- *Rakta Apamarga* soothes. *Kaphadosa* is good for wounds, maladies, and toxins and causes flatulence. It acts as an astringent and is a potent [19] emetic. {D.N.}
- *Vashir* having *Madhura Rasa, Madhura Vipaka, Seet Virya* (20) {K.N.}.

A *Vishahara* drug is *Rakt Apamarg Moola*. This quality could result from *Moola Churna's Prabhava*. Following the vitiation of the *Rakta Dhatu*, the poison that was ingested would quickly spread throughout the body. Internal *Vishahara* medication administration is necessary to neutralise the toxin. The Acharyas also stress the need for total neutralisation or removal of the toxin since partial elimination or neutralisation might have delayed effects on the body. Drugs' modes of action rely on a variety of variables, including *Rasa, Guna, Veerya, Vipaka, Prabhava, and Karma, Doshaghata*, among others. In different parts of India, *Rakt Apamarg Moola* is reported to be quite efficient in treating bug bites and is used extensively for hazardous diseases.

### INGREDIENTS OF BILWADI AGADA: (A.H.U. 36/85)

S.No	Name of the drug	Used part	Botanical Name
1.	<i>Bilva</i>	<i>Moola</i>	<i>Aegle marmelos</i> Corr
2.	<i>Surasa</i>	<i>Pushpa</i>	<i>Ocimum sanctum</i> Linn.
3.	<i>Karanja</i>	<i>Phala</i>	<i>Pongamia pinnata</i> Perri
4.	<i>Tagara</i>	<i>Moola</i>	<i>Valeriana wallichii</i> DC
5.	<i>Devadaru</i>	<i>kanda sara</i>	<i>Cedrus deodara</i> Roxb.
6.	<i>Haritaki</i>	<i>Phala</i>	<i>Terminalia chebula</i> Retz
7.	<i>Vibhitaki</i>	<i>Phala</i>	<i>Terminalia bellirica</i> Roxb
8.	<i>Amalaki</i>	<i>Phala</i>	<i>Emblica officinalis</i> Gaertn
9.	<i>Shunthi</i>	<i>Kanda</i>	<i>Zingiber officinale</i> Rosc
10.	<i>Maricha</i>	<i>Phala</i>	<i>Piper nigrum</i> Linn.
11.	<i>Pippali</i>	<i>Phala</i>	<i>Piper longum</i> Linn.
12.	<i>Haridra</i>	<i>Kanda</i>	<i>Curcuma longa</i> Linn.
13.	<i>Daruharidra</i>	<i>Kanda</i>	<i>Berberis aristata</i> DC.

Bhavana (tritulating) with Aja mutra (Goat's Urine)

**TABLE NO. 3 RASA PANCHAKA (PROPERTIES) OF INDIVIDUAL INGREDIENTS OF BILWADI AGADA(21)**

No	Name of the drug	Rasa (taste)	Guna	Virya	Vipak
1.	<i>Bilwa</i>	<i>Tikta , kashya</i>	<i>Laghu,ruksha</i>	<i>Ushna</i>	<i>Katu</i>
2.	<i>Surasa</i>	<i>Tikta , katu</i>	<i>Laghu,ruksha</i>	<i>Ushna</i>	<i>Katu</i>
3.	<i>Karanja</i>	<i>Tikta , katu , kashya</i>	<i>Laghu , Tikshna</i>	<i>Ushna</i>	<i>Katu</i>
4.	<i>Natam</i>	<i>Tikta , katu , kashya</i>	<i>Laghu , snigdha</i>	<i>Ushna</i>	<i>Katu</i>
5.	<i>surahwam</i>	<i>Tikta</i>	<i>Laghu , snigdha</i>	<i>ushna</i>	<i>Katu</i>
6.	<i>haritaki</i>	<i>Kashaya pradhana ,lavana Varjita, Pan-charasa</i>	<i>Laghu,ruksha</i>	<i>Ushna</i>	<i>madhura</i>
7.	<i>vibhitaki</i>	<i>kashaya</i>	<i>Laghu,ruksha</i>	<i>Ushna</i>	<i>madhura</i>
8.	<i>amalaki</i>	<i>,lavana Varjita, Pan-charasa</i>	<i>Guru ,ruksha ,sheeta</i>	<i>Sheeta</i>	<i>madhura</i>
9.	<i>Shunthi</i>	<i>Katu</i>	<i>Laghu , snigdha</i>	<i>ushna</i>	<i>Madhura</i>
10.	<i>maricha</i>	<i>Katu</i>	<i>Laghu , Tikshna</i>	<i>ushna</i>	<i>Katu</i>
11.	<i>pippali</i>	<i>Katu</i>	<i>Laghu,snigdha , Tik-shna</i>	<i>Anushnasheeta</i>	<i>Madhura</i>
12.	<i>Haridra</i>	<i>Tikta , katu</i>	<i>Laghu,ruksha</i>	<i>ushna</i>	<i>Katu</i>
13.	<i>daru haridra</i>	<i>Tikta , kashya</i>	<i>Laghu,ruksha</i>	<i>Ushna</i>	<i>Katu</i>

**TABLE NO. 4: SHOWING SYMPTOMS OF SCORPION POISONING AND THE ACTION OF BILWADI AGADA AND RESPONSIBLE INGREDIENTS:-**

*Bilwadi Agada* may function as an anti-inflammatory by inhibiting the generation of prostaglandins. It could inhibit CYP450, which is crucial in the creation of the poisonous metabolite (NAPQI). It could be done by boosting Glutathione (GSH) production. Hepatocyte regeneration and production may be aided by it.[22] .

Symptom	Karma	Bilwadi gutika
Local pain & Pain all over the body	Shoolaghna	Bilwa, Amalaki, Trikatu
Inflammation & Edema	Shothaghna	Bilwa, Karanja, Surahva, Shunti, Haridradavaya, Basthamootra
Edema of tongue	Shothaghna	Bilwa, Karanja, Surahva, Shunti, Haridradavaya, Basthamootra
Stiffness of body	Ushna guna	All drugs except amalaka
Fever	Jwaraghna	Surahva, Haritaki, Amalaki, Shunti, Pippali.
Haemorrhage	Sthambana	Karanja, Haritaki, Amalaki
Indriya vikruti	Indriya prasadana	Nata, Surahva, Haritaki, Daruharidra,
Excessive sweating	Kapha, Medohara	Bibhitaki & Mootra Sanjnaprabhodana,
Moorecha	Sanjnaprabhodana, Hrudya, Indriyaprasadna	Surasa, Haritaki, Amalaki, Trikatu, Mootra
Trishna	Trishnahara	Bibhitaki, Amalaki, Pippali,
Necrosis (Visheerya mana mamsa)	Vrana hara, Ropaka,	Bilwa, Surasa, Karanja, Surahva, Triphala, Haridradvaya,

**CONCLUSION**

According to the traditional references in Ayurveda, numerous *Vishaghana Yogas* and *Ekal Dravyas* can be utilised to successfully cure poisoning brought on by a scorpion bite. As seen in Tables 1, 2, and 4, herbal medicines offer a great deal of potential to cure a wide range of conditions, including scorpion bites. Most of the medications in *Bilwadi agada* are *Tikta* (bitter), *Katu* (pungent), and *Rasa pradhan*, which serve as *Kapha-vatahara* (calms the *Kapha* and *Vata*). The majority of medications are *Katu Vipaka*, which means they have a high strength and may function just as rapidly as an antidote or *Visha*. The remedy has anti-inflammatory, analgesic, antioxidant, and antibacterial properties in addition to being beneficial for illnesses including gastroenteritis and allergy problems. We can be used to cure scorpion stings, according to *Rasa, Guna, Veerya, Vipaka, and Prabhava* of *Rakt Apamarga Moola*. When used with *Madhu* or any other

concoctions, scorpion bite usage may produce noticeable outcomes.

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**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: Shipra Yadav & Ritu Kapoor: A review of bilwadi agada and apamarga moola on vrischchik damsha chikitsa, an ayurvedic management for scorpion bite. International Ayurvedic Medical Journal {online} 2023 {cited September 2023} Available from: [http://www.iamj.in/posts/images/upload/2267\\_2272.pdf](http://www.iamj.in/posts/images/upload/2267_2272.pdf)