

# The Effect of *Medhya Rasayan Ghrita* on Senile Dementia – A case report

## Case Report

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## Abstract

**Introduction:** Neurological diseases are the most life-threatening of all diseases. Among these, senile dementia is a deteriorating condition that affects patient's memory, thinking ability, and intellectual. Here is a case of mild cognitive impairment was successfully treated with Ayurveda rejuvenation therapy. Here, the patient, who was 67 years old, came to Kayachikitsa OPD with one of his relatives. He used to have difficulty doing daily activities like driving and keeping finances on his own, as well as some memory issues like remembering some past events. The Mini Mental Scale Examination (MMSE) score of this patient was 20, which means mild cognitive impairment. The patient has taken many medicines, but the condition remained the same. This patient was treated with *Medhya Rasayana Ghrita* for three months. Then, after the completion of duration of 90 days, the Mini Mental Scale Examination (MMSE) score was improved up to 26, which means no cognitive impairment. There was a significant improvement in his orientation, attention, recall and copying skills. *Rasayana medicine* is, made with *Madukaparni*, *Guduchi*, *Shankhapushpi*, *Yasthimadhu* and *Go Ghrita*. Also, quality of life improvement was also present in patient.

**Keywords:** Senile dementia, Mini mental scale examination, Mild cognitive impairment, *Medhya Rasayan*, *Ghrita*.

## Introduction

Dementia is a condition which slowly hinders one's reasoning and memorising capacities. (1) In accordance with the World Health Organization (WHO), in emergent nations, the assessed rate of number of 60 years of age will be almost 75% among the 1.2 billion.(2).

With the prognosis, it is said that probability of dementia almost doubles every 20 years.(3)

A slow reduction in cognitive functions that makes very ambitious to accomplish regular chores productively is named as dementia. Memory is the majorly affected cognitive function in Dementia patient's.

Clinically measurable memory loss occurs in 10% in 70 years above people and 20–40% in 85 years above people. Along with memory loss, dementia hampers qualities like math, language, determining capabilities, comprehension, and visuospatial ability.

Many dementia syndromes also include neuropsychiatric and social abnormalities that lead to disinhibition, agitation, depression, hallucinations, delusions, and withdrawal. Drinking, Parkinson's

disease, Alzheimer's disease, vascular dementia, multi-infarct, diffuse white matter disease (Binswanger's), and drug or medicine intoxication are the most usual causative factors of dementia.(4)

Ageing occurs step by step, common debilitation occurs in organism over the time.

The process of ageing is diverse for each individual. It is varied extremely in between different organs and from person to person. Ageing increases chances of poor health to some extent though it is not a sickness.

In Ayurveda, *Jara* is one of the eight branches of *Ayurveda (Ashtang Ayurveda)*.(5)

In Ayurveda, ageing is named as *Jara*. Though there is no any particular term for Dementia in *Ayurveda*, but *Medhya Rasayana* is mentioned in *Ayurveda*, which helps in revival of the memory (*smruti*).

There is no direct correlation or disease entity in separate chapters regarding dementia given in ayurvedic *samhitas* and texts. But in terms of ayurvedic concepts, dementia's signs and symptoms can be understood. To understand the etiopathogenesis of dementia according to Ayurveda literature, it is necessary to go through the etiology of *Mana* and *Buddhi*. Before considering the *smrutibuddhihrasa*, consideration of terms like *mana*, *buddhi*, *dhi*, *dhriti*, and *smruti* should be done.

*Rasayana* is the most rich source of *Ayurvedic* revival therapies, which promotes health and maintains healthy status of body. (6)

By keeping this in mind use of *rasayana* in different types of neurological ailments and diseases

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related to old age we decided to publish this case to promote importance of *rasayana* therapy.

A 67-year-old male patient came to Kayachikitsa OPD with complaints of difficulty doing daily activities like driving and keeping finances on their own, as well as some memory issues like remembering some past events. The patient has been suffering from this condition for the last two years. He has taken treatment at many hospitals. But he didn't have relief, so he came here for further treatment.

The patient was alright two years ago. Since two years, his condition started deteriorating, starting with forgetting things and his past information on and off. After that, skills like driving and keeping finances were also affected. Then he was diagnosed with Alzheimer's disease and old age-related dementia. For that, he had taken allopathic medicine. His condition had not improved. Then, for further treatment, he came to us.

He is a known case of hypertension and diabetes mellitus and is on regular medication. The patient has no history of bronchial asthma or hypothyroidism. There is no specific family history.

**Clinical Findings**

His vital parameters are within normal limits.

**Personal History**

He was on a vegetarian diet. He did not have any addictions. His sleep cycle was 5–6 hours per day; sleeping soundly. He has a habit of day sleep for one to two hours per day. His bowel habit frequency was two times a day but constipated and the urine habit was 5-6 times per day, with 1–2 times at night.

**Eight fold assessment**

**Ayurvedic general assessment (Asthvidh Pariksha)**

Pulse (*Nadi*)- 76/min (*Pitta kaphaj*), Stool (*Mala*) - Constipated (*Malavsthambha*), and irregular defecation, Urine (*Mutra*) - Normal (*Prakrita*); Tongue (*Jivha*) - Coated (*sama*), Speech (*Shabda*) - Normal, clear, understandable (*prakrita*); Touch (*Sparsha*) - Normal (*anushnasheeta*); Eyes vision (*drika*) - Normal, no pallor, no icterus (*Prakrita*); Physique (*Aakriti*) - Medium build (*Madhyama*).

**Diagnostic Assessment**


The Mini Mental Scale Examination (MMSE) (7) scale was used for the diagnostic assessment (Figure 1).

In this case, the patient's before treatment score was 20 which shows that he has a mild cognitive impairment and after treatment score was 26 which denotes no cognitive impairment. (Table 3)

Based on both modern and Ayurvedic parameters, the patient has been diagnosed with senile dementia with mild cognitive impairment, also known as *Jarajanya Smrutihras* in Ayurveda.

*Rasayana* is an Ayurvedic rejuvenation therapy that promotes health and maintains the body's well-being. According to Ayurvedic texts, *Medhya Rasayana* is beneficial for enhancing memory (*smruti*). Therefore, we are using *Medhya Rasayana* to address senile dementia.

**Figure 1: Mini Mental Scale**

One point for each answer		DATE:		
<b>ORIENTATION</b>				
Year	Season	Month	Date	Time
...../ 5	...../ 5	...../ 5	...../ 5	...../ 5
Country	Town	District	Hospital	Ward/Floor
...../ 5	...../ 5	...../ 5	...../ 5	...../ 5
<b>REGISTRATION</b>				
Examiner names three objects (e.g. apple, table, penny) and asks the patient to repeat (1 point for each correct). THEN the patient learns the 3 names repeating until correct.				
...../ 3	...../ 3	...../ 3	...../ 3	...../ 3
<b>ATTENTION AND CALCULATION</b>				
Subtract 7 from 100, then repeat from result. Continue five times: 100, 93, 86, 79, 65. (Alternative: spell "WORLD" backwards: DLROW).				
...../ 5	...../ 5	...../ 5	...../ 5	...../ 5
<b>RECALL</b>				
Ask for the names of the three objects learned earlier.				
...../ 3	...../ 3	...../ 3	...../ 3	...../ 3
<b>LANGUAGE</b>				
Name two objects (e.g. pen, watch).				
...../ 2	...../ 2	...../ 2	...../ 2	...../ 2
Repeat "No ifs, ands, or buts".				
...../ 1	...../ 1	...../ 1	...../ 1	...../ 1
Give a three-stage command. Score 1 for each stage. (e.g. "Place index finger of right hand on your nose and then on your left ear").				
...../ 3	...../ 3	...../ 3	...../ 3	...../ 3
Ask the patient to read and obey a written command on a piece of paper. The written instruction is: "Close your eyes".				
...../ 1	...../ 1	...../ 1	...../ 1	...../ 1
Ask the patient to write a sentence. Score 1 if it is sensible and has a subject and a verb.				
...../ 1	...../ 1	...../ 1	...../ 1	...../ 1
<b>COPYING:</b> Ask the patient to copy a pair of intersecting pentagons				
				
...../ 1	...../ 1	...../ 1	...../ 1	...../ 1
<b>TOTAL:</b>				
...../ 30	...../ 30	...../ 30	...../ 30	...../ 30

**MMSE scoring**  
 24-30: no cognitive impairment  
 18-23: mild cognitive impairment  
 0-17: severe cognitive impairment



**MMSE Interpretation According to Scale -**

- 24 – 30 – No cognitive impairment
- 18 – 23 – Mild cognitive impairment
- 0 – 17 – Severe cognitive impairment (Figure 1)

**Therapeutic Interventions**

The main aim of the treatment was to reduce the symptoms, improve Mini Mental Scale Examination Scoring, and overall improve quality of life. *Medhya Rasayan Ghrita* was given to the patient in a dose of 15 ml twice a day before meals with lukewarm water for 3 months. (8)

**Table 1: Summary of Intervention**

Duration of treatment	Drug used with contents	Dose with Duration
90 Days	<i>Medhya Rasayan Ghrita</i> contents are - <ul style="list-style-type: none"> <li>➤ <i>Mandukaparni - Centella asiatica</i></li> <li>➤ <i>Guduchi - Tinspora cordifolia, Willd.,</i></li> <li>➤ <i>Shankhapushpi Convolvulus pleuricaulis Chois.,</i></li> <li>➤ <i>Yahstimadhu - Glycyrrhiza glabra</i></li> <li>➤ <i>Go Ghrita - Clarified butter</i></li> </ul>	15ml twice a day before meal with Luke warm water for 3 months

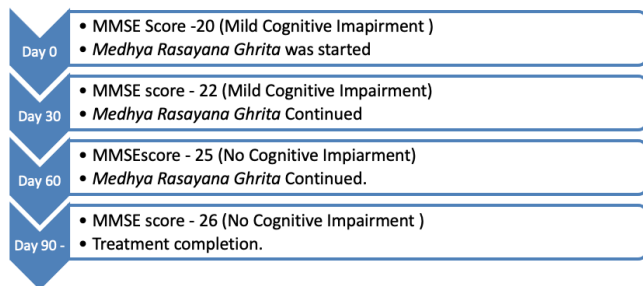
**Timeline**

In this present case, the effect of *Medhya Rasayan Ghrita* was seen from 30<sup>th</sup> day (Table 2). After 60<sup>th</sup> and total 90 days of treatment there was significant

improvement in Mini Mental Scale was seen. (Table no. 3 and figure no. 2).

### Figure no. 2 The Timeline of the case and outcome

Figure no. 2 The Timeline of the case and outcome



### Assessment on MMSC (Mini Mental Scale) Before and After Treatment

Table 2: MMSE Details of each visit and each parameter

MMSC Scale	Maximum Score	Day 0 <sup>th</sup>	Day 30 <sup>th</sup>	Day 60 <sup>th</sup>	Day 90 <sup>th</sup>
Orientation	10	7	8	9	9
Registration	3	2	2	3	3
Attention & Calculation	5	3	3	4	4
Recall	3	2	2	2	3
Language	8	6	7	6	6
Copying	1	0	0	1	1
<b>MMSC Score</b>	<b>30</b>	<b>20</b>	<b>22</b>	<b>25</b>	<b>26</b>
Impairment grade		Mild Cognitive Impairment	Mild Cognitive Impairment	No Cognitive Impairment	No Cognitive Impairment

### Discussion

In this case, there was no specific cause for dementia. So, ageing can be considered a factor causing dementia. As a person gets older, chances of debilitation increases with each day passes, reason is that, with the age the biochemical composition of tissues get deteriorate with the physiological power of the body, which increases the chances of being sick. The most common cause of dementia in the world is Alzheimer’s disease which affects the old aged people above 40 years of age.

In *Ayurveda*, according to *Charak Samhita, Vimansthana Adhyaya* 8, patients should be examined according to his age. According to *Ayurveda*, Age is classified as young age, middle age, and old age where old age is from 60 years of age up to the 100<sup>th</sup> year of age. There is decline in tissue elements, strength of anticipation, thinking capability, analyzing capacity. (9)

Whereas, if memory is impaired due to a person being overcome by *rajas* and *tamas*, this is known as

memory impairment. Normally, memory contains everything memorable. (10) Geriatrics (*jara*) is a branch of *Ashtang Ayurveda*; in fact, two specialties, *Rasayana* and *Vajeekarana*, were meant to tackle the problems of ageing, or *Jarajanya vikara*, which are classified under *Swabhavika Vyadhis*.

In this case, *Medhya Rasayana Ghrita* has been administered to the patient, which includes *Madukparni* (*Centella asiatica*), *Guduchi* (*Tinospora cordifolia*), *Shankhapushpi* (*Convolvulus pluricaulis*), *Yahstimadhu* (*Glycyrrhiza glabra*) and *Go Ghrita* (*Clarified butter*).

*Mandukparni* is *kaphaghna* being *Kashaya rasatmak*, *Pittaghna* due to *Madhura vipaka*, *vataghna* being *Ushna*. Since it acts as *Medhya* and improves memory, it is also used as *rasayana*, *vayasthapana*, and *balya*. It improves retention power of *budhhi* (memory). (11)

*Guduchi* is *vataghna* due to *snigdha* and *ushna guna*, *pittghna* due to *tikta – kashaya rasa* and *kaphaghna* due to *tikta, katu, kashaya rasa* and *ushna veerya*, thus *tridoshghana*. It acts as *Rasayana*. (12)

*Shankhapushpi* is best *Medhya Dravya*. It alleviates irritability of the mind and nerves, acting as a *balya* (strengtheners) and *nidrajanana* (promoter of sleep). (13)

*Go ghrita* stimulates the digestion, promotes remembrance, thinking, intuition, beauty, and life-span (14) pacifies *Vata, Pitta* and *Kapha*, enhances brain power, brightness, immunity. (15)

*Yahstimadhu* is *madhur rasatmak*, increases vitality, improves eyesight, boosts strength, enhances complexion, *rasayana, sheet viryatmak, guru* (Heavy), *snigdha (oily)*, beneficial for hair, good for the voice, and pacifies *Vata, Pitta*, and *Kapha*. (16)

Simple ayurvedic measures to promote rejuvenation and lower the ageing results in improving patients condition overall. The affordable and very minimal approach to treatment gives positive results for patients. *Medhya Rasayan ghrita* overall works on memory improvement and improves neurological health.

In a randomized controlled trial on age-associated memory impairment conducted by Raghav S et al., 125 mg of *Bacopa monnieri (Brahmi)* extract was given to patients. This treatment produced significant improvements in mental control, logical memory, and paired associative learning over a 12-week therapy period. In this study, only one of the four *Medhya Rasayan dravyas* mentioned by *Acharya Charak* was used. (17)

A non-randomized clinical study was conducted on seventy-two individuals (Chobe S et al.), in which integrated yoga and *Ayurveda rasayana (Brahmi ghrita)* were administered to assess their effects on cognitive functions in elderly participants with mild cognitive impairment. Both the *Ayurveda rasayana* and integrated yoga were found to be effective in improving cognitive abilities among the elderly with MCI. In this study, *Brahmi* was used as one of the four *Medhya dravyas* according to *Acharya Charaka*. (18)

In this case report, we used all four *Medhya dravyas* mentioned by *Acharya Charak*, along with *Go Ghrita*, which is itself considered a *Medhya* drug and

*Rasayana*. This combination helps to enhance the *medhyatva*.

**Conclusion** – Senile dementia is a neurological condition in which a patient's quality of life is hampered. Patient overall health deteriorates, and patients feel low in confidence and other aspects of life. In this present case report the patient, there was complaints of difficulty doing daily activities like driving and keeping finances on their own, as well as some memory issues like remembering some past events, Here, *Medhya Rasayan Ghrita* works as *medhya* and improves neurological function with its *rasayana* properties. It also improved cognitive impairment positively. The observation of this case would create scope for further researches on large scale.

**Patients Perspective:** The patient gave his opinion about the treatment and assessment for a 90-day period of treatment. He stated that, having received the *rasayana* therapy, his quality of life improved significantly, and no discomfort was felt during this period of time.

**Informed Consent:** Consent was taken from the relative of patient.

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