Available online through
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ISSN 2321 - 6328

Review Article

BHAISHAJYA KALPANA USED AS MEDHYA RASAYANA: A REVIEW

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Article Received on: 06/11/25 Accepted on: 29/12/25

DOI: 10.7897/2321-6328.136410

ABSTRACT

Rasayana is of two words, i.e. RASA + AYANA, which means one gets the excellence of Rasa dhatu and other dhatus or nourishing the dhatus of the body. Rasayana drugs functions upto the deeper tissue level, those which are specific to the brain cells and tissues are called as Medhya Rasayana[2]. Medhya Chatuska mentioned in Charaka Samhita are Mandukaparni *(Centella asiatica Linn.)*, Yastimadhu *(Glycyrrhiza glabra* Linn*.),* Guduchi *(Tinospora cordifolia (Wild) Miers)* and Shankhapushpi *(Convolvulus pleuricaulis Chois)*, specially mentioned with wide range of applications on different systems. Medhya Rasayana is traditionally recognized for its role in enhancing cognitive performance and supporting brain health. It is believed to aid in the regeneration of neural tissues, while also exhibiting antistress and adaptogenic properties. Additionally, it contributes to improved memory and may help slow down the aging process of the brain. The formulations mentioned in the Brihat Trayī texts that are classified as Medhya Rasayana and used as Medhya have been compiled according to their respective Kalpana's (pharmaceutical preparations). Compilation of formulations according to Panchavidha kashaya kalpana, Upakalpana, avaleha kalpana and Sneha kalpana. Numerous combinations and Yogas (formulations) mentioned in the Brihat Trayī possess Medhya properties, which still require systematic exploration and scientific discussion and conclusion.

Keywords: Medhya Rasayana, Bhaishajya Kalpana, *Centella asiatica Linn., Glycyrrhiza glabra* Linn*., Tinospora cordifolia (Wild) Miers, Convolvulus pleuricaulis Chois*

INTRODUCTION

Bhaishajya Kalpana the word Bhaishajya means Aushadha (drug), and Kalpana means Yojana (planning) i.e. the ideology of making use of different drugs. Bhaishajya Kalpana is an important branch of Ayurveda which deals with the preparation of various Ayurvedic formulations. There are specific things to be executed, certain principles to be followed while preparation of medicinal formulations mentioned in ancient ayurvedic texts. These principles when followed give you a standard formulation. For a disease to be cured, it is important that the medicine used should be of standard quality[1].

Rasayana which gives long life, improves memory, increases strength, and helps in reducing the disease condition.[2] Those Rasayana which are specific to brain tissues are considered as Medhya Rasayana. Medha means intelligence or power of retention and Rasayana means rejuvenation therapy Mandukaparni, Yashtimadhu, Guduchi, and Shankhpushpi are the most mentioned Medhya Rasayana herbs in the Charaka Samhita. The term "nootropic" comes from the Greek word nous, meaning "mind," and trepein, meaning "to bend" or "turn. Gen supply of the brain by stimulating nerve growth. Medhya Rasayana works on Dhi (power of grasping), Dhriti (power of retention) and Smriti (power of recollection). In Ayurveda, Medhya drug enhances the level of neurotransmitters and blood flow to the brain, improves oxygen and nutrition availability towards the brain.[3]

Different Kalpana's (formulations) of a drug exhibit distinct properties and therapeutic actions. The effectiveness of a Medhya Rasayana depends on its Rasa Panchaka—Rasa (taste), Guna (quality), Veerya (potency), Vipaka (post-digestive effect), and Prabhava (specific action). To achieve the desired effect, the drug must be administered in a specific form that aligns with the condition being treated. Therefore, Bhaishajya Kalpana (pharmaceutical processing) plays a crucial role in enhancing the efficacy of Medhya Rasayana. Hence this article enlightens on different Kalpana's used in Medhya Rasayana.

Different combinations and yoga mentioned in Brihat trayis are compiled according to its different dosage form like Panchavidha kashaya kalpana, Upakalpana and Sneha kalpana.

Table 1: The yogas of Swarasa Kalpana

Yoga	Ingredients	References
Mandukaparni Yoga	Swarasa of mandukaparni with milk consumed for 3months	(Su chi 28/6)[4]
Brahmi Yoga	Swarasa of Brahmi along with milk	(Su chi 28/6)[5]
Alambusa Kalpa	Swarasa prepared out of Alambusa (vamsalochana)	(A S U 49/68)[6]

Table 2: The yogas of Kalka Kalpana

Yoga	Ingredients	References
Mandukaparni yoga	Kalka ofmandukaparni kept in Kshira for 3 days and consumed for 3 days.	(Su chi 28/7)[7]
Vacha yoga 1	Kalka of Hemavathi Vacha dissolved in Kshira and consumed for 12 days.	(Su chi 28/9)[8]

Table 3: The yogas of Churna Kalpana

Yoga	Ingredients	References
Shweta avalguja yoga	Churna of drug mixed with the guda.	(Su chi 28/3-4)[9]
Vacha yoga 2	Churna of vacha + ghrita + swarna bhasma + bilwa churna mixed and consumed.	(Su chi 28/19)[10]
Yavaka yoga	Churna of yavaka then add pippalli and madhu	(Su chi 28/19)[11]
Aindra rasayana	Churna of brahmi, vacha, pippalli, shankapushpi and swarna with ghrita or madhu are consumed.	(Ch chi 1.3/24-29)[12]

Table 4: The yogas of Ghrita Kalpana

Yoga	Ingredients	References
Brahmi ghrita	Ghrita is prepared using brahmi, vidanga, vacha, amrutha , and triphala.	(Su chi 28/6)[13]
Naladadi yoga	Ghrita prepared with kashaya of nalada, katurohini, madhuka, shankapushpi, chandana, sariva, triphala etc.	(AHU 39/46)[14]
Chatuskuvalaya ghrita	Prepared out of nala, kanda, dala, kesara of nilotpala and swarna patra.	(AHU 39/49)[15]
Shankapushpi ghrita	Ghrita prepared using shankapushpi, madhuka, katurohini, chandana, triphala, amritha.	(A S U 49/36)[16]
Bhallataka ghritaprasha	Ghrita prepared of bhallataka and yastimadhu	(ASU 49/57)[17]

Table 5: The yogas of Taila kalpana

Yoga	Ingredients	References
Vasa taila yoga	Taila prepared using one tola Kashaya of vasa mula.	(Su chi 28/18)[18]

Table 6: The yogas of Avaleha kalpana

Yoga	Ingredients	References
Brahma rasayana	Leha prepared out of pathya, dhatriphala, panchamula,mandukaparni, shankapushpi, vacha, triphala, yasti, musta, chandana, agaru etc	(AHU 39/15-23)[19]
Abhayaamalaki yoga	Leha prepared out of abhaya, amalaki, pippalli areadded with palasha kshara kept in pot for six months.	(AHU39/24-27)[20]
Vidari yoga	Leha prepared out of vidari, bala, amritha, mandukaparni, shankapushpa, madhuka, shatavari.	(AH U 39/60-61)[1]
Chyavanaprasaha	Leha prepared out of dashamula, amalaki, amritha, meda and mahameda etc	(AHU 39/33-40)[22]
Triphala yoga	Leha prepared using triphala, vidanga, pippalli, vacha, lavana and consume for one samvatsara.	(Chchi1.3/46-47)[23]

Table 7: The yogas of other combinations

Yoga	Combination	References
Bhallataka yoga	Bhallataka consumed along with either with dadhisara, amalaki, ghrita, kshera, tila, yavasaktu to acts as medhya	(A H U 39/80)[24]
Haritaki yoga	Haritaki is fried withghee followed by drinking ghee makes a memory stay long.	(A H U 39/84)[25]

Table 8: Guna karma of medha chatushka

Plant [26]	Rasa	Guna	Veerya	Vipaka	Dosha	Karma
Mandukaparni	Madhura (sweet), tikta (bitter), kashaya (astringent)	Laghu (lightness), Sara (mobility)	Sheeta (cold)	Madhura (sweet)	Tridosha hara	Bala agni vardana, medhya
Yastimadhu	Madhura (sweet)	Guru (heaviness), Snigdha(unctuousness)	Sheeta (cold)	Madhura (sweet)	Pitta vata hara	Medhya, chakshushya, balavardana.
Guduchi	Tikta (bitter), kashaya (astringent)	Guru (heaviness)	Ushna (hot)	Madhura (sweet)	Tridosha hara	Balya, medhya, rasayani, amahara.
Shankhapushpi	Katu (pungent), tikta (bitter), kashaya (astringent)	Laghu (lightness)	Ushna (hot)	Madhura (sweet)	Tridosha hara	Medhya, rasayani, vrushya.

RESEARCH UPDATES

The comparative effect of Naladadi Ghrita with Kushmanda Ghrita (ghee) in reducing the signs and symptoms of ADHD and showed both were effective on ADHD Rating Scale and they provided 35%, 38.68% of relief, respectively ($P < 0.001$). The difference in between both groups was statistically insignificant ($P > 0.05$)[27]. A randomized placebo controlled clinical trial was carried out with the aim of evaluating the anti-depressant and psychoactive effect of Brahmi ghrita on depression and showed moderate improvement in 50% patients and mild improvement in 35% patients. Its total effect was statistically highly significant ($p<0.005$) as compared to placebo. Also, in overall effect, Brahmi ghrita resulted in moderate improvement for 40% patients and mild improvement for 55% patients, which is statistically significant at 1% level as compared to placebo[28].The study conducted on how fresh juice from *Centella asiatica* leaves to young rats during their rapid growth phase affects certain brain cells. The focus was on the amygdala, a part of the brain that helps with learning and memory. The researchers gave the juice to newborn rats and later looked at how their brain cells developed. They found that the treated rats had more branching and longer extensions in their neurons, which could mean better memory and brain function. Hence, it can be used for enhancing neuronal dendrites in stress and other neurodegenerative and memory disorders[29].Study how liquorice (*Glycyrrhiza glabra*) affects memory in mice. Researchers gave three different doses of its water extract—75, 150, and 300 mg/kg—for 7 days. They used two tests to check learning and memory. The middle dose (150 mg/kg) worked best. It helped mice learn better and remember more. It even reversed memory loss caused by drugs like diazepam, scopolamine, and alcohol. Liquorice's anti-inflammatory and antioxidant powers might be the reason it helps with memory [30].In a study involving 30 healthy volunteers aged 18–30, participants were given either *Tinospora cordifolia* (500 mg of aqueous extract daily) or a placebo for 21 days in a double-blind, randomized setup. Their memory and attention were tested using various psychological tools focused on visual, verbal, and logical memory, as well as concentration. The group that received Tinospora showed a clear improvement in verbal learning and short-term logical memory compared to the placebo group, with no harmful side effects reported. This suggests that *Tinospora cordifolia* may help boost memory and learning in healthy individuals[31].In different parts of India, various plants are called shankhpushpi, which creates confusion about its identity. The most used ones are *Convolvulus pluricaulis*, *Evolvulus alsinoides*, and *Clitoria ternatea*. In the study All three were tested for their effects on memory, anxiety, and mood. *C. pluricaulis* showed the strongest brain-boosting and calming effects at 100 mg/kg, while *E. alsinoides* and *C. ternatea* improved memory and reduced anxiety at 200 mg/kg and 100 mg/kg, respectively, and showed antidepressant effects. At high doses, all three acted as central nervous system depressants. Based on memory results, *C. pluricaulis* is suggested as the most suitable plant to be used as shankhpushpi[32].

DISCUSSION

Medhya rasayana drugs such as Mandukaparni, Yastimadhu, Guduchi and Shankhapushpi are called as Medhya chatushka.Medhya Rasayana acts at different levels such as Rasa (taste), Agni (fire), and Srotas (channels). Medhya drugs act according to their Prabhava (impact) specifically to improve memory and intellect. Amla (sour), Lavana (salty) and Katu (pungent) rasa are considered of being least important in Medhya action. Similarly, Ushna (hot) veerya (potency) drugs stimulate Saadhaka pitta that helps in promoting Medhya action. Majority of drugs are having Madhura vipaka which provide nourishment to the brain by forming Ooja (essence) dhatus. The Sheeta (cold) virya and Madhura (sweet) vipaka (post digestive effect) of drugs Mandukaparni and Yastimadhu which may help in promoting kapha and enhances dharana karma. Ushna virya and tikta (bitter) rasa of drugs guduchi and Shankhapushpi which may help in promoting pitta and enhances grahana (grasping power) and smarana (memory power) karma.Therefore, these drugs have beneficial effect on body as well as on mind. Prana vayu, Udana vayu, Sadhaka pitta, Tarpaka and Avalambaka kapha have been considered to contribute to Medhya action of the medicinal plants[3]. In contemporary science, Neuronal dendritic growth property is effective in reducing brain regional lipid peroxidation (LPO) and protein carbonyl (PCO) levels thus increases antioxidant status and improves the altered levels of neurotransmitters such as 5HT, acetylcholine, epinephrine, nor - epinephrine, GABA (gamma-aminobutyric acid) and glutamate. Medhya rasayana increases circulation in the brain, varies the concentration of neurotransmitters, prevents inflammation of the brain, activates the formation of new brain cells and protects the brain from free-radical damage[33]. Apart from Medhya Chatuska many other combinations and Kalpa's have been mentioned in Brihat trayis which needs pre-clinical and clinical studies and discussion on available research works.

CONCLUSION

Medhya Rasayana, particularly the Medhya Chatushka—Mandukaparni, Yastimadhu, Guduchi, and Shankhapushpi—acts through Rasa, Agni, and Srotas to enhance intellect and memory. Their specific Prabhava, along with Sheeta or Ushna Virya and Madhura or Tikta Rasa, balances Kapha and Pitta to support Dharana, Grahana, and Smarana karmas. Classical texts highlight the role of Prana Vayu, Udana Vayu, Sadhaka Pitta, Tarpaka and Avalambaka Kapha in mediating these effects. Modern science corroborates their neuroprotective action by reducing oxidative stress, modulating neurotransmitters, and promoting neurogenesis. Thus, Medhya Rasayana bridges Ayurveda and neuroscience, warranting further preclinical and clinical validation for holistic brain health. Numerous combinations and Yogas (formulations) mentioned in the Brihat Trayī possess Medhya properties, which still require systematic exploration and scientific validation.

REFERENCES

1. Vishakha Vivek Sonawane et al: Fundamental Principles of Bhaishajya Kalpana. International Ayurvedic Medical Journal {online} 2021 {cited January 2021} Available from: http://www.iamj.in/posts/images/upload/219_227.pdf
2. Neelam et al. Concept of medhya rasayana in Ayurveda: An overview. Int. J. Res. Ayurveda Pharm. 2017;8(Suppl 2):78-81 http://dx.doi.org/10.7897/2277-4343.08287
3. Arun G Nair, Roopa Bhat. Neha Mehra, Shailendra Pradhan, D.C. Singh. A Narrative Review on Therapeutic Potential and Efficacy of Medhya Rasayana. AYUSHDHARA, 2023;10(Suppl 3):41-44.https://doi.org/10.47070/ayushdhara.v10iSuppl3.1269.
4. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 6. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.
5. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 6. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.

6. Srikantha Murthy KR, editor. Ashtanga Sangraha composed by Vagbhata, Uttarastana: Rasayanavidhi adhyayam: Chapter 49, verse 68. Varanasi: Chaukhambha Orientalia; 2012.
7. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 7. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.
8. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 9. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.
9. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 3-4. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.
10. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 19. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1174.
11. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 19. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1174.
12. Acharya JT, editor. Charaka Samhita of Agnivesha with Ayurveda Dipika commentary by Chakrapanidatta. Chikitsasthanam: Rasayana chikitsitam Karaprachitiya pada: Chapter 1-3, Verse 46-47. Varanasi: Chaukambha Orientelia; 2021. p.13.
13. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 6. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1161.
14. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 46. Varanasi: Chaukhambha Orientalia; 2019. p. 1284
15. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 49. Varanasi: Chaukhambha Orientalia; 2019. p. 1284
16. Srikantha Murthy KR, editor. Ashtanga Sangraha composed by Vagbhata, Uttarastana: Rasayanavidhi adhyayam: Chapter 49, verse 36. Varanasi: Chaukhambha Orientalia; 2012.
17. Srikantha Murthy KR, editor. Ashtanga Sangraha composed by Vagbhata, Uttarastana: Rasayanavidhi adhyayam: Chapter 49, verse 57. Varanasi: Chaukhambha Orientalia; 2012.
18. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 18. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1174.
19. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 15-23. Varanasi: Chaukhambha Orientalia; 2019. p. 1274
20. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 21-24. Varanasi: Chaukhambha Orientalia; 2019. p. 1274
21. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 60-61. Varanasi: Chaukhambha Orientalia; 2019. p. 1277
22. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 33-39. Varanasi: Chaukhambha Orientalia; 2019. p. 1277
23. Acharya YT, editor. Susruta Samhita of Susruta with the Nibandhasangraha commentary of Sri Dalhanacharya, chikitsasthanam; medhayushkamiya rasayana: Chapter 28, Verse 18. Varanasi: Chaukhamba Surabharati Prakashan, reprint 2017; p. 1174.
24. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 80. Varanasi: Chaukhambha Orientalia; 2019. p. 1284
25. Paradakara HB, editor. Ashtangahrdayam composed by Vagbhata with the commentaries of Arunadatta and Hemadri, Uttarastana: Rasayanavidhi adhyayam: Chapter 39, verse 84. Varanasi: Chaukhambha Orientalia; 2019. p. 1284
26. Bajrang Ramawat, Varsha Jangid, Kashinath Samagandi, Review article on the role of Medhya Rasayana : Enhancing the Intellectual Power. J Ayu Int Med Sci. 2022;7(5):69-74. https://jaims.in/jaims/article/view/1882.
27. Gupta K, Mamidi P. A comparative study on Naladadi Ghrita in attention-deficit/hyperactivity disorder with Kushmanda Ghrita. Int J Green Pharm 2013; 7:322-7.
28. Deole, Yogesh S1; Chandola, HM2. A Clinical Study on Effect of Brahmi Ghrita on Depression. AYU (An international quarterly journal of research in Ayurveda) 29(4): p 207-214, Oct–Dec 2008.
29. Mohandas Rao KG, Muddanna Rao S, Gurumadhva Rao S. Enhancement of Amygdaloid Neuronal Dendritic Arborization by Fresh Leaf Juice of Centella asiatica (Linn) During Growth Spurt Period in Rats. Evid Based Complement Alternat Med. 2009 Jun;6(2):203-10. doi: 10.1093/ecam/nem079. Epub 2007 Aug 13. PMID: 18955230; PMCID: PMC2686623.
30. Parle M, Dhingra D, Kulkarni SK. Memory-strengthening activity of Glycyrrhiza glabra in exteroceptive and interoceptive behavioral models. J Med Food. 2004 Winter;7(4):462-6. doi: 10.1089/jmf.2004.7.462. PMID: 15671690.
31. Bairy K L, Rao Y, Kumar Das S, Kumar K B. Efficacy of Tinospora cordifolia on Learning and Memory in Healthy Volunteers: A Double-Blind, Randomized, Placebo Controlled Study. 3 2004; 3 (2) :57-0
32. Malik J, Karan M, Vasisht K. Nootropic, anxiolytic and CNS-depressant studies on different plant sources of shankhpushpi. Pharm Biol. 2011 Dec;49(12):1234-42. doi: 10.3109/ 13880209.2011.584539. Epub 2011 Aug 16. PMID: 21846173.
33. Kumar A. Nootropic herbs (Medhya Rasayana) in Ayurveda: An update. Pharmacognosy Reviews. 2012; doi:10.4103/ 0973-7847.99949.

Cite this article as:

Prajwal Sanakyanavar, Archana Pagad, Arya JP, Suchindra R, Suresha Patil and Spoorthi MM. Bhaishajya Kalpana used as Medhya Rasayana: A Review. J Biol Sci Opin 2025;13(6):46-49. http://dx.doi.org/10.7897/2321-6328.136410

Source of support: Nil; Conflict of interest: None Declared