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## Materia medica of Bala Dwaya - A Literary Review

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#### ABSTRACT

Literary Dwaya means two, Bala Dwaya means two types of Bala i.e. Bala and Atibala. Bala means strength promoting, hence it bestows strength and is a tonic in general as well as rejuvenator for all kinds of Vataja disorders. The Bala is Sida cordifolia Linn. and Atibala is Abutilon indicum Linn. both belongs to Malvaceae family. Both are having Madhura Rasa, Madhura Vipaka and Sheeta Virya. In Brimhaniya Mahakashaya of Charaka Samhita it is enumerated that Vatyayani as Bala and Bhadroudini is Atibala. There are two varieties of Atibala one is big and the other is small. The big one is named as Abutilon hirtum where as the second one is named as Abutilon indicum Linn. which is smaller variety. In the Atharva Parishishta the Bala flowers can be used as Pushpabhisheka. The present study of Bala and Atibala reveals the pharmacological actions, their controversies, therapeutic application, etc. according to different Ayurvedic lexicons.

Key words: Bala, Atibala, Abutilon indicum, Abutilon hirtum, Bala Dwaya.

#### **INTRODUCTION**

In the Ayurvedic lexicons, Bala is from a group of four drugs, Balachatusthaya<sup>[1]</sup> and is Balya (tonic) and Prajastahapana (which promotes reproduction). [2] Acharya Vaqbhata mentions Bala under Madhyama Panchamoola<sup>[3]</sup> and Sushruta enumerated under Vata-Sanshamana Ganas and Vamanopaga Gana. [4] mentioned Charaka has also under Vatashanshamana Gana. [5] In the Panchashirisha Agada, [6] and in Sarvadhatugata Visha Chikitsa, Bala is one of the ingredient.<sup>[7]</sup> Bala is more effective in heart as a tonic, where as Atibala is stronger diuretic.

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Among four Bala viz; Bala, Atibala, Mahabala and Nagabala, the first two are commonly used. In Brimhaniya Mahakashaya<sup>[8]</sup> of Charaka Samhita it is enumerated that Vatyayani as Bala and Bhadroudini is Atibala. There are two varieties of Atibala one is big and the other is small. The big one is named as Abitulon hirtum whereas the second one is named as Abitulon indicum Linn. which is smaller variety.

#### **REVIEW OF LITERATURE**

#### Bala<sup>9</sup>

Botanical name - Sida cordifolia Linn

#### Family - Malvaceae

Shrubby, branched, softly hairy and with much stellete, hair nearly all over and subpersistant. Leaves: 1-2 inch long, cordate or subacute, not acuminate, petioles are 1/2 inch long. Pedicels: Solitory or few together, hort. Some up to ½- ¾ inch long jointed much above the middle. Calyx: ¼ -3/4 inch long, lobes ovate, acute. Corrolla: Slightly exceeding the calyx, yellow. Fruit; 1/3 inch in diameter. Carpels: 7-10 strongly reticulated ciliate on the upper margins. The two dorsal margins almost scabrid, awns 2 nearly as long as the carpels, linear, retroselyscabrid, hairy. Root: Occurs in variable sized pieces, 5-15 cms long ISSN: 2456-3110 REVIEW ARTICLE July-Aug 2018

with few lateral slender rootlets of smaller size, tap root branched at the tip; outer surface buff to grayish - yellow minutely striated or smooth, odorless, taste slightly bitter. Available in all over India.

#### Atibala<sup>[10]</sup>

**Botanical Name:** Abution indicum Linn.

#### Family: Malvaceae

It is a perennial softly tomentose shrub, with very big leaves. Stem - round, frequently tinged with purple. Leaves - ovate to orbicular - cordate, 2-2.5 cm. long acuminate, toothed, petioles long, stipules long, linear, acute,. Flowers - Solitary on jointed peduncles, orange-yellow or yellow. Calyx - lobes ovate, apiculate, Corolla - yellow, opening in the evening. Staminal tube hairy at the base, Filaments long. Seeds: 3-5, reniform, tubercled or minutely stellate - hairy, black or dark brown. (Flowers and fruits almost throughout the year). Found as a weed in all over India, the sub-Himalayan tract and hills upto 1,400 m. and in hotter parts of Srilanka.

#### Vedic period<sup>[11]</sup>

- Bala is mentioned as Rasayana, Vishagna, Balya and Pramehagna.
- In Atharva Veda, Kalpasutra the reference regarding Bala is available.
- In Atharva Parishishta it is used as Pushpaabhisheka. (Pai.19/39/1-13. A.P. 5/1/4.)

#### **According to Charaka Samhita**

- Bala is mentioned in Brunhaniya,<sup>[8]</sup> Balya,
  Prajasthapana<sup>[12]</sup> and Madhuraskandha<sup>[12]</sup>
- Bala is mentioned as strength promoting and Vatashamaka drug.<sup>[5]</sup>
- The Bala Churna is advised with water in Sarvadhatugata Visha Chikitsa.<sup>[7]</sup>
- Also it is one of the ingredients of Panchashirishoagada<sup>[6]</sup> and Amrutaghrita.
- While explaining the different types of varieties Chakrapani told that, Vatyayani is Sweta Bala<sup>[8]</sup> and Bhadraudini is Peeta Bala.<sup>[8]</sup>

 Charaka - Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vatashamaka, Grahi.

#### According to Sushruta Samhita

- In Vamanopagagana<sup>[4]</sup> Bala is mentioned.
- In case of Sahadiva, Acharya Sushruta explained that it is one of the varieties of the Bala and it is having Peeta Pushpa<sup>[13],[14]</sup> (yellow flowers) but the other varieties have Neelapushpa (blue color flowers).
- For all types of Vataraktarogas, Bala Taila<sup>[15]</sup> is used.
- For the preparation of Mahasugandhi Agadaraj<sup>[16]</sup> which is used in snake poison Bala is one of the ingredients.
- While explaining the Baladwaya, it is mentioned that Bala is having white flower (Shuklapushpa) and Atibala has yellow flower (Peetapushpa)<sup>[17]</sup> and its seed is Seetapaki.<sup>[18]</sup>
- Sushruta Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vatashamaka, Balya, Rasayana.

#### According to Acharya Vagbhata

- The reference regarding Bala found in Balya Dashemani<sup>[19]</sup> and in Madhyama Panchmoola.<sup>[20]</sup>
- In Astanga Hrudaya, Uttaratantra, Vagbhata has mentioned Bala Dwaya,<sup>[21]</sup> Dwibala<sup>[22]</sup> and Balatraya.<sup>[23]</sup>
- According to Arunadatta the Balatrayam<sup>[24]</sup> are Bala, Atibala and Nagabala.
- Vagbhata Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vatashamaka, Balya.

#### Bhavaprakasha Nighantu<sup>[25]</sup>

- Bala is mentioned in Guduchyadi Varga.
- Bala Chatusthaya (Four types of Bala) are Madhura in Rasa, Snigdha in Guna, Sheeta in Veerya, Bala, Kantikaraka, Grahi in Karma, alleviates Samira, Arsha, Pittaasra and Kshata.

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- The root bark of this is taken along with curd or sugar cures Mutratisara.
- Bhavaprakasha Nighantu Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vatashamaka, Balya, Kantikaraka, Grahi.

#### Dhanavantari Nighantu<sup>[26]</sup>

Bala is mentioned in Guduchyadivarga, Shukravardhaka, Balya, Tridoshashamaka, also acts as Shukra, Ojavardhaka and cures Raktapitta and Kshaya, Madhura Rasa, Snigdha Guna, Sheeta Virya, Madhura Vipaka.

#### Shaligrama Nighantu<sup>[27]</sup>

- Bala is mentioned in Guduchyadivarga. Also explained various synonyms of Bala. Ruchikaraka, Vrushya, Grahi and Vata and Pitta Shamaka.
- Shaligrama Nighantu Madhura Rasa, Snigdha Guna, Sheetavirya, Madhuravipaka, Vata-Pitta Shamaka, Balya. Vrushya, Grahi.

### Shodhala Nighantu<sup>[28]</sup>

- Bala is mentioned in Guduchyadivarga, Vrishya and strength promoting i.e. Balakaraka.
- Shodhala Nighantu Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vata-Pitta Shamaka, Vrushya, Balakaaraka.

#### Kaiyadeva Nighantu<sup>[29]</sup>

- In Oshadivarga, Bala is mentioned as Balachatusthaya (all the four types of Bala), are Ayuvardhaka and alleviates Vatarakta, Tridosha, Kshata and Kshaya.
- Its fruits (seeds) are Kashaya and Madhura in Rasa, Madhuravipaka, Sheeta in Veerya, Guru, Sthambaka, Lekhana Karaka, Vibandha, Adhmana, Vata-Pitta and Rakta-Vikaranashaka.

#### Raja Nighantu<sup>[30]</sup>

The Raj Nighantu explained various synonyms of Bhadraudini like Nagabala, Kharagandha, Chatushphala, Mahodaya, Mahashakha, Mahapatra, Mahaphala, Vishvadeva, Arishtha, Kharva, Hrisva, Gavedhuka, Deavadanda, Mahadanda and Ghata. Its qualities are, Mahura,

- Amla, and Kashaya in Rasa, Ushnavirya and Guru. It alleviates Kandu, Kushtha, and Vatadosha, Vrina and Pitta Vikaranashaka.
- Bala is mentioned in Shatahvadivarga. Bala is Atitikta, Madhura in Rasa, cures Pittatisara, provides Bala, Veerya, Pushti and relieves Kapharoga.

#### Adarsha Nighantu<sup>[31]</sup>

- In Karpasadivarga, Bala is mentioned, and having Brumhaniya, Balya, Prajasthapana, Grahi, Vrushya, Ojavardhaka, Vatahara, Pittaghna and Kshayanashaka properties.
- Adarsha Nighantu Madhura Rasa, Snigdhaguna, Sheetavirya, Madhuravipaka, Vata-Pitta Shamaka, Brumhaniya, Balya, Prajasthapana, Grahi, Vrushya, Ojavardhaka,

#### Priya Nighantu<sup>[32]</sup>

- In Shatapushpadi Varga, Balapanchaka is mentioned. The Balapanchaka are Bala, Atibala, Mahabala, Nagabala and Raja Bala.
- Priya Nighantu Madhura Rasa, Snigdhaguna ,
  Sheetavirya, Madhuravipaka, Vata-Pitta
  Shamaka, Balya, Vrushya, Brumhanakaraka.

#### Gada Nigraha<sup>[33]</sup>

While explaining the treatment of all types of Vatavyadhi, Bala Taila and Brihad Bala Taila, Tritiya Bala Taila and Mudhagarbhe Chaturtha Bala Taila is mentioned.

#### Substitute and Adulterants<sup>[34],[35],[36]</sup>

- The plants most commonly used as the source of Bala belong to the genus sida. Sidaretusa Linn, syn. S.rhombifolia, var. retusa Linn, S. rhombifolia Linn, S.rhoboidea Roxb, S. spinosa Linn, S.acuta Burn, S.veronicae folia Lamk and Abitulon indium G.Don, Urenalobata Linn, U. sinuate Linn, Pavonia odorata Wild, P. zeylanica Cav. are being used under the name of Bala in different part of the country.
- Abitulon indicum (L). Sweet, S.retusa Linn, Pavonia odorata Wild and Urena lobata Linn. are used as adulterants.

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- Sida cordifolia Linn. is the widely used source of Bala in northen parts of India while physicians of Kerala have adopted Sida rhombifolia Linn. S.retusa (Linn) Borss. (Syn S. rhombifolia var. retusa (Linn) Mast; Family: Malvaceae) as Bala.
- The drugs may commonly adulterate with Sida rhombifolia and Sida spinosa species.

#### Chemial constituents<sup>[37]</sup>

- Root: C 28 phyto-ecdysones viz, sidasterone B, carboxylated tryptamines, quinazoline alkaloids, symathomimetic amines, bête-phenethylamine, beta sitosterol, acylstery glycosidesitoindoside, ephedrine, S-(+)- Nb-methyl tryptophan methylester, hypaphorine, vasicinone, vasicine, vasicinol, choline, betaine, phytosterol, resin acids.
- Seed: Proteins, steroids, resin, resin acid, mucin, phenethylamine, ephedrine, pseudoephedrine, fatty oil, potassium nitrate, linoleic acid, malvalic acid, sterculic acid and coronaric acid.
- Aerial parts: Palmitic, stearic, hexacosanoic acids, beta - sitosterol.

#### Controversial aspect of Bala<sup>[38]</sup>

- In Kerala, fresh bundles of green *Bala* plants are sold in the market. It is widely used in Kerala. Not a single pharmacy may be there, which may not be using *Bala*. Ghee, *Taila* and other preparations are made from *Bala*. But their *Bala* is *Sida retusa* Linn, some what different from ours.
- Vatyalaka is a synonym of Bala and this word has been as derived as it is used for sweeping purposes. Some plants are tied together and made into a sweep.
- Sida cordifolia Linn. contains an alkaloid Ephedrine; other species do not contain ephedrine. So Sida cordifolia Linn. should be used for medication.
- Looking to all this Bala is not at all controversial.
- Still, however, in some parts of India Atibala is known as Bala. This should be corrected.

• Another species A. theophrastii Mdic. (A. avicennae Gaertn) is also used by some as Atibala because of their similarity in appearance. It is mainly used for nerve disorders like paralysis and Vata prominent disorders. It is also used as the adulterant of Bala.

#### **CONCLUSION**

The literary review reveals that all the types of *Bala* are having *Madhura Rasa Snigdha Guna, Sheeta Veerya*. So the other species can be taken into consideration for various therapeutic applications. As both *Bala Dwaya* possesses *Vatashamaka* property and same chemical composition, can also be used vice-versa.

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