

A COMPREHENSIVE LITERATURE REVIEW ON SHIMSHAPA (DALBERGIA SISSOO)

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ABSTRACT

Dalbergia sissoo popularly known as *Sheesham* and Indian rose wood in English belongs to family *fabaceae*. *Shimshapa* is widely distributed in tropical and subtropical areas and has therapeutic potential against deleterious diseases. Indian rosewood is a high class furniture and cabinet wood widely used through out North India On account of its great strength, elasticity and durability, it is highly valued as constructional and general utility timber and is used for all the purposes for which Indian rosewood is employed in the South. The wood is said to yield an empyreumatic, medicinal oil. Essential oil contains: bisabolone and nerolidol; biochanin A and its 7 – glucoside; 5-4' dihydroxy – 6,7 – dimethoxy isoflavone (7-O-methyl

tectoriginin); 5 – hydroxy – 4 methyl coumarin. Dalbergia sissoo seeds, leaves and fruits are commonly used for medicinal purpose. The various medicinal properties of Dalbergia sissoo such as Anti inflammatory, anti pyretic, analgesic and oestrogen like activity. The wood exhibits alterative, stomachic, anthelmintic, blood purifying, anti leprotic and cooling properties. Its extract was found useful in scalding of urine. Aerial parts showed significant spasmolytic activity. It is used as a single remedy and as content in many medicinal preparations. The current review is to summarize Description, Phytochemistry, Therapeutic Activity, Pharmacological Activity of Dalbergia sissoo mentuion in various ayurvedic as well as modern literature.

KEYWORDS: Dalbergia sissoo Antimicrobial action, Phytochemistry, Pharmacology.

INTRODUCTION

Historical review

A. Vedic kala

The Rigveda, the oldest extent source, deals with a number of drugs which may be called as oldest drug stock of Ayurveda. The number of drugs have gradually increased along with addition of knowledge with advance of time and that is why its number in Atharvaveda and later in Ayurveda is quite larger than in the previous. Perhaps the Vedas are considered to be the oldest scriptures, most important and highest written authority. In Vedas, References regarding Shimshapa can be traced both in Rigveda and Atharvaveda.

According to Dr. Suryakant in his text “Vedic Kosh”, The word “*Shimshapa*” has been used in Rigveda and Atharvaveda for Shisham tree.

In **Rigveda**, Shimshapa is found to be useful to make cart wheel and falls under the category of “*Shanta Vriksha*” (Ru. 3/53/19, Khi. 5/15/2, Kau. Su. 8/16, 34/1, Pa. 7/3/1, Pa. Ga. 4/2/80, 4/3/139,150, 4/1/99, Pa. Ma. 2/1/57, 5/1/2). The drugs which are useful in shanti Karma, are kept under *Shanta Vriksha*.^[1]

In Shaunakiya Shakha of **Atharvaveda** (Shau. 6/129/1, 20/129/7, Pai. 19/32/1-2), the word “*Shanshapa*” had been used, which is Shisham tree. According to Shri Whitani (Translation of Atharvaveda pp.378), Shri Jimar, and Dr. Suryakanta (Vaidic Kosha pp.516) and other experts Dr. V.W. Kramvelkar (The Atharvaveda aur Ayurveda pp.306) has been accepted it as *Dalbergia sissoo* Roxb. The words Brhmavarchasa, Saubhagyakarana, Shatrushatana etc also had been used for it in Atharvaveda. Elsewhere in Shaunakiya Shakha of Atharvaveda, there is another word “*Shyama*” also has been mentioned, which is useful in “*Shvitra*” and “*Palitya*”. Lala Shaligramji (Shaligram Aushadha Shabdasagar pp.188-189) accepts it as Shisham among many meanings has been given of “*Shyama*”.

In **Patanjala Mahabhashya** Shimshapa is given for the example of *Vriksha*. (1/2/45,64; 1/3/9, 2/1/57; 4/3/163, 5/1/2).(VishwaKarma Hiralal et al, 1984)^[2]

Shimshapa also have been listed in Kalpasutra, Paniniya Ashtadhyayi and Vartika.

B. Samhita kala**1. Charaka samhita (3000-2000 BC) - (Sharma P.V, 2003)**

Charaka Samhita, the ancient literature on Indian science, especially deals with the clinical medicines. About 7 references are found in Charaka Samhita regarding the drug Shimshapa.

- i. Cha. Su. 25/49 - Shimshapa is mentioned under 20 Sarasava among the 84 yoni of Asava.
- ii. Cha. Vi. 8/144 - It is mentioned in Kashaya Skandha.
- iii. Cha. Sha. 8/38 - Shimshapa Sara dhuma is useful at the time of labour in Asanna Prasava
- iv. Cha. Chi. 1/2/3 - It is one of ingredient of Amlakayas Brhma Rasayana.
- v. Cha. Chi. 1/2/12 - Shimshapa Svarasa is mentioned as one of Pranakamiya Rasayana
- vi. Cha. Chi. 7/152 - It is one of ingredient of Mahakhadir Ghrita.
- vii. Cha. Ka. 1/8 - In the description of Jangala desha, where trees like Shimshapa, etc grows, that is Jangala desha.^[3]

2. Sushruta Samhita (200AD - Sharma P.V, 2003)

9 references of Shimshapa have been found in Sushrut Samhita.

- i. Su. Su. 38/8 - In Salsaradi gana.
- ii. Su. Su. 38/20 - In Mushkakadi gana.
- iii. Su. Su. 45/123 - Guna Karma of Sara sneha of Shimshapa and other drugs have been mentioned,
- iv. Su. Chi. 10/8 - Sura of Shimshapa and other drugs are useful in the treatment of Kusthha.
- v. Su. Chi. 10/12 - Ayaskruti prepared by Shimshapa and other drugs is useful to treat Asadhya Kushtha or Prameha, in treatment of Sthulata, Shofa, especially in Rajyakshama.
- vi. Su. Chi. 11/9 - Shimshapa Kashaya is indicated in treatment of Vasa meha.
- vii. Su. Chi. 31/5 - Sara sneha of Shinshpa along with other drugs is useful in Dadru, Kushtha, Kitibha.
- viii. Su.U. 39/203 - Shimshapa sara pakva Kshira is indicated as Sarva Jwarapaham.
- ix. Su. U. 40/51 - Shimshapa is indicated in treatment of Atisar along with other drugs.^[4]

3. Ashtang Hridaya (7 AD) Comment. Arunadatta – Sarvangasundara (13 AD)

5 references have been found in Astanga Hridaya.

- i. A.H.Su. 15/19-20 - Shimshapa is included in Asanadi gana.
- ii. A.H.Su. 15/32 - It is kept in Mushkakadi gana.
- iii. A.H.Chi. 1/115 - Shimshapa sara Sidhha Kshira is indicated as sarva Jwarapaham.
- iv. A.H.Chi. 9/96-97 - Pichha basti of Shishapa and Kovidar is indicated in Guda bhrnsha, Pravahana, Ruja, in Kshata Kshina.
- v. A.H.U. 39/169 - Indicated as one of Rasayana.^[5]

4. Bhela Samhita

- (i) Bh.S.Su. 4/11-12 - Along with other trees it is indicated in Kushtha.^[6]

C. Nighantu kala^[7]

1. **Dhanvantari nighantu (10 – 13 AD- Sharma P.V, 2003):** It is one of the most ancient Nighantu available now days. Here the drug Shimshapa has been mentioned under Amradi Varga. The author has been described two types of Shimshapa i.e. Shimshapa and Kushimshapa and their preparation and actions.
2. **Sodhala nighantu (12 AD- Sharma P.V, 2003):** Acharya Sodhala has mentioned synonyms and Guna-Karmas of Shimshapa. He has also mentioned Guna-Karma of Shinshpa Sara Taila.
3. **Abhidhana ratnamala (12-13 AD- Sharma P.V, 2003):** There is no specific description about author of this book. It is also known as ShadRasa Nighantu. He has given 8 synonyms of the drug.
4. **Madhava dravyaguna (1250- Sharma P.V, 2003):** This text is also known as 'Bhavaswabhav Vada.' In this text, Shimshapa has been kept in 'Vividhaushadhi Varga' and 'Taila Varga'.
5. **Siddha mantra (Kala-13 AD Purvardha- Sharma P.V, 2003):** Vaidyacharya Keshava, author of Siddha Mantra, has included this drug in 'Kaphaghna Varga' and 'Kaphavataghna Varga'. He has quoted the drug as 'Apittam Kaphavataghnam'.
6. **Hridaya dipaka nighantu (Kala-13 AD Uttarardha- Sharma P.V, 2003):** This Nighantu is written by Acharya Bopadev. He has kept this drug in 'Dwinam Varga'.
7. **Madanapal nighantu (Kala-14 AD- Sharma P.V, 2003):** There are 2 types has been mentioned of Shimshapa i.e. Shimshapa and Kushimshapa in this Nighantu.

8. **Kaideva nighantu (Kala-15 AD- Sharma P.V, 2003):** The Nighntu is otherwise known as Pathyapathyavibodhaka written by Acharya Kaideva and the author has kept Shimshapa under Aaushdhi Varga. He has mentioned 2 types of Shimshapa i.e. Shimshapa and Kushimshapa.
9. **Bhavaprakasha nighantu (16 AD- Sharma P.V, 2003):** It is also known as Haritakayadi Nighanutu. He has included the drug in Vatadi Varga.
10. **Raja nighantu (17 AD- Sharma P.V, 2003):** Vaidyacharya Narhari pandit, the author of the nighantu has mentioned this under Prabhadradi Varga. He has described Shyama, Shweta and kapila shimshapa with their gunakarma in detail.
11. **Raja vallbha nighantu (18 AD- Sharma P.V, 2003):** In this Nighantu, drug is kept under 'Nanaushadhi Varga.'
12. **Aushadhi nighantu:** In this text, Bhasha, Grhayansha, and Rasa, Virya, Vipaka etc had been given.
13. **Shaligram nighantu (1896- Sharma P.V, 2003):** It is said to be the last in the galaxy of Nighantus of the Adhunik Kala. He has mentioned synonyms and Guna-Karmas of 3 types of Shinshpa i.e. Shimshapa, Shweta Shimshapa and Kapila Shimshapa. He followed Raja Nighntu while mentioning Trividha Shimshapa. He has also quoted reference of Bhavaprakasha.
14. **Nighantu shesha:** Synonyms and Niruktis have been described in this Nighantu.

D. Adhunik kala

1. **Shankara nighantu (Reprint, 2002):** This Nighantu is written by Pt. Sankardatt Gaud and he has given brief description of the drug. He has accepted 3 types of Shimshapa.
2. **Priya nighantu (19 AD):** Priya Nighantu is written by Acharya Priyavrat Sharma. He has mentioned drug Shimshapa in Haritakyadi Varga.
3. **Materia medica of ayurveda (2000):** Vaidya Bhagvandas has given 2 types of Shinshpa i.e. Shimshapa and Kushimshapa in this text.
4. **The wealth of india (1952):** This precious book describes the plant with all its pros and cons. Detail description regarding cultivation of plant has been given in this book. Its commercial use and physical and chemical constants also had been given of this plant. There is no description related therapeutic use of drug Shimshapa.
5. **Indian medicinal plants (Kirtikar & Basu) (1918):**^[8] The Family - Leguminosae, Genus – Dalbergia and characters of species - Sissoo and morphology of the plant, vernacular names have been described elaborately, along with its uses and therapeutic

applications.

6. **Forest flora of the chakrata, Dehradun and Sahranpur:** In this flora detail description of genus and species has been given. *D. latifolia* is another variety, which is known there 'Walayati Shisham'
7. **Medicinal plants of nepal:** Shimshapa is also available in Nepal. Description is given regarding it. In this text, place of representative collection is given i.e. Hitaura, 600 m (Narayani Zone, Makwanpur district).
8. **Records of the botanical survey of india (Vol. I, III):** Plant is found during botanical tour in Chamba. According to this survey, it is frequent near the town of Chamba but does not grow above 3500 ft.
9. **Annual reviews of plant sciences, Vol. II:** Chemical composition and in vitro dry matter digestibility of *D. sissoo* tree leaves has been given in this text.

Classification

Depending upon the drug origin, morphology, property, pharmacodynamics and therapeutic values, ancient texts have classified the drugs into Ganas, Vargas and Skandhas.

Table 1: Classification according to gana in samhitas.

Name of texts	Gana
Charaka Samita	Kashaya Skandha, Asav Yoni- Sara vriksha
Sushruta Samhita	Salasaradi gana
	Mushkakadi gana
Ashtanga Samgraha	Mushkakadi gana
	Asanadi gana
Ashtanga Hridaya	Mushkakadi gana
	Asanadi gana

Table 2: Classification according to varga.

Namo of texts	Varga
Dhanvantari Nighantu	Amradi Varga
Sodhala Nighantu	Amradi Varga, Taila Varga
Abhidhana Ratnamala	Kashya Skandha
Madhava Dravyaguana	Vividha aushadhi gana, Taila Varga
Siddha Mantra	Kaphaghna Varga, Vata Kaphaghna Varga
Hridaya Dipaka Nighantu	Dwinama Varga
Madanapala Nighantu	Vatadi Varga
Kaideva Nighantu	Aushadhi Varga
Bhavaprakasha Nighantu	Vatadi Varga
Raja Nighantu	Prabhadradi Varga
Raja Vallabha Nighantu	Nanaushadhi Varga
Shaligrama Nighantu	Vatadi Varga

Priya Nighantu	Haritakyadi Varga
Nighantu Adarsha	Palashadi Varga
DravaGuna Vigyana (P.V.Sharama)	Shimbi Varga
Yadavji Trikamaji Acharya	Shimbi Varga

Synonyms

In the olden days, the prevailing system of description of a medicinal plant was through various synonyms which are indicative of its physical characters, properties, actions, habitat, therapeutic uses, specific natural characteristics etc. So the knowledge of synonym of the drugs has much importance in Dravyaguna Vigyana. No synonym of Shimshapa was found during Samhita Kala.

Table 3: Synonyms of Shimshapa/Krishna Shimshapa.

Sr.	Synonyms	Dh. Ni.	So. Ni.	Abh. R.	M. Ni.	K. Ni.	Bh. Ni.	Raj Ni.	P. Ni.	Sha. Ni.	Ni. Sesh	Ni. Aa.	Va. Cha.	D. H.
1.	Aguru	+								+	+			
2.	AngaRasara					+								
3.	Angara Varna										+			
3.	Anupushpaka													
4.	Avsadani			+										
5.	Bhasmagarbha			+										
6.	Dalapatri												+	
7.	Dhira		+					+						
8.	Dhumrika							+		+				
9.	Dridhadaru								+					
10.	Guchha pushpa													
11.	Guru		+				+							
12.	Guru nabho			+										
13.	Guru sara			+										
14.	Gurusarika					+								
15.	Kalanusarya													
16.	Kapila				+	+		+		+			+	
17.	Krishna Shimshapa							+						
18.	Krishnasara	+	+	+		+	+	+	+	+	+	+	+	+
19.	Krishna				+									
20.	Mahasara		+											
21.	Mahashyama	+		+		+		+			+			
22.	Mandalchhada			+										
23.	Mandal Patrika					+								
24.	Pandur Chhada										+			
25.	Picchala					+				+	+			
26.	Picchila		+				+							+

27.	Pipala										+			+	
28.	Rochana														
29.	Saramandala Patrika				+										
30.	Shimbifala														
31.	Shimshipa														
32.	Shimshapa	+	+		+	+	+	+	+			+	+	+	
33.	Shyama						+								+
34.	Sita		+												
35.	Tikshnadhuma			+											
36.	Tikshnasara							+							
37.	Tivradhumaka													+	
38.	Tivradhumanga Dhuma		+												
39.	Vira									+					
40.	Vritapatra														
41.	Yuga Patrika									+				+	

Description regarding another Shimshapa i.e. Kapila Shimshapa is also found insome texts. It is also known as Kushimshapa in some texts. There is also another variety i.e. Shweta Shimshapa.Synonyms of both the varieties which are found in various texts are as per below:

Table 4: Synonyms of Kapila Shimshapa/Kushimshapa.

Sr.	Synonyms	Dh. Ni.	M. Ni.	K. Ni.	Bh. Ni.	Raj Ni.	Sha. Ni.	Ni. Shesh	Va. Cha.
1.	Bhasmagarbha	+			+	+	+	+	
2.	Bhasmapingala		+	+				+	
3.	Kapila	+			+	+	+	+	
4.	Kapilakshi					+	+		
5.	Kapila Shimshapa					+	+		+
6.	Kushimshapa	+	+	+		+	+	+	
7.	Pita					+	+		+
8.	Sarani								
9.	Sarini					+	+		
10.	VaRasadani			+					
11.	Vasadani	+	+					+	

Table 5: Synonyms of shweta shimshapa.

Sr.	Paryaya	Raj Ni.	Va. Cha.	Va. Cha.
1.	Shweta patra	+		
2.	Shweta Shimshapa		+	+
3.	Shwetaa			
4.	Sitahva	+		

Types^[9]

In Ayurveda, many Acharyas have mentioned 2 type of Shimshapa, whilemany have

mentioned 3 type of Shimshapa. Others have not mentioned any type. Name of types which have been mentioned in Nighantus are tabulated below:

Table 6: Types of shimshapa according to various texts.

Sr.	Texts	Shimshapa	Krishna Shimshapa	Kapila Shimshapa	Kushimshapa	Shweta Shimshapa
1.	Dh. Ni.	+			+	
2.	So. Ni.	+				
3.	Abh. R.	+				
4.	M.D.G.	+				
5.	Si. M.	+				
6.	Hri. D. Ni.	+				
7.	Ma. Ni.	+			+	
8.	K. Ni.	+			+	
9.	Bh. Ni.	+		+		
10.	Raj Ni.		+	+		+
11.	Sha. Ni.	+		+		+
12.	Shankar Ni.	+		+		+
13.	Priya Ni.	+				
14.	Ni. Shesha	+			+	
15.	M. M. A.	+			+	
16.	Shivadatta	+		+		

- **Guna ratnamala (Bhavamishra):** Acharya Bhavamishra has mentioned 2 varieties of Shimshapa. Shimshapa = Krishnasara i.e. *Dalbergia sissoo* Roxb. Heart wood is of black colour. Kapila Shimshapa i.e. *Dalbergia latifolia* Roxb., Heart wood is of Ash col
- **Nighantu kalpadruma (Sudarshanlal trivedi):** Wood of Shisham is red, blackishbrown. There is also another variety with black wood.
- **Vanaushadhi chandrodaya, Part 9:** There are 3 varieties of Shisham i.e. Krishnasara, Kapila and Shweta shisham. Another variety also found i.e. 'Vilayati Shisham'. Acharya Chandraraj Bhandari opines that it is *Dalbergia latifolia* Roxb.
- **Dravyaguna vignana (P.V. Sharma):** In many texts, Kushimshapa has been mentioned as variety of Shimshapa. It may be *Dalbergia sissooides* Grah. It is slightlight in colour in comparison to *D.sissoo* Roxb. Another species *Dalbergia latifolia*Roxb. is also famous as Shimshapa.
- **Vanaspati shastra (Jaikrishna indraji thakar):** Acharya Jaikrishna Indraji Thakar has accepted *Dalbergia latifolia* Roxb. as Sisam. According to him, *Dalbergia lanceolaria* is Shimshapa.
- **Dravyaguna vignanam (Yadavaji trikamji Acharya):**Acharya Yadavaji Trikamji has considered *Dalbergia latifolia* as Shimshapa.

- **Nighantu adarsha (Bapalal vaidya):** Acharya Kshiraswami has accepted ‘Aguru Shimshapa’ word. He has interpreted “*Kapilaa Bhasmagarbha sa*” as “*Raktabha Rakta Shimshapa anya*”.
- **Indian herbal remedies (C. P. Khare):** *Dalbergia latifolia* Roxb. is also used as Shimshapa. In Kerala the heart wood of *Xylia xylocarpa* Roxb. is wrongly used as Shimshapa.

Rasa panchaka

Rasa panchaka of all 3 varieties which are mentioned in various texts is as per below:

Table 7: Rasa panchaka of Shimshapa/Krishna shimshapa.

Sr.	Name of texts	Rasa	Guna	Virya	Vipaka
1.	M. Ni.	-	-	Ushna	-
2.	K. Ni.	Katu, Tikta, Kashaya	-	Ushna	-
3.	Bh. Ni.	Katu, Tikta, Kashaya	-	Ushna	-
4.	Raj Ni.	Tikta, Katu	-	Ushna	-
5.	Sha. Ni.	Tikta, Katu	-	Ushna	-
6.	P. Ni.	Tikta, Kashaya	Ruksha	Ushna	-
7.	Shankar Ni.	Katu, Tikta, Kashaya	-	Ushna	-
8.	Aushadhi Ni.	Tuvara, Tikta, Lavana	Ruksha	Ushna	-
9.	Nighantu Vigyana	Kadua	-	Garma Khushka	-
10.	Nighantu Kalpadruma	Fika, Charapara Katu, Tikta, Kashaila, Kadua	Shital butacc. to Unanai Garam	Ushna	-
11.	Vanaushadhi Nidarshika	Kashaya, Katu, Tikta	Laghu, Ruksha	Ushna	Katu
12.	Vanaushadhi Chandrodaya	Kadva, Tikta, Kashaila Acc. Unanai Kadvi, bedtaste	-	Garam	-
13.	Sa. Va. Ni.	Tikta, Katu	-	Ushna	-
14.	Sa. D.G.Vi.	Katu, Tikta, Kashaya	Ruksha	Ushna	Katu
15.	Ni. Aa.	Kashaya, Katu, Tikta	-	Ushna	Katu
16.	Dravyaguna Hastamlaka	Kashaya, Katu, Tikta	Laghu, Ruksha	Ushna	Katu
17.	P.V. Sharma	Kashaya, Katu, Tikta	Laghu, Ruksha	Ushna	Katu
18.	Ya. Tri.	Kashaya, Katu, Tikta	-	Ushna	-
19.	The API	Kashaya, Katu, Tikta	Laghu, Ruksha-stem barkGuru, Picchila -Heart Wood	-	-
20.	Data base on medicinal plants	Kashaya, Katu, Tikta	Laghu, Ruksha	Ushna	Katu

Here, almost all Acharyas have mentioned Kashaya, Katu, Tikta Rasa; Laghu, Ruksha Guna; Ushna Virya; Katu Vipaka for Shimshapa, which is Krishna Shimshapa. While according to all most all Acharyas Kapila Shimshapa and Shweta Shimshapa have Tikta Rasa, Sheeta Virya. Taila of Shinshpa is Kashaya, Tikta, Katu in Rasa; Tikshna in Guna, Ushna in Virya.

Karma

Karma of Shimshapa can be inferred after administration of the drug and they are tabulated as per opinion of various texts:

Table 11: Karma of shimshapa mentioned in various texts.

Sr.	Karma	Dh. Ni.	So. Ni.	M. Ni.	K. Ni.	Raj Ni.	Sha. Ni.	Pri. Ni.	API	DBM
1.	Anulomana									+
2.	Artavajanana									+
3.	Balya	+				+			+	+
4.	Chakshushya									+
5.	Daha Prashamana	+				+				+
6.	Deepya					+	+			+
7.	Deha Dardhyakrita							+		
8.	Garbha Patana			+	+				+	
9.	Garbhashaya Sankochaka									+
10.	Jwaraghna		+							+
11.	Kaphavishoshana								+	
12.	Krimighna									+
13.	Kushthaghna		+	+	+		+	+		+
14.	Lekhana									+
15.	Medohara				+			+	+	
16.	Medovishoshana								+	
17.	Mootrala									+
18.	Mootramarga Snehana									+
19.	Nadi balya									+
20.	Rakta Shodhaka									+
21.	Raktastambhana									+
22.	Ruchikara	+				+			+	
23.	Shoshaharini				+		+			
24.	Shotha hara		+			+	+			+
25.	Shukradoshahara								+	
26.	Stambhana									+
Sr.	Karma	Dh. Ni.	So. Ni.	M. Ni.	K. Ni.	Raj Ni.	Sha. Ni.	Pri. Ni.	API	DBM
27.	Vamaka								+	
28.	Varnya	+				+			+	
29.	Vrana Shodhana								+	+

Rogagnata

Shimshapa is a wonder drug, which is effective in many diseases. Rogagnata of this drug which is mentioned by various Acharyas is tabulated below:

Table 12: Rogagnata of shimshapa mentioned in various texts.

Sr.	Rogagnata	Dh. Ni.	So. Ni.	M. Ni.	K. Ni.	Raj Ni.	Sha. Ni.	P. Ni.	API	DBM
1.	Agnimandya									+
2.	Ajirna					+	+			
3.	Arsha								+	
4.	Ashmari								+	
5.	Atisara					+	+		+	+
6.	Basti roga			+	+				+	
7.	Chhardi								+	
8.	Dadru		+				+			
9.	Daha	+		+	+	+	+		+	+
10.	Dushta vrana								+	+
11.	Gridhrasi									+
12.	Gulma								+	
13.	Hikka	+							+	+
14.	Jwara								+	+
15.	Kandu								+	+
16.	Kashtartava									+
17.	Krimi			+	+			+	+	+
18.	Kshata									+
19.	Kushtha		+	+	+		+	+	+	+
20.	Lalameha									+
21.	Medoroga				+			+		+
22.	Mootrasaraka								+	
23.	Netraroga									+
24.	Pandu								+	+
25.	Phiranga									+
26.	Pinasa				+				+	
27.	Pooyameha									+
28.	Prameha / Meha			+					+	
29.	Pravahika									+
30.	Rajorodha									+
31.	Raktapradara									+
32.	Raktarsha									+
33.	Raktatisara									+
34.	Rakta Vikara			+				+	+	
35.	Shoola		+							+
36.	Shosha				+				+	
37.	Shotha / Shofa	+	+		+	+			+	+
38.	Shvitra		+	+	+			+	+	+

- **Kapila shimshapa:** Shramapaha, Jwaraghni, Chhardi, Hikka vinashini

- **Shweta shimshapa:** Pitta-Dahanut
- **Taila:** Dushta Vrana Shodhana, Krimi, Kapha, Dadru, Kushtha, Kitibha, Vatahara etc.

Effect of drug on dosha

Shimshapa is Tridosha Shamaka mainly Kapha Vata Shamaka. Other varieties of Shishapa i.e. Kapila Shimshapa which is also known as Kushimshapa somewhere is Vata and Pitta Shamaka according to most of Acharyas, while Shweta Shinshpa is mainly Pitta Shamaka. Effect of Shinshapa on Doshas are tabulated below according to various texts:

Table 13: Effect of shimshapa on doshas according to various texts.

Sr.	Texts	Shimshapa/KrishnaShimshapa					K.Shimshapa/Kushimshapa		Shweta Shimshapa
		V↓	K.Nis	K↓	P↓	T↓	V↓	P↓	P↓
1.	Dh. Ni.				+			+	
2.	So. Ni.	+		+					
3.	Raj Ni.	+		+	+		+	+	+
4.	R. V. Ni.	+							
5.	Sha. Ni.	+		+			+	+	+
6.	Ni. Ka.			+			+	+	+
7.	Va. Ni.					+			
8.	Va. Cha.		+				+	+	+
9.	Sa. V. D.	+		+	+		+	+	+
10.	Shankar Ni.			+			+	+	+
11.	D. G. H.					+			
12.	Ya. Tri.			+					
13.	Ni. Aa.	+		+					

Effect on dhatus / Upadhatus and Agni

Shimshapa generally acts on all dhatus and upadhatus. Acharya Charaka has mentioned Shimshapa in Amlakayas Brahma Rasayana (Cha.Chi.1/2/3) and Pranakamaiya Rasayana (Cha. Chi. 1/2/12). Acharya Vagbhata also indicated it as Rasayana (A. H. U. 39/169). Its Balya, Shothahara, etc properties indicate its action on Rasa. Its main action can infer on Rakta dhatu by its Karma like Rakta shodhaka, Rakta stambhaka, Kushthaghna, etc.

Similarly it acts on Meda by its Lekhana, Medohara, Medovishoshana, etc. Karma. Shinishapa has mainly Tikta, Katu and Kashaya Rasas hence it is Sneha, Kleda, Meda Upashoshak. Tikta Rasa also acts as Upashoshaka of Vasa, Majja, etc. It is Deha dardhyakrita which indicates its effect on Rasa, Mansa and Asthi dhatu. Stanya Shodhana and

Shukradoshahara effects are also found. It promotes Agni through Deepana Karma by Katu Rasa. Nadi balya, Garbhashaya sankochaka etc Karmas are suggestive of its action on Nadi.

Effect on mala

Though Shimshapa is having Katu Vipaka, it doesn't act like stambhaka on Mala. But it is Vatanulomana, and due to its Tikta, Katu Rasa it does the Amapachana and Deepana action and acts as a Samgrahi in Sama Mala Pravriti and thus can be given in Atisara. Mootrala and Mootramarga snehana Karma are listed in texts.

Therapeutic uses^[10]

1. Shimshapa Sara dhuma is useful at the time of labour in Asanna Prasava.
2. Leha of Shimshapa twak kwatha can be given in Gridhrasi with Payas and Havishyanna, it can cure Gridhrasi within 21 days. (Vangasena, Gridhrasi Nidana/609).
3. In Sushruta Chikitsa sthana, Shimshapa in Kashaya form is indicated for Vasameha.
4. Sura of Shimshapa is indicated in Kushtha. (Su. Chi. 10/8), (A.S. Chi. 21/38)
5. Heart wood of Shimshapa should be boiled in milk being double the quantity of water reduced to milk only. Intake of this milk alleviates all types of fever. (Su. U. 39/203) (A.H.Chi. 1/115).
6. Pichha basti of Shinshpa and Kovidar i.e. decoction made of the crushed tender leaves of Shinshpa and Kovidar along with barley and mixed with ghee and milk should be given as slimy enema in discharge of mucus, tenesmus and prolapse of rectum.
7. Swarasa of Shimshapa patra can be given in eye disease as eye drop with honey.
8. Gargling of Shimshapa twak is useful in mouth ulcer. (Unial Mayaram, 1995)
9. As per Unani opinion, it is useful in Dental pain, boils and burning sensation of penis. (Trivedi Sudarshanlal, 1958).
10. As per Unani opinion decoction of leaves can be used in acute Gonorrhoea. (Bhandari Chandraraj, 1971).
11. Decoction of leaves also can be given in blisters and furuncles. (Bhandari Chandraraj, 1971)
12. Poultice of leaves can be tied on inflammation of breast. In this condition, washing with decoction can also be done. (Bhandari Chandraraj, 1971).
13. The bark is haemostatic and is effective in bleeding piles, menorrhagia and in varicose veins. (Dhiman Anil, 2004).
14. Its raspings of the wood are boiled in water until these become half, and then mixed with

'sharbat' of shisham are advised to drink about for forty days in Kushtha. (Bhandari Chandraraj, 1971).

15. The mucilage of the leaves mixed with sweet oil is used in excoriations (Dhiman Anil, 2004).
16. The heart wood yields oil which is used for skin and foot disease of cattle. The bark made intopills with aromatics such as ginger, checks cholera. (George watt, 1972).

Modern science^[11]

In modern science, the drug *Dalbergia sissoo* Roxb. is taken as Shimshapaamong all the varieties. However other varieties are also taken as Shimshapa.

Taxonomic position (Banthem and Hooker – 1862-1883)

- Kingdom : Plantae
- Subkingdom : Spermatophytae (Phanerogams)
- Division : Angiospermae
- Class : Dicotyledons
- Subclass : Polypetalae
- Series : Calyciflorae
- Natural Order : Rosales
- Family : Leguminosae
- Sub-Family : Fabaceae (Papilionaceae)
- Genus : Dalbergia
- Species : Sissoo

Vernacular names^[12]

- Sanskrit : Shimshapa, Krishnasara etc.
- Botanical name : *Dalbergia sissoo* Roxb.
- English : Sissoo, Malabar black wood, South Indian Red wood Blackwood, Rose wood
- Hindi : Sisam, Sissu, Shisham, Sissai, Shishi
- Gujarati : Sisam, Tanach
- Marathi : Sissu, Shishav
- Bengali : Shishu, Sisu, Shishu, Shishugachh,

- Kannad : Agaru, Biridi, Cish mabage, Eragundimavu, Bindi
- Malayalam : Irupal, Sisam, Iruvil, Tali, Sissui, Pivala-sesaba,
- Punjab : Tali, Shisham, Shishai, Safeda, Shin, Nelkar, Shewa, Shia
- Tamil : Gette, Itti, Nukku-kattai, Pichai, Sisu, Yette, Sisuitti,

Species – *Dalbergia sissoo roxb*^[13]

- **Habit:** A fairly large, deciduous, handsome tree; reaching 18 m. high; young parts pubescent or tomentose; branches numerous, downy, grey and spreading.
- **Bark:** Grey or light brown, somewhat reticulately longitudinally furrowed, exfoliating in narrow strips; young parts grey downy, inside light-brown, soon turning to dark-brown, very fibrous.
- **Heart wood:** The heart wood is brown, mottled with darker longitudinal veins, hard and close grained, annual rings not distinctly marked; medullary rays very fine; pores uniformly distributed, joined by wavy white concentric bands; wt 45-55 lbs. per c.ft.
- **Leaves:** Alternate, bifarious, imparipinnate; leaf-rachis 2-4" long, zigzag, pubescent when young, Pale green
- **Petioles:** Terete, very downy when young;
- **Stipules:** Lanceolate, caduceous.
- **Leaflets:** 3-5, firm, 3.8-6.3 by 3-5.4 cm. (the terminal the largest and the lowest the smallest), distant, alternate, broad ovate or rhomboid, tough, slightly waved on the margin. suborbicular, conspicuously and abruptly acuminate, puberulous when young, soon glabrescent and shining when old, base narrowed or cuneate, lateral nerves about 5 on either half, rather distinct, very slender, tertiaries prominent
- **Petiolules:** 3-6 mm. long.
- **Flowers:** 0.2-0.3" long, yellowish white, scented, each shaped after the plan of a pea flower, sessile or nearly so, in axillary panicles shorter than the leaves and composed of several short subsecund spikes; rachis and branches of the panicle densely hairy; bracts linear-subulate hairy.
- **Calyx:** Downy, about half the length of the flower. Standard with a long claw; 4-5 mm. long, hairy; teeth short, ciliate the 2 upper connate except at the tip, the lateral linear, obtuse, the lowest the longest, subacute.
- **Corolla:** Pale yellow, 6-8 mm. long; standard 4 mm. broad, with a long claw, the limb obovate-orbicular.

- **Stamens:** 9 in one bundle. The sheath of the filaments slit only at the top.
- **Ovary:** Pubescent; ovules 2-4, style much shorter than ovary, stigmalarge, glandular
- **Pods:** 3.8-10 by 0.6-1.3 cm. narrowed at the base into a long stalk which istwice as long as the calyx, thin, strap-shaped, linear lanceolate glabrous, pale brown when ripe. slightly reticulate. The pods do not burst open when ripe to free the seeds, but are scattered by wind and water; the thin outer covering of the pod soon decays and the seeds then germinate. In their wild state the trees are usually found growingon the banks of streams and rivers to which their pods have been carried by floods.
- **Seeds:** 1-4, 0.25” long, kidney shaped, flat.

Pharmacological activities^[14]

- **Anti inflammatory**, anti pyretic, **analgesic** and oestrogen like activity.
- The alcoholic extract of the green branches of aerial parts showed a dose dependent inhibitory effect on the motility of isolated rabbit duodenum and pronounced bronchodilation. (Data base on Medicinal Plants, Vol. 2)
- The wood exhibits alterative, stomachic, anthelmintic, blood purifying, anti leprotic and cooling properties. Its extract was found useful in scalding of urine. Aerial parts showed significant spasmolytic activity. (C.P.Khare)

Parts used

Root, Bark, Heart wood, leaf (Data base on Medicinal Plants, Vol 2)

Doses

- Decoction: 50-100 ml., 10-20 gm forHeartwood.
- Powder: 3-6 gm., 1.5-10 gm. for Heart wood.

DISCUSSION

The shimshapa is the ayurvedic drug used in ayurvedic formulations as well as in trade and commerce. In Ayurvedic science various drugs have been mentioned under Krimighna Dravyas. In Bhavprakash nighantu Shimshapa is described as Krimighna and it is said to have Krimighna guna by others Nighantukaras, moreover the drug used in many instance of infectious diseases; modern day experimental studies promise for their antimicrobial activity, to be more specific this drug is active against candida albicans fungus. It has having the referances in Nighantus because of its rasa panchaka (kashaya, Tikta rasas, Laghu, Ruksha gunas and Katu vipaka) for tackling Krimi, Kushtha etc. It is available in the wild everywhere

and it is cost effective.

CONCLUSION

Shimshapa (*Dalbergia sissoo roxb.*) is one among the most trusted drugs from the treasure of Ayurveda. The Kashaya of the patra and kanda twak can be used in skin infection. Phytochemical studies reveals that, presence of Tannins, Glycosides, Flavonoids, Phenolic compounds in Shimshapa patra and kanda twak. The traditional medicinal uses of shimshapa in samhita and nighantus is in kustha krimi vrana dusti medodusti prameha etc. Ayurveda shows the multiple uses of shimshapa on the basis of rasa panchaka. this literary review has been done to cover all its ancient and modern aspects so that it may be helpful for future experiments on shimshapa as well as to enlighten the properties of dalbergia sissoo.

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