



“BRAHMI (*BACOPA MONNIERI* LINN.)” TINY PLANT WITH TREMENDOUS PROPERTIES – A COMPREHENSIVE REVIEW

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ABSTRACT

Brahmi (*Bacopa monnieri* Linn.) belongs to family Scrophulariaceae described in classical *Ayurvedic* texts as well as in modern texts for various types of treatments to cure diseased conditions. It has various synonyms in *Ayurvedic* scriptures dealing its properties. So, in the present review article, an attempt has been made to compile critically its information related to therapeutic uses of *Brahmi* from *samgraha granthas*, *nighantus* and other published texts of *Ayurveda*. It is observed that *panchanga* of *Brahmi* is used as an ingredient in 88 formulations, which are effective in disease conditions like *unmada* (insanity), *apasmara* (epilepsy), *jwara* (fever), *pandu* (anemia), *amlapitta* (acidity), *kustha* (skin disease) etc. Different parts of *Brahmi* are used in many dosage forms; such as *swarasa* (juice), *kwatha* (decoction), *lepa* (paste), *varti* (suppository), *avleha* (semi-solid preparations) and many more.

KEYWORDS: *Ayurveda*, *Brahmi*, Therapeutic importance, *Bacopa monnieri* Linn.

INTRODUCTION

Ayurveda deals with drugs of plant, animal, metal and mineral origin, where maximum drugs are of plant origin. Information pertaining these drugs are available in the classical texts of *Ayurveda* named as *Vedas* (6000 BC), *Samhitas* (1500 BC – 600 AD), *Nighantu* and *Samgraha granthas* (800AD – 1900AD). *Brahmi*, one of the classical drugs of herbal origin, botanically identified as *Bacopa monnieri* Linn, has been used by the *Ayurvedic* physicians, for the management of different disease conditions.^[1]

‘*Brahmi*’ the Sanskrit word derived from ‘*Brahma*’ the creator of the universe. *Maharishi Caraka* has categorized *Brahmi* as *samjnasthapana* (restores consciousness) and *prajasthapana* (establishment of progeny). *Acharya vagbhata* places it as a drug of choice in epilepsy.^[2] It is mentioned to be a keen stimulant for memory, intelligence and booster for longevity. It is believed that *Brahmi* mainly used to treat the disorder of the brain, but it can be used in many disease conditions of human beings. *Bacopa monnieri* Linn. belongs to family scrophulariaceae is also used in the pharmaceutical industries in the products, used to manage normal health of human beings.

Brahmi has many long researched and proven for many beneficial medicinal and functional properties. Functional ingredients are the foods that have health benefits beyond normal nutrition. *Brahmi* has its own unique, strong herbal taste and a bitter aftertaste.^[3]

On review, it is observed that no single hand information is available regarding the uses and indications of *Brahmi* with special reference to the classical texts of *Ayurveda*. Hence, in this article, an attempt has been made to present in depth critical review of *Brahmi*.

MATERIALS AND METHODS

Various available *samhitas* (classical texts), *nighantus* (lexicons), *samgraha granthas* (compendia) and some other texts related to *prayoga* (uses), habit & habitat, external morphology were referred; the synonyms, properties, actions and various formulations with their *adhikara* (prime indication) were compiled, critically analyzed and arranged in a systematic manner.

RESULTS AND DISCUSSION

Ayurvedic lexicon describes the plant drug through *paryaya* (synonyms). On the basis of reported synonyms,

it is observed that *Brahmi* was attributed about 46 synonyms for describing its morphological and pharmacological characters, in various classical texts. (Table 1)

The different synonyms attributed to *Brahmi* shows that it is very well known plant on Earth. It prefers watery places to development of growth. It is potent drug and it properties like *dev indra* (best amongst all plant.). It is

indigenous divine plant and mainly it acts on brain diseases and also it improves the intellect, brain power and memory. It improves the voice as well as cure the diseases of voice. It imparts brain intelligence like *devi Saraswati* and enhancing learning in human. It provides luster and strength to the hair. It is powerful drug used in many diseased condition and it rejuvenates the individual as well as act as anti-ageing drug. (Table 1)

Table 1: Synonyms attributed to *Brahmi* in different *Ayurveda* books.^[4-16]

Sr.	Synonyms	Probable interpretation
1.	<i>Andri</i>	It prefers water to grow and it is powerful like lord Indra
2.	<i>Bharti</i>	It is indigenous plant
3.	<i>Brahmakanyaka</i>	It is similar to goddess saraswati
4.	<i>Brahmasoma</i>	It is marvelous plant
5.	<i>Brahmcharini (Somvallari)</i>	A creeper which prefers marshy places for its growth
6.	<i>Brahmi</i>	It is memory enhancer
7.	<i>Brahmasuvarchala</i>	It improves intelligence as well as it is best <i>malabhedaka dravya</i>
8.	<i>Divya</i>	It is divine medicinal plant
9.	<i>Divyateja</i>	It provides divine nature
10.	<i>Indrawalli / Indrani</i>	It is potent drug identical to <i>Dev Indra</i>
11.	<i>Jalanimba</i>	It easily grow in water and having bitter test like neem plant
12.	<i>Jalodwaya</i>	The area which is full of water is attracting the <i>brahmi</i> to grow.
13.	<i>Kapotvanka</i>	It's leaves are resemble to the wings of pigeon
14.	<i>Kapotvega</i>	Due to its cold potency it works slowly like pigeon
15.	<i>Laghubrahmi</i>	It is a merely small herb
16.	<i>Lavanya</i>	It increase the strength of hair
17.	<i>Lavshaya</i>	It improves the hair luster
18.	<i>Mahaushadhi</i>	It has many uses
19.	<i>Mandukmata / manduki</i>	It is used as substitute drug for <i>Mandook parni</i>
20.	<i>Matsyakshi</i>	Its flowers resemble the eyes of fish in shape
21.	<i>Medhya</i>	It act as brain tonic
22.	<i>Munika</i>	It is used by Sages
23.	<i>Nirabrahmi / Jalabrahmi</i>	Easily grows in water places
24.	<i>Sarswati</i>	It improves intelligence like goddess <i>Sarasvati</i>
25.	<i>Satyanama</i>	The name given is reputable
26.	<i>Saumyalata / Somlata</i>	It is like climber, which is filled with Amrita or Soma
27.	<i>Sharadi</i>	It has <i>sheet veerya</i> properties
28.	<i>Smarini</i>	It improves memory power
29.	<i>Soma</i>	It has <i>sheeta veerya</i>
30.	<i>Somya</i>	Its pleasant looking creeper
31.	<i>Sunama</i>	The name is easily memorable
32.	<i>Suraksha</i>	It protects from diseases
33.	<i>Surejya / Surswara</i>	It can be utilized to cure voice problem
34.	<i>Surestha</i>	It provides good voice quality
35.	<i>Surasa</i>	It has pleasant taste
36.	<i>Sursrestha</i>	It improves the voice
37.	<i>Suswara</i>	It is used to improve voice quality
38.	<i>Suvarchala</i>	It is used to removing <i>mala</i> naturally
39.	<i>Swaymbhuvi</i>	It improves intellectual
40.	<i>Twashtha</i>	It is provider of longevity
41.	<i>Twastree</i>	It is the maker of divine implements in the human body
42.	<i>Vaidhyaji / Vaidhyatrii</i>	It cures diseases like a <i>Vaidya</i>
43.	<i>Vara</i>	It beautifies the hair
44.	<i>Vayasya</i>	It rejuvenates the individual
45.	<i>Vayastha</i>	It act as anti-ageing drug
46.	<i>Veera</i>	It is a potent drug

Habit & Habitat^[17]

The herb is found in moist or wet places, such as on borders of water channels, wells, irrigated fields etc. It grows throughout India, up to 1,200 meters elevation. The glabrous annual creeper is succulent.

External Morphology^[18]

A glabrous somewhat succulent creeping herb; stems 10-30 cm. long, rooting at the nodes; branches numerous, ascending. Leaves sessile, decussate, 6.25 by 2.5-10 mm, obovate – oblong or spatulate, rather fleshy, dotted with black specks, very obtuse, quite entire, nerves obscure. Flowers axillary, solitary; bracteoles 5 mm. long, linear; pedicels 0.6-3.2 cm. long, slender. Calyx glabrous, divided to the base; upper sepals 6 by 3-4 mm, ovate, acute; the other 4 sepals slightly shorter than the upper; the 2 inner lateral ones 1.5 mm. wide, lanceolate, acute.

Corolla pale blue or almost white, 8 mm. long; lobes nearly equal, rounded, spangled when fresh with shining dots. Anthers bluish purple; pollen white. **Fruit** capsule 5 mm. long, ovoid, acute, pointed with the style-base, glabrous. **Seeds** about 0.85 mm. long, oblong striate, pale.

Pharmacological properties of Brahmi

Brahmi has attributed with *Tikta, kashaya rasa, Madhura vipak* and *Sheeta virya, Laghu, Snigdha* and *Sara guna*. It pacifies *Pitta-vata dosha*. It is being recommended to alleviate various disease conditions like *daurbalya* (weakness), *unmada* (mental disorder), *jwara* (fever), *sotha* (inflammation), *agnimandya* (loss of appetite), *ajirna* (indigestion), *kushtha* (skin disease), *swasa* (asthma), *visha* (poison) and *kandu* (itching). (Table 2).

Table 2: Pharmacological properties of Brahmi.^[19]

Rasa	Guna	Veerya	Vipaka	Dosha Karma ^[20]	Karma	Rogagnata
Tikta, Kashaya	Laghu, Snigdha, Sara	Sheeta	Madhura	Vata-pitta hara	Balya, Medhya, Jwarahara, Sothahar, Deepana, Pachana, Kusthaghna, Swasahara, Vishaghna and Kandughna.	Dourbalya, Unmada, Apasmara, Jwara, Sotha, Agnimadhya, Ajirna, Kustharoga, Swasa, Vishroga and Kanduroga.

Part used^[21] & **Dose**^[22]: A different parts of the plant *Brahmi* is used, but mainly leaves and whole plant are taken as part used in making formulation. It is used alone as *swarasa* in the dose of 0.5 tola – 1 tola (nearly 5ml - 10ml) and dried *churna* can be taken in the amount of 4 ratti – 8 ratti (500 mg – 1gm).

Formulations of Brahmi / Brahmi in classical texts

Various *sangraha granthas* (compendia) were scrutinized for the formulations containing *Brahmi* as an ingredient. *Samgraha granthas* (different pharmacopoeia) of Ayurveda (especially different volumes of *BBR-Bharat Bhaishjaya Ratnakara*) reports about 88 formulations having *Brahmi* as an ingredient. It is used both internally (78) as well as externally (03) and 07 formulations are used internally & externally, in various dosage forms such as *svarasa*(expressed juice), *kvatha*(decoction), *churna* (powder), *taila*(oil), *ghrita*(ghee), *avleha*(confectionaries), *lepa*(paste), *varti*(suppositories), *rasa* (mercurial preparation), *vati* (tablet). (Table 3)

The formulations of *Brahmi* indicated for internal

administration in disease condition like *unmada* (insanity), *apasmara* (epilepsy), *swarabheda* (hoarseness of voice), *jwara* (fever), *bhagandara* (fistula), *amlapitta* (acidity), *kushtha* (skin disease), *pandu* (anemia), *raktapitta* (bleeding disorder), *swasa* (asthma), *kamala* (jaundice) etc. The many formulations internally act as *medhya* (brain tonic), *ayushya* (anti-ageing), *vajikara* (sexual tonic), *balya* (tonic) etc. In external application, the formulations are indicated for *keshya* (hair tonic), *unmada* (insanity) and *vrana* (wound). Out of 88 formulations 07 formulations are used internally as well as externally in different conditions of the body like *unmada* (insanity) & *apasmara* (epilepsy), *krumi* (worms), *gulma* (abdominal lump), *vishahara* (anti-poisoning), *medhya* (brain tonic) and *Bhutabaddha* (maniac). (Table 3)

It seems that, highest number of formulations were founded in *jwara* (19), as *medhya* (12), *unmada* (07), and as *ayushya* (06). It is observed that *Panchang* (whole plant) of *Brahmi* being used in highest number of formulations. (Table 3)

Table 3: Formulations of Brahmi as stated in classical texts of Ayurveda.^[23]

Sr. No.	Formulations	I/E	Dosage form	Adhikara	Reference
1.	Abhrakrasayan	I	Vati	Medhya	BBR-1
2.	Abhravatak	I	Vati	Vajikara	BBR-1
3.	Abhyamlkirasayan /Bramharasayan	I	Avleha	Ayushya	BBR-1
4.	Andrirasayan	I	Churna	Ayushya, Medhya	BBR-1
5.	Astamangalaghrita	I	Ghrita	Medhya	BBR-1
6.	Astamangalaghrita	I	Ghrita	Medhya	BBR-5

Sr. No.	Formulations	I/E	Dosage form	Adhikara	Reference
7.	Bala rasa	I	Vati	Sanipat Jwara	BBR-3
8.	Bhadranshtailam	I	Oil	Kustha	BBR-3
9.	Bhalatakadhyachurna	I	Churna	Kustha	BBR-3
10.	Bhimrudro rasa	I	Vati	Vishahara	BBR-3
11.	Bramhi ghrita	I	Ghrita	Unmada, Kustha	BBR-3
12.	Bramhi Rasayan	I	Avleha	Medhya	BBR-3
13.	Bramhivati/Bramhiadhyavati	I	Vati	Sanipat Jwara	BBR-3
14.	Bramhiadichurna	I	Churna	Swarya	BBR-3
15.	Bramhiadikwatha	I	Kwatha	Sanipat Jwara	BBR-3
16.	Bramhiadilepa	E	Lepa	Keshya, Vrana	BBR-3
17.	Bramhiadiswarasa	I	Swarasa	Unmada	BBR-3
18.	Bramhirasadi yoga	I	Bhasma	Unmada	BBR-3
19.	Bramhiyadhyavarti	E	Varti	Unmada	BBR-3
20.	Chandrarudro rasa	I	Bhasma	Vichchirchika	BBR-2
21.	Chandrodayo rasa	I	Bhasma	Balya, Medhya	BBR-2
22.	Chatudarshangloha	I	Churna	Swasa - Kasa	BBR-2
23.	Chatuhsasthikwatha	I	Kwatha	Jwara	BBR-2
24.	Dashmuladhyamtailam	I/E	Oil	Unmada, Apasmara	BBR-3
25.	Dwatrishandakhyakwatha	I	Kwatha	Sanipat Jwara	BBR-3
26.	Haritakyadikwatha	I	Kwatha	Sanipat Jwara	BBR-5
27.	Hiranyakhyaavleha	I	Avleha	Ayushya	BBR-5
28.	Jwnabherav rasa	I	Bhasma	All Disease	BBR-2
29.	Kapotvangadi yoga	E	Churna/ Lepa	Vrana	BBR-5
30.	Khasparnvatika	I	Vati	Kosthavikar	BBR-5
31.	Kinnarkantha rasa	I	Vati	Svarabhanga	BBR-5
32.	Kiratatiktadikalka	I	Kalka	Jihvakari	BBR-5
33.	Kushandhatailam	I	Oil	Basti, Diabetes	BBR-1
34.	Kusthadileha	I	Avleha	Ayushya	BBR-5
35.	Kusumayudha rasa	I	Churna / Lepa	Balya, Vajikara	BBR-5
36.	Mahabhravati	I	Vati	Jwara	BBR-4
37.	Mahakalyanakghrita	I	Ghrita	Vajikara	BBR-4
38.	MahamrutunjyaGutika	I	Vati	Sharpavisha	BBR-4
39.	Mahatiktamghrita	I	Ghrita	Raktapitta	BBR-4
40.	Mandukparnadikwatha	I	Kwatha	Trushnanigrahana	BBR-4
41.	Manthanbhairav rasa	I	Bhasma	Sanipat jwara	BBR-4
42.	MrutasanjivaniGutika	I	Vati	Sanipat Jwara	BBR-4
43.	Paniyabhatvati	I	Vati	Ayushya	BBR-3
44.	Paniyavatika	I	Vati	Sanipat Jwara	BBR-3
45.	Pashanbhedadikwath	I	Kwatha	Stone killer	BBR-3
46.	Pavehanimbadiachurna	I	Churna	Bhagandar	BBR-3
47.	Prajasthapankasaya	I	Kwatha	For pregnancy	BBR-3
48.	Pratibhes rasa	I/E	Bhasma	Krumi	BBR-3
49.	purvakalavati	I	Vati	Grahni	BBR-3
50.	Rasabhravati	I	Vati	Kapharoga	BBR-4
51.	Rasendragutika	I	Vati	Kapharoga	BBR-4
52.	Rasnadichurna	I	Churna	Swasa - Kasa	BBR-4
53.	RasnadiKwatha	I	Kwatha	Pandu	BBR-4
54.	Ratnagiri rasa	I	Bhsma	Jwarahara	BBR-4
55.	Sahchartailum	I/E	Oil	Gulma	BBR-5
56.	Sankhapuspadyamghritam	I	Ghrita	Apasmara	BBR-5
57.	Saptangaghritam	I	Ghrita	Medhya	BBR-5
58.	Sarashapadyagutika	I/E	Vati	Vishahara	BBR-5
59.	Sarsvatarista	I	Arista	Ayushya, Medhya	BBR-5
60.	Sarsvatichurna	I	Churna	Medhya	BBR-5
61.	Sarsvatighritam	I/E	Ghrita	Medhya, Bhutabadha	BBR-5
62.	Sarivadighritam	I/E	Ghrita	Medhya	BBR-5
63.	Shalurparnaavleha	I	Avleha	Sanipat Jwara	BBR-5

Sr. No.	Formulations	I/E	Dosage form	Adhikara	Reference
64.	Shilajatu churna	I	Churna	Kshaya	BBR-5
65.	Shudhavati	I	Vati	Amlapitta	BBR-5
66.	Sinhadi Kwatha	I	Kwatha	Sanipat Jwara	BBR-5
67.	Smritisagar rasa	I	Bhasma	Apasmara	BBR-5
68.	Soddhavati	I	Vati	Sanipat Jwara	BBR-5
69.	Soma ghrita	I	Ghrita	Medhya	BBR-5
70.	Somnatha rasa	I	Vati	Prameha	BBR-5
71.	Sompani rasa	I	Vati	Sanipat Jwara	BBR-5
72.	Sudhanidhi rasa	I	Vati	Kamala	BBR-5
73.	Sunthadhyachurna	I	Churna	Swasa	BBR-5
74.	Sutbhashma yoga	I	Kwatha	Apasmar	BBR-5
75.	Svarna yoga	I/E	Churna	Apasmara, Unmada	BBR-5
76.	Svasakasandhivati	I	Vati	Swasa	BBR-5
77.	Taradikwatha	I	Kwatha	Pralapa	BBR-2
78.	Trikatvadichurna	I	Churna	Sanipat Jwara	BBR-2
79.	Triphaladimandura	I	Churna	Amlapitta	BBR-2
80.	Triphaladuymchurna	I	Churna	Sushti	BBR-2
81.	Ugradikwatha	I	Kwatha	Jwara	BBR-1
82.	Uragandhadidhupa	I	Dhupa	Masurhika	BBR-5
83.	Unmadkutha rasa	I	Churna	Unmada	BBR-5
84.	Vidhyadharabhram	I	Churna	Deepana	BBR-4
85.	Vidhyanathvati	I	Vati	Sanipat Jwara	BBR-4
86.	Virtarvaditailam	I	Oil	Ashmari	BBR-4
87.	Kshudradikwatha	I	Kwatha	Sanipat jwara	BBR-5
88.	Yakshmantakleha	I	Bhasma	Kshaya	BBR-4

CONCLUSION

Brahmi (*Bacopa monnieri* Linn.) is a small herb belongs to family scrophulariaceae, easily found near moist or wet places throughout India. *Brahmi* is attributed with pharmacological properties i.e. *kashaya*, *tikta rasa*, *madhura vipaka* and *snighdha*, *sara*, *laghu guna*, *sheeta veerya*. *Bharat Bhaishajya Ratnakara a samgraha grantha* of *Ayurveda* reports about 88 formulations having *Brahmi* as an ingredient. It is used in more than 10 different dosage forms, used in about more than 16 diseased conditions, 03 external, 78 internally and 07 externally as well as internally used. *Brahmi* is mainly useful to combat various disease conditions like insanity, epilepsy, fever, brain disorders, memory loss, skin disease, hoarseness of voice etc. It is observed that *Panchang* of *Brahmi* being used in highest number of formulations.

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