



“ANCIENT DRUG REVIEW ON SHALIPARNI [DESMODIUM GANGETICUM (L.)DC]”

DR. SHRIGIRE SAYARAM¹ DR .RAVI V PATIL² ,DR .RAJENDRA DHATE³

**1.PROFESSOR & HOD,DEPT OF DRAVYAGUNADHANWANTARI AYURVED MEDICAL
COLLEGE & HOSPITAL,UDGIR, 413517**

**2.PROFESSOR ,DEPT OF SHALAKYATANTRA DHANWANTARI AYURVED MEDICAL
COLLEGE & HOSPITAL,UDGIR, 413517**

**3. PROFESSOR & HOD DEPT OF SHALAKYATANTRA DHANWANTARI AYURVED
MEDICAL COLLEGE & HOSPITAL, UDGIR, 413517**

ABSTRACT-

The medicinal plant Shaliparni or Sarivan (*Desmodium gangeticum*) is extensively used in Ayurveda. It is one of the ten roots of famous anti-inflammatory formulation of Ayurveda, Dashmula. Dashmula is used since time immemorial to treat swelling inside the body, and intake of Dashmula balances tridosha and digests the ama, and gives relief in pain. For the medicinal use purpose whole plant is used. Due to its madhura – tikta rasa and madhuravipaka it alleviates vitiated vaat and rakta dusthi, so it is indicated efficiently in vaatrakta chikitsa. In Charaka samhita it is classified in sothhara mahakashya and in Sushruta it is classified in Vidarigandhadi gana and laghupanchamula. *Desmodidium gangeticum* has many ethnomedical uses. In various nighantus, it is also indicated in Atisara, Shosha, Shopha, Jwara, Visha, Krimi rogas. Shaliparni possesses aphrodisiac, cardiogenic, nervine tonic, febrifuge, haemostatic, and anti-helminthic properties. Shaliparni also has anti-inflammatory, analgesic, antibacterial, anticholinesterase, smooth muscle relaxant, antipyretic, CNS stimulant and depressor, and bronchial muscle relaxant properties.

KEYWORDS- *shaliparni, classification propagation, raspanchak composition, karma ,uses*

INTRODUCTION-

The *Samhitas* on *Ayurveda* has divided the subject in eight different parts called “*Ashtangas*.”⁽¹⁾ There is no any *Anga* will be completed without *Dravyaguna*. *Ayurved* is also a science, which deals with the *Guna* and *Karma* of *Dravya* so *Dravyaguna* is having more significance in therapeutics/*Ayurvedic* treatment. In *Chikitsa Chatushpada* *Dravya* is provided important place in *Chikitsa*. *Rajnighantukar* “*Narhari Pandit*” consider *Dravyaguna* as first among the eight branches of *Ayurveda*.

In recent era, there has been great demand for plant derived products in developed countries.⁽²⁾ Approximately 80% of world population still relay a use the herbal drugs, for treatment of various diseases. The increasing popularity of herbal products, both food and feed supplements and as phyto-therapeutic drugs.⁽³⁾

Dashmoola is one of the highly prescribed and consuming medicines in *Ayurveda*. *Shaliparni*[*Desmodium gangeticum (L.)DC*] is commonly known as *Shaliparni* or trick tree. It is one of the important member of *Dashmoola* and constituent of *Dashmoolarishta* and *Dashmoola Kwath*. *Charak* has emphasized. *Shaliparni* ingredient under *Shothahar Dashemani*(group of ten herbs). In comparison to demand there is no or less cultivation of *Shaliparni*[*Desmodium gangeticum (L.)DC*]and its unrestricted exploitation from jungles by industries are continuous. This causing the plant endangered.⁽⁴⁾ *Shaliparni* [*Desmodium gangeticum(L.) DC*] is an endangered ethno-medicinal plant belongs to Fabaceae family.⁽⁵⁾ The *Shaliparni* [*Desmodium gangeticum(L.)DC*] is one among the *Dashmoola* and is an important content of *Ayurvedic Kalpas* like *Chyavanprashavleha*, *Rasnadikwath*, *Dashmoolarishta*, *Brahmarasayan*.^(6,7)

The main chemical components of *Shaliparni*[*Desmodium gangeticum (L.)DC*] are Desmodin and Gangentin responsible for its properties.⁽⁸⁾ *Shaliparni*[*Desmodium gangeticum(L.)DC*] contains minerals like calcium, Magnesium, Phosphorus, and Vitamin A and C. The root is having anti-inflammatory, analgesic, anti-bacterial, anti-fungal and CNS depressant properties.⁽⁹⁾

Because of the high medicinal value of *Shaliparni*[*Desmodium gangeticum(L.)DC*], the National Medicinal Plant Board of India identified *Shaliparni*[*Desmodium gangeticum (L.)DC*] plant as “Medicinal plant species in high trade sourced from tropical forests” and also included in the list of vulnerable group of species that needs immediate management focus.⁽¹⁰⁾

❖ CLASSIFICATION ACCORDING TO SAMHITA⁽¹¹⁻¹⁶⁾.❖ Classification from *Nighantu*¹⁷

Sr.no	Samhita	Classification
1	<i>Charak Samhita</i>	1.Shothahara Dravya ⁽¹¹⁾ 2.Madhur Skandha ⁽¹²⁾ 3.Angamarda Prashaman 4.Balya,Snehopaga 5.Dipan,Pachan, Grahi, Vaat-Kaphaghna Gana
2	<i>Sushruta Samhita</i>	1.Laghu Panchmoola ⁽¹³⁾ 2.Vidarigandhadi Gana ⁽¹⁴⁾
3	<i>Ashtang Hrudaya</i>	1.Madhur Gana ⁽¹⁵⁾ 2.Laghu Panchmoola ⁽¹⁶⁾ 3.Varunadi

Sr. No.	Name of <i>Nighantu</i>	Classified Under <i>Varga</i>
1	<i>Dhanvantari Nighantu</i>	<i>Guduchyadi Varga</i>
2	<i>Shodhala Nighant</i>	<i>Guduchyadi Varga</i>
3	<i>Madanpala Nighantu</i>	<i>Abhayadi Varga</i>
4	<i>Kaiyadeva Nighantu</i>	<i>Aushadhi Varga</i>
5	<i>Raja Nighantu</i>	<i>ShatavhadiVarga</i>
6	<i>Bhavaprakasha Nighantu</i>	<i>Guduchyadi Varga</i>
7	<i>Shaligrama Nighant</i>	<i>Guduchyadi Varga</i>
8	<i>Priya Nighantu</i>	<i>HaritkyadiVarga</i>

❖ Taxonomical Classification Of *Shaliparni*:⁽¹⁸⁾

- Kingdom : Plantae
- (Unranked): Angiosperms
- (Unranked): Eudicots
- (Unranked): Rosids
- Order : Fabales

- Family : Fabaceae
- Subfamily : Faboideae
- Tribe : Desmodieae
- Sub-tribe : Desmodiinae
- Genus : *Desmodium*
- Species : *Desmodium gangeticum*

❖ **Vernacular Names**

Languages	Names
Hindi	Salpan, Salpani, Salun, Salwan
Assam	Biyanisaawata
Bengal	Salpani
Bombay	Daye, Salpani, Salwan
Canarese	Murelehone
Gujrat	Salovana
English	Tricktrefoil
Kannada	Murelchonne
Malayalum	Moovila
Porebunder	Ekapanipanddhiyo
Punjab	Shalpurni
Santal	Tandibhedijanetet
Tamil	Pulladi
Telugu	Gitanaram, Kolakuporna, Nallanelapariki, Peddantrinta
Urdu	Shalwan
Uriya	Salopornni

SWARUPA [MORPHOLOGY]



Modern Morphology

Origin and Distribution

Common species on lower hills and plains throughout India, ascending to 1500m in the Himalayas. It is frequently found in outer Himalaya, Punjab, in forest and waste land of Bihar and Orissa , Palghat in Madhya Pradesh, in open and Westland forests of Rajasthan , forest from Gujarat to Godavari, W. Ghats , from South Canara to Travancore and Madras.

Propagation and Cultivation

It is propagated by seeds and prefers light soil. Seed dormancy may be overcome by pre-sowing treatment of seeds with H_2SO_4 for 15 minutes⁽¹⁾.

Parts used-Root, whole plant.

Family- Fabaceae⁽¹⁹⁾

Herbs, shrubs or trees. Leaves alternate, digitate or pinnate, rarely 1-foliolate or simple, often terminating in tendrils. Flowers irregular (rarely sub regular), hermaphrodite. Calyx gamosepalous, 5-toothed or one-lobed or the upper lobes more or less connate, or bilabiate, the 2 upper lobes opposed to the 3 lower, rarely closed in bud and spathaceous. Corolla papilionaceous; petals 5, free or adnate to the staminal tube, the posterior (standard) outside in bud, the 2 lateral wing intermediate, the 2 lower inside and usually cohering by their lower margins (keel). Stamens 10, amadelphous, Monadelphous or free. Ovary free. Embryo with an inflexed radical. Cotyledon accumbent.

Desmodium

Herbs or shrubs, rarely small trees. Leaves pinnate and rarely 5-foliolate; stipules free or united into a single leaflet one; stipellate. Flowers usually in dense racemes, sometimes in axillary umbels or fascicles. Calyx-tube short, campanulate or turbinate, the 2 upper teeth more or less connate, the 3 lower acute or acuminate. Corolla exserted; standard obovate or orbicular; wings more or less adhering to the keel; keel-petals incurved, sometimes spurred towards the claw.

Stamens usually diadelphous, 9 and 1, sometimes monadelphous, sometimes with the vexillary filament free in the upper half. Ovary sessile or stalked, 2-many-ovuled; style incurved. Pod of several 1-seeded usually indehiscent joints, more rarely dehiscent along one suture – Species 170 – Tropics and subtropics.

The genus exhibits tonic, diuretics, febrifuge, and anticatarrhal properties. The roots are often mucilaginous, emollients, laxative, and ant dysenteric.

Constituents of *Desmodium gangeticum*-

The roots contain several alkaloids, flavonoids, pterocarpanoids— gangetin (gives anti-inflammatory activity), gangetinin, and desmodin. The aerial parts contain indole-3-alkylamines, and their derivatives.

Shaliparni roots are bitter alterative tonic with Anti-inflammatory, Anticatarrhal, fever reducing, carminative, digestive, laxative, emmenagogue, and diuretic properties. The roots are used traditionally for treating inflammatory conditions, chronic fever, cough, diarrhoea, dysentery, biliousness, vomiting, piles, bronchitis, asthma, intestinal parasites, arthritis, rheumatism, and post-delivery disorders. Acharya Charak prescribed the decoction (Kadha or Kwath) of leaves to treat Chardi (emesis), Atisar (diarrhea), fluid retention, jwar, and constipation.

Ayurvedic Properties, and Action of Shaliparni

The root of the plant is astringent, bitter, and sweet in taste (Rasa), sweet after digestion (Vipaka), and is hot in effect (Virya).

It is an Ushna Virya herb. Ushna Virya or hot potency herb, subdues Vata (Wind), and Kapha (Mucus), and increases Pitta (Bile). It has the property of digestion, vomiting, and purging, and gives a feeling of lightness.

1. Rasa (taste on the tongue): Madhura (Sweet), Tikta (Bitter)
2. Guna (Pharmacological Action): Guru (Heavy)
3. Virya (Action): Ushna (Heating)
4. Vipaka (transformed state after digestion): Madhura (Sweet)

Karma (Action with meaning)

1. Balya – increases strength
2. Tridosahara – corrects the imbalance of Vatta, Pitta, and Kapha

3. Vrishya – increases the quantity of semen
4. Vishahara – destroyer of poison
5. Angamarda Prashamana – useful in treating pain in the body
6. Sukha Prasava kara – Oxytocics, induce labor
7. Sarvadoshahara – kills all diseases
8. Vatadoshajit – balances Vata
9. Rasayana – supports Rasa or plasma
10. Krimighna – destroys worms

Important Ayurvedic Formulations Based on Shalaparni

Dashmula (Group of Ten Drugs: Bilwa, Agnimantha, Shyonaka, Gambhari, Patala, Saliparni, Prishniparni, Brihati, Kantakari, Gokshura), and All Dashmula containing medicines such as Dashamularishta, Dashmula kwath, Dasamula taila, etc.

1. Amritarishta
2. Amritaprasha Ghrita
3. Dhanvantara Taila
4. Indukanta Ghrita
5. Mahavishagarbha Taila
6. Mahanarayana Taila
7. Narayana Taila
8. Rasnadi Kvatha Churna

Important Medicinal Properties

Shalparni or *Desmodium gangeticum* is rich in medicinal properties. The understanding of these properties will help us to better utilize this herb.

- **Antioxidant:** neutralize the oxidant effect of free radicals, and other substances.
- **Anti-inflammatory:** reducing inflammation by acting on body mechanisms.
- **Anti-nociceptive:** inhibits nociception, the sensation of pain.
- **Anti-rheumatic:** alleviating or preventing rheumatism.
- **Anti-osteoarthritic:** Against Osteoarthritis.
- **Astringent:** causing the contraction of the body tissues.
- **Antipyretic / antifebrile / febrifuge:** Effective against fever.

- **Anthelmintic:** anti-parasitic, expel parasitic worms (helminths), and other internal parasites from the body.
- **Diuretic:** Promoting excretion of urine/agent that increases the amount of urine excreted.
- **Immunostimulant:** stimulate the immune system by inducing activation or increasing activity of any of its components.
- **Laxative:** tending to stimulate or facilitate the evacuation of the bowels.
- **Nervine tonic:** Anti-stress

Tranquilizer: reduce tension or anxiety.

The Dosage of *Desmodium gangeticum*

5-10 grams as powder, and 10-20 grams for preparing decoction.

Medicinal Uses Of Shalaparni (*Desmodium Gangeticum*)

- Shalaparni is used both internally, and externally. Internally, it is used as a Rasayan, and to cure cough (Kasa), intestinal parasites (Krimi), fever (jwar), gynecological disorders, loose motion (Atisar), piles (Arsh), Swas (Difficulty to breath), muscle wasting (Sosha), vomiting (Vaman), dysuria (Mutrakricchra), Shotha (inflammation), Prameha (metabolic disorders), Vata roga, intermittent fever (Visham jwar), and disorders due to poison (Vishvikar).
- Scientific study done on aqueous decoction (5, 10, and 20 mg/kg) of roots, and aerial parts shows anti-inflammatory activity in-vivo in dose-dependent manner.
- The juice extracted from whole plant shows anti-rheumatic, and anti-osteo arthritic activity via anti-inflammatory activity.
- Diseases of the skin
- Boil Shalaparni leaves (2-3 grams) + Neem leaves + Tulsi leaves (5-7), and black pepper corn (2-3) in water. Filter, and drink 1-2 times a day for a few weeks.
- Diarrhea, and dysentery
- The juice of roots or the decoction of leaves is given, twice/thrice a day to cure diarrhea, and dysentery.
- Eczema
- The leaf paste is applied topically.
- Hair fall
- The leaf paste is mixed with Aloe Vera, and applied topically.

- Lumbago
- The poultice of leaves is applied.
- Mouth ulcer
- Root powder mixed with honey is applied.
- Premature ejaculation
- The roots are chewed.

DISCUSSION-

The cultivation and propagation of medicinal plants is the only way to maintain the demand to supply ratio. In the present era tissue culture is playing an important role in this sense. With the help of tissue culture, threatened medicinal plants can be protected to overcome this problem. Tissue culture is widely used to produce clones of plants. Tissue culture offers certain advantages over traditional methods of propagation. With the help of this technique the exact copies of plant can be produced, particularly good flowers, fruits and quick production of mature plants is also possible. The production of multiples, in absence of seeds or necessary pollinators to produce seeds is possible with the help of tissue culture.

CONCLUSION-

Being one of the important drug in *Ayurvedic* treatment, every aspect of the *Shaliparni*[*Desmodium gangeticum (L.)DC*] is detailed in the texts. *shalparni* is mentioned extensively in the text of *Ayurveda*. Mainly it is used as a component in *dashmool*, however single uses are also stated at some places in the texts like in *Ardhavybhedak*, *baalroga*, *netraroga*, etc. *Acharya Charak* indicates its use with milk in *hrudashool*, particularly in *vataj hrudashoola*²⁰. Due to its *madhura – tikta rasa* and *madhuravipaka* it alleviates vitiated *vaat* and *rakta dusthi*, so it is indicated efficiently in *vaatrakta chikitsa*. In various *nighantus*, it is also indicated in *Atisara*, *Shosha*, *Shopha*, *Jwara*, *Visha*, *Krimi rogas*. Though root is the commonly used part, leaves and the whole plant are also used in some formulations. Various tribal communities of India use it to treat whooping cough, bone fractures, as an antidote of scorpion sting, and to cure snake bites. *Shalparni* possesses *aphrodisiac*, *cardiotonic*, *nervine tonic*, *febrifuge*, *haemostatic*, and *anti-helminthic* properties. It has also been found useful in *flatulence*, *diarrhoea*, *dysentery*, *neuro-muscular disorder*, *tuberculosis*, *seminal weakness*, and *gout* conditions. The root of *Shalparni* is a well-known *antipyretic*.

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