

**LITERARY AND THERAPEUTIC REVIEW OF SHARPUNKHA
(TEPHROSA PURPUREA)**

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ABSTRACT

Dravyaguna mainly deals with study of Herbal medicines and when utilized in optimum manner least side effects are seen. Sharpunkha is one such herbal medicine, also called as Saraponkh in Hindi belongs to Fabaceae family and its Botanical name is Tephrosa purpurea, It is an annual herb easily available as wasteland weed. Its chief action is on Pleeha i.e., Spleen so it is also called as Pleehashatru. It is used cardinally in Liver Cirrhosis and Splenomegaly. Tephrosia purpurea (L.) Pers. is named as "Sarwa vranvishapaha" for its property to heal wounds. Traditionally, it is used for impotency, asthma, dyspepsia, hemorrhoids, syphilis gonorrhoea, rheumatism, enlargement of kidney and spleen. It is an important component of herbal preparations like

Tephroli and Yakrifti used to cure liver disorders.

KEYWORDS: Ayurveda, Sharpunkha, Doshagnata, Pliha.

INTRODUCTION^[1,2,17]

Sharpunkha, an annual herb with Botanical name Tephrosa purpurea Pers., hails from Fabaceae family and belongs to Aparajita kula. The leaflets of Tephrosa purpurea looks like fletching of an arrow when it is bisected into two halves by a transverse cut across the leaflet, hence the name Sharpunkha in Sanskrit. Bhavmishra recorded that Sharpunkha is prime drug for management of Pleehodara. Sharpunkha is found throughout India as a roadside weed, along railway tracks, abandoned fields and cleared forest areas upto an elevation of about

1000m. The species is also distributed in Pakistan, Bangladesh, Myanmar, Sri Lanka, Malaysia and other tropics of the world. Sharpunkha is not mentioned in any classical Ganas.

AIM

To study complete literary and therapeutic review of Sharpunkha (*Tephrosia purpurea*).

METHODOLOGY

A systematic methodology was followed to go through the literary data. A thorough study was done of Bruhatrayee and Laghutrayee. Nighantus like Madanpal nighnatu, Kaydev Nighantu, Adarsh Nighantu, Bhavprakash Nighantu, saraswati Nighantu and reference books like Dravyaguna Vijnana books of D.S Lucas, K. Nisteshwar, L.Hegde were referred.

Etymological derivation^[1,14]

“Neeli vriksashyakriti eevakriti yasya saha”

This plant resembles the herb namely Neeli

Basonym^[14]

“Trotnaat madhyatah patram sharpunkh nibham bhavet

Matastatouasou vitayah sharpunkhsamadvyah”

When leaves are broken or torn one piece looks like a point of an arrow and the other end looks like wing of an arrow.

Meaning of scientific name^[13,14]

Tephrosa – Ash grey colour of leaf

Purpurea- Purple colour of flower

Classification^[3]

Scientific name- *Tephrosia purpurea*

Kingdom- Plantae

Subkingdom- Tracheobionta

Super division- Spermatophyta

Division -Magnoliophyta

Class- Magnoliopsida

Subclass- Rosidae

Order- Fabales

Family- Fabaceae

Sub family- Papilionaceae

Subfamily- Fabaceae

Genus- Tephrosa

Species - Purpurea

Synonyms^[1,2]

Names	Meaning
Sharpunkha	When leaves are broken or torn one piece look like a point of an arrow and other looks like wing of an arrow
Pleehasatru	That which is useful in Pleeha roga
Nilivrikshakriti	Appearance is similar to the plant Neeli (<i>Indigoera tinctora</i>)
Pleehari	Useful in Pleeha roga
Banpunkha	On breaking the leaves one end looks like feathered end of an arrow.
Isupunkhika	One end of broken leafs looks like the feathered end of an arrow.
Sayakpunkha	One end of broken leafs looks like the feathered end of an arrow
Isupunkha	One end of broken leafs looks like the feathered end of an arrow
Swetadhya/Sitapunkha/ Swetpunkha/Subhrapunkha/Svetpunkha-	The flowers are white in colour and these synonyms refer to the white variety of sarapunkha

Identification character^[14]

- Habit-** Herbaceous perennial plant grows upto 60cm
- Root** – Taproot and Branched
- Branching** – Spreading, Glabrous
- Leaf-** Compound, imparipinnate; leaflet – 11-21in number. Obtuse or retuse, glabrous above, silky below.
- Inflorescence-** Leaf opposed, raceme
- Flowers:** Papilanaceous, purple in colour (T. Purpurea)
- Fruits-pods, 3-4.5cm long, linear, slightly curved. Seeds are 5-6 in one fruit.

Phenology^[13]

- Flowering during rainy season : June-August
- Fruiting occurs in cold: October -February

Table 1: Showing the synonyms according to the various classical texts.

Synonyms	Dha .ni.	Ma.Ni.	Ka.Ni	Ra.Ni	Bha,Ni	Anand kand
Kalasaka	-	+	-	-	-	-
Plihari	-	+	-	-	-	-
Kalaka	-	+	-	-	-	-
Kanda punkha	-	-	-	+	-	-
Bana punkha	-	-	-	+	-	-
Isu punkha	-	-	-	+	-	-
Sarabhidha	-	-	-	+	-	-
Punkha	-	-	-	+	-	-
svetadhya	-	-	-	+	-	-
Sitasyaka	-	-	-	+	-	-
Sitapunkha	-	-	-	+	-	-
Swetapunkha	-	-	-	+	-	-
Subrapunkha	-	-	-	+	-	-
Plihasatru	-	-	-	-	+	-
Nilivriksakriti	-	-	-	-	+	-

Table 2: Showing the vernacular names according to the various classical texts.^[1,12,13,14]

Hindi	Sarphonk
English	Wild indigo. Fish Poison
Kannada	Koggili, Vajraneeli
Gujarathi	Ghodakan, Jhila, sarponkha
Marathi	Sirapankha, Unhali
Telugu	Vempali, Neelavampalai
Tamil	Kolingi, paapali
Malyalam	Kozhengil
Hawaiian	Akuhu, Auhola hola
Rajasthani	Masa

Table 3: Showing the Gana/Varg according to the various classical texts.^[1,7,8,9,11,13,14]

Charak Samhitas	Not mentioned in Varga
Sushrut samhita	Not mentioned in any Gana
Bhaav Prakash Nighantu	Guduchyadi varga
Raj Nighantu	Shatahvadi varga
Sarswati nighantu	Kshup varga
Kaidev Nighantu	-
Shaaligram Nighantu	-
Madanpal Nighantu	Abhyadi varga
Shodhal Nighantu	-
Dhanvantri Nighantu	-

RASA							
RASA	B.N.	Ma.Ni.	Ra.Ni	Saraswati Ni.	P.V	K.NI.	So.N
TIKTA	+	+	-	-	+	-	-
KASHAY	+	+	-	-	+	-	-

Table 4: Showing the rasa panchaka according to the various classical texts. ^[1,7,8,9,10,11,13]

GUNA								
GUNA	B.N	MA.N	RA.N.	SARASWATI NI.	SHA.N.	SHO NI..	K.N	P.V.
LAGHU	+ _	+	-	-	-	+	-	+
RUKSHA	-	-	-	-	-	+	-	+
TIKSHNA	-	-	-	-	-	+	-	+

VIPAKA								
VIPAKA	B.N	Ma.N	RA.N.	SARASWATI ni.	P.V.	K.Ni	Sha.ni	So Ni
KATU	+	-	+	-	+	-	+	-

VEERYA								
VEERYA	B.N	Ma.N	Ra.N.	Saraswati ni.	P.V	K.Ni	Sha.ni	So.Ni
USHNA	+	-	+	-	+	-	+	-

Table 5: Showing the doshkarma according to the various classical texts. ^[1,7,8,9,10,12,13,14]

Doshkarma	Bha.N	Ma.ni	Ra.ni	Saraswati ni.	P.V	SHA.N.	K.Ni
kaphashamak	+	-	-	-	-	-	-
vatashamak	+	-	+	-	+	-	-

Table 6: Showing the Karmas (pharmacological actions) according to the various classical texts. ^[1,7,8,9,10,12,13,14]

Karmas	Sho .ni	Ma.Ni	Bha.Ni	Sa.Ni	P.V
Vishaghna	-	+	+	-	-
Vranropan	-	+	+	-	-
Dantya	-	-	-	-	-
Shukrastambhan	-	-	-	-	-
Jwarhara	-	+	-	-	-
Krumivinash	-	-	+	-	-
Chakshushya	+	-	-	-	-

Chemical composition ^[13,14]

Roots:- Iso tephrosin, Rateone, Tephrosin deguelm, Quercetin. Beta-sitosterol, Lanceolatin A and B, Pongamol, Karngine, and Kangone.

Leaves:-2.5% Rutin, Calcium, Magnesium, Potassium, Phosphorous, Sodium and Nitrogen

Among the known active compounds of *T. purpurea*, tephrostachin is responsible for antiplasmodial activity.

Tephrosin, pongaglabol, and semiglabin exerts antiulcer activity Quercetin, rutin, β -sitosterol, and lupeol are mainly responsible for its anti-inflammatory and anti-cancer properties.

Therapeutic uses

1. Pleehodara (Splenomegaly)-In case of Pleeha paste of roots of sharpunkha (*T. Purpurea*) should be consumed with buttermilk.^[7]
2. Vrana-Juice obtained by crushing the root of Sharpunkha should be applied to Vrana, Administration of Sharpunkha root rubbed in water along with honey ensures wound healing.^[7]
3. Mudha garbha-Instillation of juice of Sharpunkha prevents mudhagarbha.^[7]
4. Premature Ejaculation-By holding root of Shweta sarpunkha or applying its juice externally on the penis prevents premature ejaculation.^[1]
5. Kasa-Inhalation of smoke of Sharpunkha moola relieves kasa.^[1]
6. Sharpunkha roots when placed in hairdo, the women delivers easily.^[7]
7. Application of paste of Sharpunkha roots around the abdominal region leads to deworming.^[7]
8. Crushed roots of Sharpunkha when placed between aching tooth relieves pain.^[13]
9. In Yakrut and Pleeha roga the root is given with Haritaki churna.^[14]

Therapeutic indications^[13]

Yakruthara, Pleehaghna, Gulma, Vranropak, Vishapaha, Kasaghna, Asrajit, Shwashara, Jwarhara, Chakshushya, Damshtrajit, Shastrasrajit.

Part used^[14]

1. Roots
2. Panchanga (whole plant)

Posology^[14]

Moola churna-3-5gm

Kshara (Alkali powder preparation)-1-2gms

Swarasa- 2-5ml

Kwatha- 50-100ml

Formulation^[14]

1. Punkhadi taila in dantaroga
2. Shadbindu taila in Kustha
3. Grahanihara Kashaya in Grahani, Gulma.

Latest researches^[15]

1. Acetylcholinesterase inhibitory action reported from this plant aids its utilization for the development of drugs for Alzheimer's and dementia neurological disorders.
2. Effects of Flavonoids From *Martynia annua* and *Tephrosia purpurea* on Cutaneous Wound Healing. The findings suggested 5% w/w ointment of TPF-A and MAF-C fractions were more effective than isolated flavonoids in wound healing which may be due to synergistic interactions between the flavonoids and other constituents.

Pharmacological activity

Pharmacological activities of different parts of the plant reported include anti-inflammatory, antiulcer, antimicrobial, antioxidant, antiallergic, antidiabetic, hepatoprotective, antitumor and insect repellent activity

Controversy^[8,14,15]

Two kinds of 'sharpunkha', the 'Shvet' (white) and 'Rakta' (red) are described in some of the Ayurvedic texts and the former is reported therapeutically more effective. Some of the Ayurvedic physicians use *T. villosa* Pers. as 'Shvet sharpunkha' due to its persistently villous silky white parts. While others have advocated white colour of flowers as main feature for distinguishing "Shvet sharpunkha". A white flowered form of *Tephrosia purpurea* which is found in association with red or purple flowered ones is reported as *T. purpurea* (Linn.) Pers. Form albiflora S. R. Paul et R. C. Gupta. *Tephrosia villosa* is rasayan in activity. Shweta variety is considered different by different authors. D.G Lucas accords *Tephrosia villosa*, whereas Dr. Sanjeev Lale considers *Tephrosia candida* as white variety. Priya vrat Sharma mentions two varieties *T. candida* and *T. procumbens* as Shwet sharpunkha.

DISCUSSION

Sharpunkha being Tikta (Bitter) in rasa improves taste in the person, detoxifies, kills germs and worms, relieves unconsciousness, strengthens and stabilizes body, digestive and

carminative cleanses and detoxifies body. Its Kashaya (Astringent) rasa pacifies kapha and pitta in body, and is instrumental in wound healing, dries up moisture (due to its air and solid elements), useful in bleeding disorder. Its Katu vipak is ruksha and laghu in guna which thus enhances vata and subsides kapha and kleda present in wounds and oral cavity thus facilitating wound healing and relieves dental caries. The veerya of sharpunkha being Ushna is chiefly the cause of action like kasaghna, shwashara, jwarhara brought by dravya. The Prabhava of it is Pleehaghna as enumerated by priyavrat sharma.

CONCLUSION

Tephrosa purpurea, Sharpunkha an annual herbaceous herb found mainly during rainy season between June to August is used mainly in splenomegaly and liver disorders due to its Tikta Kashay rasa and Katu Vipaak. Due to its Tikta rasa it is useful in kapha pittaj jwara. Its roots are effective in Yakritodar and Pleehodar. The paste of its roots with buttermilk treats chronic splenic disorders. Its Panchang churna with lukewarm water is used in jaundice. Also its roots are used in Snake bite is indicative of its detoxifying activity. The active ingredients in it bring about anti inflammatory, antidiabetic, anticancerous activity, supports liver functions, corrects metabolism thus corrects the Agni. In conclusion, Sharpunkha ia a multidimensional drug working on various system and establishes health in all system.

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