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Medhya Rasayana WSR To BRAHMI

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INTRODUCTION:

Brahmi is a typical herb originated all over India. It is a plant which lives more than two years of 10 cm high. The word Brahmi comes from the word 'Brahman' which means Consciousness of God. Brahmi gives a state of calmness to the body, soul and spirit. In subtropical and poorly water drained areas it grows well. It grows faster at 30°C-40°C. Created on their role in treatment of slight and enduring health problems, plants have been used for a thousand years now. As of late, herbal plants are in attention due to their ability to show hopefully outcomes in numerous health difficulties.

Botanical name : Bacopa monnieri

Vernacularname : South Indians Bacopa as brahmi, North Indians using Centella asiatica.

Hindi : Jalnim and in Sanskrit : Brahmi, Sarasvati.

Synonyms: Aindri, Nirbrahmi, Kapotavankaa, Mandukaparni, Bhaarati, Matsyaakshaka, Shaaluraparni.

Morphology:

A glabrous, punctuate, succulent creeping annual herb. Leaves-simple, sessile, obovate or spatulate, entire, fleshy. Flowers-solitary, axillary, white; bracteoles linear. Fruits-ovoid, acute, acute capsules included in the persistent calyx. Flowers and fruits almost throughout the year (mainly between February-April).

Taxonomical position:

Kingdom: Plantae

Division: Angiosperms

Class: Eudicots

Order: Lamiales

Family: Scrophulariaceae Genus: Bacopa

Species: monnieri

Geographical Distribution:

Brahmi commonly grows in marshy areas.

Habitat:

Common in moist places throughout India, Nepal, Sri Lanka, China, Pakistan, Taiwan, southern Africa, Australia, South America.

Propagation:

The plant is propagated by soft herbaceous cuttings. For mass propagation, whole plant is cut into small divisions and planted directly in the sunken beds. The cuttings are transplanted in wet soil at spacing of 10×10cm to get maximum herbage yield. Flood irrigation is provided quickly just after planting.

Planting:

Plant cuttings about 4-5 cm long, each containing a few leaves, nodes and roots are ideal planting materials. These can be obtained by cutting mother plants into small pieces with roots. The cuttings are transplanted in wet soil at spacing of 40 cm × 40 cm. Flood irrigation is provided immediately after planting.

Harvesting:

Plant starts yielding by 5-6 months after transplantation. Harvesting is done in the month of October-November, 4-5 cm from the base is cut for harvesting. 2-3 harvestings are done in one year. Harvested material is washed and cleaned of the external matter. It is then spread in thin layer on ground under shade at room temperature. The product is tossed twice a day for uniform drying. The drying process takes about 8 to 10 days then packing is done in airtight bags for long distance transportation. The total dry herb yield of plant in two harvesting seasons is approximately 100 quintal per hectare.

Uses in Ayurveda:

Bacopa is useful in-Double vision due to weakness of nerves, dizziness, confusion, lack of mental composure. Depression, anxiety, nervousness, phobia, manic depressive psychosis sleep disturbances, insomnia, feeling sleepy all the time. Lack of memory, loss of concentration, Hearing and vision loss. As memory and confidence booster ahead of exams. Tinnitus, neuropathy-Brahmi is a very good nerve tonic. Speech problems in children-Brahmi is a promotes brain growth and improves coordination between limbs, tongue and brain. Hypertension-Bacopa is very useful in high BP¹⁻³.

Brahmi Benefits as per Ayurveda:

Shophahara-good anti inflammatory herb
Panduhara-useful in anemia

Jvarahara-useful in fever

Deepani-improves digestion power

Kushtahara-relieves itching, useful in pruritis

Pleeha-useful in spleen disorders

Vayasa sthapani, Ayushya-improves life quality, anti aging

Unmada vinashini-useful in psychiatric disorders

Medha-improves intelligence

Vak-improves speech, helps in speech related development problems in children.

Svarya, Svarada-improves quality of voice

Hrudya-good for heart, acts as cardiac tonic

Shvasahara-useful in asthma, chronic bronchial disorders

Maha-useful in urinary tract disorders and diabetes

Kasajit-useful in cough, cold

Visha hara-natural detoxification herb, useful in poisoning. In ADHD disease Brahmi is used⁴⁻⁶.

Chemical composition:

Ascorbic acid, Nicotinic acid, Brahmine, Herpestine, Alanine, Hentri-acontane, Octacosane, Monnierin(saponin), Hersaponin, Bacosid A&B, Bacogenins A1-A4(Sapogenins) B-Sitosterol

Pharmacological Activities:

Memory enhancement: The Ayurvedic herb Brahmi also called Bacopa. It helps in increasing the memory and learning skill of human and it also sharpen the brain. It's used to treat Alzheimer's disease, anxiety, along with fighting stress and improving memory.

Antioxidant: The antioxidant potential is good in Brahmi which protects from oxidative destructions. The cellular destruction is due to free radical and which also enhance antioxidant activity in other organs that mainly acts on brain related to the cognitive functions⁷.

Anti-depressant{ The active ingredients affect the hormonal balance in the body and affect the stress hormone in our body. It increases the serotonin levels in the brain, which relieves from anxiety, nervousness and allows relaxing the mind, when Brahmi leaf is administered.

Anti-Parkinson: The cluster of alpa-syuclein protein in the sobstantia nigra, the dopamine producing cell of the brain is reduced by Brahmi. It kills dopamine producing cells. Brahmi prevents the death of dopamine cells and symptoms of Parkinson's.

Anti-convulsant: It has a neural pathway and prevents the epileptic fits. Bacosides promote acetylcholine which activates GABA, it balance the chemicals within the brain that controls the seizure activity. It also enhances GABA activity and reduces the cognitive problems^{8,9}.

Anti-inflammatory: It is used for systemic redness in the brain and swelling in the body. When Brahmi leaf is applied in the affected part, it reduces swelling and decreases the irritation level inside the body. This also has important anti inflammatory action that may well be applicable to its efficiency in the curative of numerous inflammatory situations in traditional medicine¹⁰.

Conclusion:

Comparative studies between Brahmi and similar allopathic medicines are essential to evaluate the efficacy and safety profile of the erstwhile therapies. Due to small sample size of human trails, we recommend large

multicentric clinical trials to confirm bio-safety profile of Brahmi and also to its additional and serious side effects. Brahmi is used for Alzheimer's disease.

References:

1. Agnivesha, Charaka Samhita, Ayurveda Dipika commentary by Chakrapanidutta, revised ed., Chikitsa Sthana (1:1/16), pg. 377, Chaukhambha Surbharati Prakashan, Varanasi, (2005).
2. Sharma PC, Yelne MB, Dennis TJ. Database on Medicinal plants used in Ayurveda and Sidha. Vol. 1. New Delhi: CCRAS, Dept. of AYUSH, Ministry of Health and Family Welfare, Govt. of India; 2005. pp. 265 –6.
3. Sushruta: Sushrut Samhita, with commentary of dalhana, Edited by Vaidya Jadavaji Trikamaji Acharya, chaukhambha oriental a, Varanasi. 8th edition. Sutra Sthana (15:41), pg. 212 (2005)
4. Illustrated Dravyaguna Vijnana, Volume II by Dr. J. L.N Shastry.
5. Ballard C, Gauthier S, Corbett A, Brayne C, Aarsland D, Jones E. Alzheimer's disease. *Lancet*. 2011;377:1019–1031.
6. Priller C, Bauer T, Mitteregger G, Krebs B, Kretzschmar HA, Herms J. Synapse formation and function is modulated by the amyloid precursor protein. *J Neurosci*. 2006;26:7212–7221
7. Kahol AP, et al. Council of Scientific and Industrial Research Process for the preparation of a extract rich in Bacosides from the herb *Bacopa monniera*. United States Patent US006833143B1 (December 21, 2004).
8. Singh HK, Dhawan BN. Neuropsychopharmacological effects of the Ayurvedic nootropic *Bacopa Monniera* Linn. (Brahmi) *Indian J Pharmacol*. 1997;29:359–365.
9. Bhattacharya SK, Bhattacharya A, Kumar A, Ghosal S. Antioxidant activity of *Bacopa monniera* in rat frontal cortex, striatum and hippocampus. *Phytother Res*. 2000;14:174–179.