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REVIEW ARTICLE OPEN ACCESS

PHARMACOLOGICAL AND PHARMACOGNOSTICAL BENCHMARKS OF SHIRISHA (ALBIZIA LEBBECK BENTH.) IN AYURVEDA NIGHANTUS

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ABSTRACT:

Scientifical point of view, Pharmacology, a branch of Pharmacy is established in early 19th century whereas Pharmacognosy is another branch is in 19th and early 20th century [1,2]. However, the traces of the branch in the form of Traditional medicines were far before reported in Ayurveda Sciences. An Ayurveda system deals with herbs and their therapeutic applications by its own methodology and ideology. Among many herbs reported in Ayurveda, Shirish (*Albizia lebbeck* Benth.) is one of the most common herbs was routine in practices. *Shirisha* is botanically known as *Albizia lebbeck* Benth., which has many therapeutic properties. *Shirisha* is an economically important plant for medicinal uses. In Ayurvedic literature, *Shirisha* is considered as *Vishaghna Dravya* which means an antidote against all type of poisons. There are so many therapeutic uses mentioned in different Ayurvedic texts. Since the Vedic period, *Shirisha* has been described in so many places with the name *Shirisha* and its various synonyms. Variation in descriptions of Shirisha are observed in different Nighantu. This review highlights the detail description about *Shirisha* given in *Nighantu* and also description of included *Gana* or *Skandha* from *Brihattrayi*.

Keyword: *Albizia lebbeck* Benth., *Shirisha*, *Nighantu*, Ayurveda

INTRODUCTION:

The framework to any branch of science comes from its wide utility and social acceptances. However, it starts with observations, assumptions, experiments and confirmations. Ayurveda is a practical branch specially deals with relieving various ailments in human. To relieve the pain of any disease, the first tool used was herbs. However, its practical applications, various tools were started to gather which was wholesome in nature. In those periods of establishing Ayurveda, such tools were created. For Pharmacology, the *Doshaghnata*, *Rogaghnata* and *Karma* were framed as benchmark of therapeutic application. Similarly, to assess the properties of the herb, its identifications, and standardization the parameters like *Rasa*, *Guna*, *Veerya*, *Vipaka*, *Paryaya* (Synonyms), etc were created as a benchmark. It is to be said that these are the earliest benchmark for Both the branches and hence are discussed herewith.

A large number of herbal medicines have been described in Ayurveda and other alternative medicines, which popularity and use to improve general health of ordinary people. These are very valuable for humans as having more therapeutic efficacy. Many herbal medicines either alone or in combination used in various medicines for the treatment of various diseases. *Albizia Lebbeck* is one of those which are commonly used in Ayurveda system of medicine. Detail description about the treatment of disease is found in various *Samhita* and *Chikitsagrantha* of Ayurveda, but about detail description of any plant one need to refer *Nighantu*. In *Nighantu* each drug is described through its various synonyms and *Rasa*, *Guna*, *Veerya*, *Vipaka*, *Karma*, *Rogaghnta* etc. In the absence of plant classification and nomenclature, synonyms were the only means used by ancient physicians to identify them. This system of naming things has changed over time. Most plants were named based on their historical context. Since very few names were used interchangeably, the names remained unchallenged even during the *Samhita* period. During the *Nighantu* period, the number of synonyms increased significantly, which led to a revolutionary development in the field of synonyms. In different Nighantu description of drug is found with some modifications or changes. There is need to review each drug from each Nighantu and compile the detail description at one place for the sake of knowledge. There are so many synonyms found in different books and difference in *Rasa, Guna, Veerya, Vipaka* is observed.

Shirisha is taken as a, *Albizia lebbeck* Benth. in modern science. The word albizzia has come

from Albizzia an Italian naturalist of the eighteenth century *Albizia lebbeck* is an exotic species whose invasion is from Australia to India. The name of genus is derived from Filippo del Albizzi, a native of Florence, Italy. In 1749 introduction of *A.* 'laebach' is the species name for this plant which is derived from the Arabic name. When the wind blows and agitat the tree, the pods and enclosed seeds are said to produce the voice like an incessant rattle similar to women's chatter, that's why 'woman's tongue' is the name[3]. *Albizia Lebbeck* is large deciduous tree with grayish bark; Leaves are evenly 2-pinnate and the leaflets are in 5-9 pairs, 2.5-5.0 cm long, broadly oblong and pale green, unequal sided, very obtuse glabrous above and reticulately veined beneath. Flowers are stalked, fragrant in globose umbellate heads 2-3.8cm diameter. Peduncles are 3.8-7.5cm long , solitary or 2-4 together from the axils of the upper leaves. Pod is 10-30 cm long and 2.5-5.0 cm broad, flat straw coloured and contains 4-12 pale brown seeds[4]. The plant is measured the most potent and every part of the plant is prescribed for the treatment of bites and stings from different venomous animals.

MATERIALS AND METHODS:

Various Ayurvedic texts like 21 Nighantu have been reviewed in this study. Apart from them, articles, web pages, online books etc. were also visited. All information specific to *Shirisha* has been collected, classified and organized according to the findings and results below.

OBSERVATIONS AND RESULTS:

NIGHANTU KALA:

Nighantu is a Sanskrit term for a traditional collection of words, often containing short commentaries organized into subject groups. Nighantu can be defined as a dictionary containing groups of synonyms, names of medicines, animals, minerals or anything that can be administered to the human body as food or medicine. It sheds light on the understanding of plants that can be used as medicines to treat diseases.

Table 1- References of *Shirisha* observed in various Nighantu are given as below:

No.	*Nighantu*	Details	Abbreviation
1.	*Paryayaratnamala*[5] (9th century)	-	P.R.
2.	*Madanadi Nighantu*[6] (10th Century)	*Shirisha* is described in *Chaturtha Gana*.	Md.Ni.
3.	*Dhanvantari Nighantu*[7] (10th Century AD)	*Shirisha* is described in *Aamradi Pancham Varga*.	Dha.Ni.
4.	*Shodhala Nighantu*[8] (12th Century AD)	*Shirisha* is described in *Aamradi Varga.*	Sho.Ni.

5.	*Nighantushesha*[9] (12th Century)	*Shirisha* is described in Vrikshakanda.	Ni.S.
6.	*Abhidhana Ratnamala*[10] (12th -13th Century AD)	*Shirisha* is described in *Kashaya Skandha*.	A.R.
7.	*Hridaydipaka Nighantu*[11] (13th Century AD)	*Shirisha* is placed in *Ekapada Varga*..	H.Ni.
8.	*Madhav's Dravyaguna*[12] (13th Century)	Mentioned *Guna-Karma* of *Shirisha* in *Vividha Aushadhi Varga*.	-
9.	*Madanapala Nighantu*[13] 14th Century AD	*Shirisha* is described in *Vatadi Varga*.	M.Ni.
10.	*Kaiyadeva Nighantu*[14] (1425 AD)	*Shirisha* is described in *Aushadhi Varga*.	K.Ni.
11.	*Saraswati Nighantu*[15] (16th century AD)	*Shirisha* is described in *Mahavriksha Varga*.	Sr.Ni.
12.	*Bhavaprakasha Nighantu*[16] (16th Century AD)	*Shirisha* is described in *Vatadi Varga*.	Bha.Ni.
13.	*Rajnighantu "Abhidhana Chudamani"* [17] (17th Century AD)	*Shirisha* is decribed in *Prabhadradi Varga*.	R.Ni.
14.	*Rajvallabha Nighantu* [18] (18th Century)	Described *Shirisha* in *Aushadhaaashraya Parichheda*	-
15.	*Laghu Nighantu*[19] (18th Century)	*Shirisha* is not mentioned	-
16.	*Shaligram Nighantu*[20] (19th Century AD)	*Shirisha* is described in *Vatadi Varga*.	Sha.Ni.
17.	*Abhidhana Manjari*[21] (1952 AD)	*Shirisha* is described in *Velladi Varga*.	-
18.	*Priya Nighantu*[22] (20th Century AD)	*Shirisha* is described in *Haritakyadi Varga*.	P.Ni.
19.	*Nighantu Aadarsha*[23] (20th century)	*Shirisha* is described in *Babbuladi varga*.	Ni.Aa.

Synonyms:

Table 2 - Synonyms of *Shirisha* observed in various *Nighantu*

No.	Synonyms	Sau.Ni.	P. R.	Md.Ni.	Dha. Ni.	Sho. Ni.	Ni.S.	A.R.	H.Ni.	M.Ni.	K. Ni.	Sr. Ni.	Bha.Ni.	R.Ni	Sha.Ni.	P.Ni.	Ni. Aa
1.	*Shirisha*	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
2.	*Mridupushpa*	+	+		+	+	+			+	+	+	+	+	+		+
3.	*Kapitana*				+	+	+			+	+		+	+	+		
4.	*Kalim*										+			+			

5.	*Bhandi*	+		+		+	+	+			+		+		+		
6.	*Bhandil*				+	+	+				+	+	+	+	+		
7.	*Bhandir*						+			+	+		+		+		
8.	*Plavaga*							+		+	+						
9.	*Shankhiniphala*				+	+	+			+	+			+			
10.	*Shukapushpa*	+		+			+				+		+		+		
11.	*Shuktaru*		+		+	+					+		+	+	+		+
12.	*Shyamvarna*				+	+				+	+						
13.	*Shukpriya*			+	+	+	+				+		+		+		
14.	*Shitapushpa*													+			
15.	*Shukvriksha*						+			+							
16.	*Shukreshta*													+			
17.	*Bahirpushpa*													+			
18.	*Vishahanta*			+										+			
19.	*Supushpaka*													+			
20.	*Udanak*													+			
21.	*Lomashapushpaka*													+			
22.	*Kalinga*													+			
23.	*Shyamal*													+			
24.	*Madhupushpa*			+										+			
25.	*Vritpushpa*	+		+								+					
26.	*Vipra*									+							
27.	*Vishaha*						+										
28.	*Karnapura*						+										
29.	*Shyamvalkal*						+										
30.	*Prithushringi*											+					
31.	*Shukrakid*											+					
32.	*Sarashreshtha*											+					
33.	*Shukdrum*							+								+	
34.	*Munishreshtha*											+					
35.	*Vishaghati*					+											
36.	*Pravara*					+											
37.	*Bhanditik*					+											
38.	*Vishanashana*		+														
39.	*Shikhiniphala*	+															
	Total	**6**	**4**	**8**	**8**	**12**	**13**	**4**	**1**	**9**	**13**	**8**	**9**	**17**	**9**	**2**	**2**

***Rasapanchaka*:**

Table 3 - *Rasapanchaka* of *Shirisha* observed in various *Nighantu*

No.	Text	*Rasa*				*Virya*				*Vipaka*	*Prabhava*	*Guna*		*Doshaghnata*	
		Katu	*Tikta*	*Kashaya*	*Madhura*	*Shita*	*Ushna*	*Ishat Ushna*	*Anusna*			*Laghu*	*Ruksha*	*Tridoshahara*	*Kaphapittahara*
1.	Md.Ni.				+	+							+		+
2.	D.Ni		+				+					+		+	
3.	M.Ni.					+									
4.	K.Ni.		+	+	+			+				+			
5.	Bha.Ni.		+	+	+			+				+			
6.	R.Ni.	+				+									
7.	C.Ni.				+	+							+		+
8.	D.G.Vi.														

Rogaghnata:

Table 4 -*Rogaghnata* of *Shirisha* observed in various *Nighantu*

Rogaghnata	Md.Ni.	Dha.Ni.	M.Ni.	K.Ni.	Bha.Ni.	R.Ni.	Sha.Ni.	C.Ni.	API
Vishahara	+		+	+	+	+	+	+	+
Pama						+			
Kushtha		+				+			
Kandu		+				+			
Twakdosha		+				+			+
Visarpa	+		+	+	+		+	+	
Shopha			+	+	+		+		+
Kasa		+		+	+				
Vrana	+			+	+			+	
Shwasa		+							
Varnya		+	+						+
Arsha							+		
Sweda							+		
Twakruk							+		
Total	**3**	**6**	**4**	**5**	**5**	**5**	**6**	**3**	**4**

DISCUSSION:

In this study about 39 synonyms are compiled from 21 *Nighantu*. Historically pharmacognostical description of *Shirisha* is not available in *Ashtanga Nighantu* and *Laghu Nighantu*, but afterward description of synonyms related to morphology of *Shirisha* is found in other *Nighantu*. Maximum number of synonyms are mentioned in *Raja Nighantu* and minimum number of synonyms are mentioned in *Hridayadipaka Nighantu*. As per observation *Shirisha* is the name of drug coined by all *Nighantu*. *Mridupushpa* is the synonym of *Shirisha* most frequently observed in many Nighantu. Which means *Shirisha* is having very soft and delicate flower. *Bhandi*, *Bhandil*, *Kapitana*, *Shukpushpa*, *Shuktaru* and *Shukpriya* are also observed around in 8 Nighantu. These are the synonyms given to *Shirisha* based on its morphology. Also, synonyms as *Vishanashaka*, *Munishreshtha*, *Vishaha* etc. are given based on its action. Pharmacologically From above Table *Shirisha* can be considered as having *Madhura*, *Tikta* and *Kashaya Rasa*. Only *Raja Nighantu* and Ayurvedic Pharmacopoeia of India has given *Katu Rasa* of *Shirisha*. *Sheeta Veerya* of *Shirisha* is given by all *Nighantu* except *Dhanvantari Nighantu* which has been given *Ushna Veerya*, *Kaiydaiv Nighantu* and *Bhavprakash Nighantu* has been given *Ishat Ushna Veerya* of *Shirisha*. *Laghu* and *Ruksha Guna* is given in *Nighantu*. *Vipaka* of *Shirisha* is not mentioned in any of the *Nighantu*, only Ayurvedic Pharmacopoeia of India has given *Katu Vipaka* of Drug. *Shirisha* is described as a *Kaphapittahara* and *Tridoshahara*. *Shirisha* is mainly described as a *Vishahara* in all the *Nighantu* and also in *Chikitsagranth*. *Acharya Charaka* has given "*Shirisho Vishghnanam*" in *Agraya Samgraha* of *Charaka Samhita*[24]. Other than this *Shirisha* is also observed in *Kushtha, Kandu, Visarpa, Kasa, Shwasa, Vrana, Arsha, Shopha* etc. conditions. It is also having *Varnya* and *Swedahara* properties. In *Brihattrayi Shirisha* is described in *Kashaya Skandha* in all text, which denote *Kashaya Rasa* of *Dravya*.

CONCLUSION:

Shirisha (*Albizia lebbeck* Benth) possesses multiple actions and can play a significant role in management of many diseases. Based on review from different 21 *Nighantu* this can be concluded that *Shirisha* is having mainly *Madhura*, *Tikta* and *Kashaya Rasa*, *Ushna Veerya*, *Katu Vipaka* and *Laghu*, *Ruksha* and *Tikshna Guna* and mainly used for *Visha, Kushtha, Kandu, Vrana*, *Kasa*, *Shwasa* etc. conditions.

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