



## Potential of Medhya Rasayanas in Managing Dementia: A Narrative Review of Ayurvedic Interventions

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### ABSTRACT :

Dementia is an increasing neurodegenerative disorder worldwide, including in the emerging paediatric population in India. Designed for Dementia The treasure of Traditional System of Indian Medicine, Ayurveda provides an integrated approach to the treatment of cognitive decline through Medhya Rasayanas, herbs and formulations which are reputed to improve memory, intellect and overall mental function. This narrative review attempts to assimilate the classical Ayurvedic understanding with contemporary scientific knowledge of how Medhya Rasayanas may play a role in dementia prevention and treatment.

### Introduction

Dementia is a term for a number of diseases, which share loss of memory and a decline in cognitive function and the most common is Alzheimer disease (Alzheimer's Disease International, 2023). The World Health Organization (2021) suggests that there are more than 55 million people worldwide who suffer from dementia, and that this number is expected to increase dramatically in ageing populations. Traditional pharmacological therapies are aimed at symptom control, with no disease-modifying properties. Consequently, alternative or conventional systems such as Ayurveda are gradually being investigated to offer safer and long-term alternatives (Anand et al, 2012).

In Ayurveda, Smritibhramsha (memory loss) and Buddhi Vibhramsha (loss of intellect) are described as symptoms of deterioration of Majja Dhatu and imbalance of Vata Dosha, particularly in old age (Charaka Samhita). Ayurvedic rejuvenative therapies, especially Medhya Rasayanas, are recommended to enhance cognitive function, delay aging, and restore mental clarity (Sharma, 1987).

#### Ayurvedic Concept of Dementia

Dementia can be conceptually correlated with conditions like Smritibhramsha, Jara Janya Smritinasha, and Vatavyadhi (Sharma & Chandola, 2011). Aging (Jara) is a natural degenerative process in Ayurveda, governed primarily by the Vata dosha, which increases with age (Tripathi, 2003). Impairment of Ojas (vital essence), Sadhaka Pitta, and Majja Dhatu Kshaya are also believed to contribute to the loss of cognitive faculties (Lad, 1984). The treatment approach involves Rasayana Chikitsa, primarily focusing on herbs that enhance Medha (intellect) and Smriti (memory) (Dash, 1987).

#### Medhya Rasayana: An Overview

Medhya Rasayanas are a group of Ayurvedic herbs known to rejuvenate the nervous system, improve cognition, and prevent neurodegeneration. The four primary classical Medhya Rasayanas are:

1. Mandukaparni (Centella asiatica)
2. Yashtimadhu (Glycyrrhiza glabra)
3. Guduchi (Tinospora cordifolia)
4. Shankhpushpi (Convolvulus pluricaulis) (Singh, 2008)

Other supportive herbs include Brahmi (Bacopa monnieri), Ashwagandha (Withania somnifera), and Vacha (Acorus calamus) (Singh & Dhawan, 1997).

### Scientific Evidence Supporting Medhya Rasayanas in Dementia

#### 1. Brahmi (\*Bacopa monnieri)

Brahmi is well-documented for its neuroprotective and antioxidant properties. Studies show its efficacy in improving memory acquisition and retention (Morgan & Stevens, 2010). A randomized controlled trial showed significant cognitive improvement in elderly individuals after Brahmi administration (Stough et al., 2001).

## 2. Mandukaparni (*Centella asiatica*)

Mandukaparni, known to improve synaptic plasticity and cerebral blood flow (Gray et al., 2017) has potential to target preclinical models of dementia.

## 3. Shankpushpi (*Convolvulus pluricaulis*)

It has been reported to have anxiolytic, antiepileptic and cognition improving properties via cholinergic mediation (Walia & Kumar, 2019). Shankpushpi syrup is also used for age-associated cognitive decline (Choudhary et al., 2020).

## 4. Yashtimadhu (*Glycyrrhiza glabra*)

Known for adaptogenic and neuroprotective effects, Yashtimadhu reduces neuroinflammation and promotes mental clarity (Arora et al., 2019).

## 5. Ashwagandha (*Withania somnifera*)

Ashwagandha is an anti-amyloid, anti-inflammatory and antioxidant substance. It enhances cognitive function and neuronal plasticity in rodent models of Alzheimer's disease (Kuboyama et al., 2006).

## 6. Guduchi (*Tinospora cordifolia*)

Guduchi has immunomodulatory and nootropic effects, helpful in age-related neurodegeneration (Saha & Ghosh, 2012).

Mode of Action of Medhya Rasayanas

Medhya Rasayanas act through multiple mechanisms:

- \* \*Antioxidant action\* reducing oxidative stress
- \* \*Neurotransmitter modulation\* (especially acetylcholine)
- \* \*Anti-inflammatory effects\* reducing neuroinflammation
- \* \*Amyloid plaque inhibition\* in Alzheimer's models
- \* \*Neurogenesis and synaptic repair\* (Pahwa et al., 2020)

## Discussion

Ayurveda offers a promising avenue for dementia care, especially in its early or preventive stages. Medhya Rasayanas, through their broad-spectrum effects, address both the root causes and symptoms of neurodegeneration. While classical texts emphasize long-term use for rejuvenation, modern clinical validation of formulations and dosage regimens is needed. Integration of Ayurvedic interventions into geriatrics could offer cost-effective and safer strategies in countries like India, where access to modern dementia care remains limited.

## Conclusion

Medhya Rasayanas hold potential in addressing the multifactorial pathology of dementia. While promising preclinical and clinical data exist for several Ayurvedic herbs, more high-quality randomized controlled trials are necessary to confirm their efficacy and safety. Bridging the gap between traditional knowledge and modern science can pave the way for integrative dementia care.

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