

## SHALMALI: A STUDY ON PHARMACOLOGICAL ACTION FROM AN AYURVEDIC PERSPECTIVE SPECIALLY ON MENSTRUAL DISORDERS

Bharati Kumari<sup>1\*</sup>, Chitranjan Das<sup>2</sup>, Purnima Bharti<sup>3</sup> and Mahendra Prasad Singh<sup>4</sup>

<sup>1</sup>2<sup>nd</sup> Year M.D Scholar, Department of Dravyaguna,

<sup>2</sup>3<sup>rd</sup> Year M.D Scholar, Department of Dravyaguna,

<sup>3</sup>2<sup>nd</sup> Year M. D Scholar, Department of Rog Nidan & Vikriti Vigyan,

<sup>4</sup>th Guide & Head of Department, Department of Dravyaguna.

Government Ayurvedic College, Patna.

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### \*Corresponding Author

**Dr. Bharati Kumari**

2<sup>nd</sup> Year M.D Scholar,  
Department of Dravyaguna,  
Government Ayurvedic  
College, Patna.

### ABSTRACT

Each and every pathy is good but each pathy has its own merits as well as demerits. For example -if we are treating the case of menorrhagia and if we find that there is a uterine fibroid, so there is naturally a gynaecologist remove the fibroid by surgery and the patients will get cure. So this is 100% gift from the Modern science but if there is no specific cause is found for example-Idiopathic menorrhagia. There is no problem in uterus, no problem in the ovary, there is no infection, no inflammation but they feel that is not idiopathic it is hormonal problem. They just giving you some overall hormonal treatments continuously for 3 cycles and checking the results. If they are not getting results then they do further managements. But this is what I am

saying here are our limitations, because hormones are good at some level and bad at some level. So to avoid the side effects of the hormones the *Ayurveda* can be best alternatives. If we want to understand the *Ayurvedic* management then we should be confident enough to understands the basis of *Ayurveda*. It says that one of the cause of menstrual problem is due to *Santarpan* and *Apatarpan*. *Santarpan* means abnormal excessive malnutrition while *apatarpan* means undernutrition, Each and every tissue has less quality and quantity. *Shalmali* is one such a drug which has very efficient role in menstrual disorders. This article demonstrates the therapeutic role of *Shalmali* from a reverse pharmacological perspectives.

**KEYWORDS:** *Shalmalia malabarica*, *B.ceiba*, *Mocharasa*, Menstrual disorder, *Raja*, *Artawa*, *Shukra*, *Rajakshaya*, *Raktapradar*.

## INTRODUCTION

Menstrual disorders mainly concerned with Amenorrhoea, Menorrhagia, and Dysmenorrhoea.

Amenorrhoea is like a deficiency of menstrual discharge. In *Ayurveda* it is called as *Kshaya*. But here this word specially for non Ayurvedic people will understand *Kshaya* as TB(tuberculosis). When we say *Rajakshaya* or *Artawakshaya* is specially meaning like deficiency. So when the Bleeding is less, then *Ayurveda* says that *Rajakshaya* or *Artawakshaya*, but *kshaya* does not means Tuberculosis here. Thus we have talked about Amenorrhoea or oligomenorrhoea.

Second problem is opposite to that, is heavy Menstruation, in *Ayurveda* it is called as *Raktapradar* or *Rajovridhi* or *Artawavridhi*. So *Vridhi* means excess and *kshaya* means less. These are the two important conditions and third will be the Dysmenorrhoea, painfull menstruation. This condition already talked that how the Modern Doctors treat these cases. Now we will take under the consideration of *Ayurveda*.

Basically there are some special terms which must have understand. For example- the term *Raja*, *Artawa* and *Shukra* regarding the female. *Raja* can be compared with the monthly menstrual bleeding.<sup>[1]</sup> *Artawa* can be compared with female gametes or ovum<sup>[2]</sup> and third thing *Shukra* is the generalised term and it includes many things for example- Estrogen. Estrogen can be compared with *Shukragni*, because estrogen is the main which use stimulation for proliferation of the primordial follicles. So how the ovum is formed, there is some pushup and there is some *Agni*. *Agni* is a energy for transformation. And that is transformation from primordial follicles, secondary follicle, tertiary follicle or graffian follicles. These are changes and these changes are transformations. So Estrogen and Progesteron are these type of *Agni*.

*Shukra dhatu* is compared with the ovum as well as secretions also they can be compared with the female hormones directly, because they are responsible for secondary sex characters. This is one of the function of *Shukra dhatu*. So *Shukra* sometimes consider as ovum as well as reproduction capacity, i.e- cellular regeneration capacity in the female because *Shukra* is

not only at testes or not only at the ovary. *Shukradhatu* a *Ayurvedic* term *Sarvasharirvyapini*,<sup>[3]</sup> it present throughout the body from head to toe. Cellular regeneration, cellular reproduction also under the controll of *Shukra dhatu* according to *Ayurveda*.

So to live healthy balance between them is very necessary. For this purpose *Ayurveda* provide so many drugs to balance these things. One of them is the drug *Shalmalia malabaricum*. That is *Shalmali*. *Shalmali* belongs to *Bombaceae* family. *Acharaya charaka* categorised it in *Shonitasthapana gana*, *vednasthapana gana*, *purishaviranjaniya gana*. On the basis of *Rasa* it is kept under *Kashayaskanda* representing its astringent and cooling property.<sup>[4,5]</sup> *Sushruta* kept it in *Priyangavadi varga* while *Bhavaprakasha* in *Vatadi varga*.

The literature of *Ayurveda*, *Siddha* and *Unanihas* explained the use of various parts of this plants in different dosage forms for the various diseases.<sup>[6]</sup> *Shalmali* one among such drugs used as haemostyptic agent in different formulations indicated in bleeding condition and its therapeutic uses are described in various *Ayurvedic treatise*. It can be used in bleeding disorders like menorrhagia-bleeding uterine disorder, haemoptysis, influenza, acute dysentery, malena, Ulcers, wound, inflammation etc. due to its astringent, haemostyptic, demulscent, cooling and binding properties. *Mocharasa* was also described as a good Aphrodisiac agent since ancient times.<sup>[7]</sup>

### **Plant description<sup>[8]</sup>**

#### ***Taxonomical classification***

*Kingdom: Plantae*

*Division: Magnoliophyta*

*Class: Magnoliopsid*

*Order: Malvales*

*Family: Bombacaceae*

*Genus: Bombax*

*Species: ceiba*

*Binomial name: Bombax ceiba L.;*

*Bombax malabarica D. C.*

*Salmalia malabarica (D.C.) Schott & Endl*

#### ***Vernacular names***

- *Hindi: Semal, Semar, Shimal, Nurma, Deokapas,*

- *Sanskrit: Shalmali, Chirajivika, Picchila, Kukkuti, Raktapushpaka, Kantakadruma, Bahuvirya, mocha, mocharasa.*
- *English: Kapok tree, Silk cotton tree*
- *Marathi: Shembalsavari*
- *Telugu: Mandlaboorugachettu, Kondaburaga*
- *Malayalam: Mullulavamarum, Samparuthi*

### Properties and Action<sup>[9]</sup>

*Rasa: Kashya*

*Guna: Laghu, Snigdha, Picchila*

*Virya: Sita*

*Vipika: Katu*

*Karma: Sothahara, Dhaprasamana, Pittahara, Vatahara, Kaphavardhaka, Shtambhan*

### Phytochemical studies



Many chemical compounds have been isolated from different parts of *Shalmali*. These belong mostly to phenolics, flavonoids, sesquiterpenoids, steroids, naphthoquinones, and neolignans. A total of 16 compounds have been isolated from root, 8 from root bark, 3 from stem bark, 3 from heart wood, 2 from leaves, 78 from flowers, 19 from seeds, and 11 from gum. Many compounds have been isolated from its various parts, out of which the novel ones are shamimicin, bombamalosides, bombamalones, bombasin, bombasin 4-o-glucoside, and bombalin which have been isolated first time from any plant species.<sup>[10]</sup>

In a preliminary phytochemical study, *roots* have shown the presence of flavonoids, tannins, saponins, steroids, cardiac-glycosides, and phenols besides carbohydrates and amino acids.<sup>[11]</sup>

### Traditional Uses<sup>[12]</sup>

*Ayurveda*, the traditional Indian medicine, describes the excellence of *plants* by combining both the pharmacognosy (properties) and pharmacology (action). These traditional parameters reflect not only the quality but also efficacy of the plants. Some of its medicinal uses as mentioned in *Ayurveda* are being described here.

#### *Charak samhita*

*Semal* has been described among top ten drugs used as styptic, bowel regulator, and tissue regenerator in *Ayurveda*. *Pedicel/petiole* of the plant or gum is used as enema in ulcerative colitis and dysentery.<sup>[13,14]</sup>

#### *Sushruta samhita*

*Stem bark* is said to be useful in hemorrhagic disorders, wound healing, removing pimples/acne, and have a cooling effect in burning sensations. It is also used in hyperpigmentation, wounds, burns, and stomatitis as a topical therapeutic agent.<sup>[15]</sup>

#### *Ashtang hridaya*

*Mocharasa* (the exudates of *shalmali*) is widely used in various *Ayurvedic formulations* for tissue regeneration, wound healing, and antidysenteric effects.<sup>[16]</sup>

#### *Bhava prakash*

Powder of *root* (*Semal-musli*) with sugar is considered to be a good aphrodisiac. *Root* is also considered to possess antiaging, anabolic, and nutritive properties. Paste of *leaves* is applied in arthritis and on glandular swellings. *Flowers* of *B.ceiba* with seeds of *Papaver somniferum*, sugar, and milk is prescribed to cure piles. *Gum* (*Mocharasa*) of the *plant* is cold in potency, absorbent, demulcent, aphrodisiac, and astringent in taste and cures dysentery, diarrhea, retained undigested food, burning sensation, various menstrual diseases, and diseases of *Kapha*, *Pitta*, and *Rakta*.<sup>[17]</sup>

#### *Dravyaguna vijnana*

A traditional formulation "*Shalmali ghrita*" prepared with *flowers of B. ceiba* is used as *Pramehagna* and to cure polyurea, spermatorrhea, leucorrhoea, and menorrhagia.<sup>[18]</sup>

## DISCUSSION

*Shalmali* the Indian *silk cotton tree* is an important multipurpose *tree species* which is gift of nature for human welfare. Its each and every part is being used for different purposes. This

plant contains many novel chemical compounds and due to this, it is being used traditionally in many diseases. *Menstrual disorders* are one of them in female on which efficient role of this *plants* has been proven thousands of years ago, as for example- *Acharya Bhavaprakasha* described its role in *Pradar roga* as follows-

**प्रदरेशाल्मलीपुष्पशाकन्तु घृतसैन्धवसाधितम्। प्रदरं नाशयत्येव दुःसाध्यत्यञ्च न संशयः॥**

*Bhāvaprakāśa, Cikitsā, 9-51.*

## CONCLUSIONS

On the basis of literary data, textual references and our *Samhita's references* it has been proven that all medicinal values which had been described are true in nature. The research studies had been proven the potency of *Shalmali* against diseases. Thus the presences of such active chemical compounds indicates that could serve as “excellent compound” for the development of Novel medicines related to *Menstrual disorders*.

## REFERENCES

1. Shastri Kashinath Pt, The Carak Samhita of Agnivesa Revised By Carak and Drdhabala, Part -1, Chaukhambha Bharati Academy, 2016; 2(3): 830.
2. Shastri Kashinath Pt The Carak Samhita of Agnivesa Revised By Carak and Drdhabala, Part -1, Chaukhambha Bharati Academy, 2016; 47: 868.
3. Sushruta. Sushrutasamhita, Sharirasthan Varanasi: Chaukhamba Sanskrit Sansthan, 2018; 40: 4, 20, 12, 4.
4. Shastri Kashinath Pt, The Carak Samhita of Agnivesa Revised By Carak and Drdhabala, Part -1, Chaukhambha Bharati Academy, 2005; 4, 31, 46, 87, 95.
5. Shastri Kashinath Pt, The Carak Samhita of Agnivesa Revised By Carak And Drdhabala, Part -1, Chaukhambha Bharati Academy, 2005; 4, 46-47, 95-96.
6. [ijapr.in/index.php/ijapr/article/view/719](http://ijapr.in/index.php/ijapr/article/view/719)
7. [ijapr.in/index.php/ijapr/article/view/719](http://ijapr.in/index.php/ijapr/article/view/719)
8. BombaxceibaLinn.Areviewofitsphytochemistryandpharmacology.pdf
9. The Ayurvedic Pharmacopoeia of India, Government of India Ministry of Health And Family Welfare, Department of ISM & H, New Delhi, Controller of Publication Civil Lines, 1, 3, 185, 37 – 39, 11, 15.
10. Vagbhatta. Ashtang Hridaya Sutrasthana, Varanasi: Chawkhamba Sanskrit Sansthan, 1993; 107.

11. Sharma P. Dravyaguna Vijnanam. Ch. 5. Varanasi: Chaukhamba Bharti greenpharmacy.info/index.php/ijgp/article/view/1148
12. Bhavmishra. Bhavprakash Chapter Vatadivarga, Verse Varanasi: Chaukhamba Bharti Academy, 2010; 525 – 7, 54 - 59.
13. Agnivesha, Charak, Dridhabala. Charak Samhita Sutrasthana, Verse New Delhi: Chaukhamba Sanskrit Pratishthan, 2000; 5, 2, 4, 31, 75, 46 and 77.
14. Agnivesha, Charak, Dridhabala. Charak Samhita Sidhisthana, Verse NewDelhi: Chaukhamba Sanskrit Pratishthan, 2002; 967: 35 - 10.
15. Sushruta. Sushrutasamhita Sutrasthana, Verse Varanasi: Chaukhamba Sanskrit Sansthan, 2001; 144 – 5, 45 – 46, 12, 38.
16. Academy, 2001; 491- 494.
17. Jain V, Verma SK. Pharmacology of Bombax ceiba. Heidelberg: Springer, 2012.
18. Jain V, Verma SK, Katewa SS, Anandjiwala S, Singh B. Free radical scavenging property of Bombax ceiba Linn. Root. Res J Med Plants, 2011; 5: 462-70.