

**MILD NEURO COGNITIVE DISORDER -AN AYURVEDIC
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Gobindgarh, Punjab.**ABSTRACT**

Mild Neuro Cognitive Disorder (MNCD) is characterized by the emergence of cognitive deficits that exceed what is typically anticipated based on an individual's age and educational background, yet are not severe enough to disrupt their daily functioning. This condition is frequently regarded as a transitional phase between normal aging and dementia, marked by a decline in essential capacities such as vital capacity, energy levels, sexual function, speech, perception, absorption, retention, memory, and cognitive skills. The effects of aging, along with vataprakopa and Swabhavika SmritiHrasa, which are associated with the normal aging process, are referred to as benign senescent associated memory impairment. Conversely, Aswabhavika SmritiHrasa is treatable, albeit with challenges, and is managed according to the Dosha and the disease's stage, primarily utilizing

Rasayana therapeutic approaches.

KEYWORDS: Mild cognitive disorder (MNCD) SMRITIBHRAMSHA.**INTRODUCTION**

The American Psychiatric Association has recently published the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSMV). One among the categories that underwent substantial revision is that the chapter "Dementia, Delirium, Amnesic, and Other Cognitive Disorders" in DSM IV. DSMV has renamed this category "Neurocognitive Disorders," (NCD) and it covers three entities: delirium, major neurocognitive disorder, mild neurocognitive disorder.^[1] and their etiological subtypes

(E.g. Alzheimer's diseases, Lewy body dementia). The term Dementia replaced with neurocognitive disorder. NCD is characterized by structural or functional disturbance of brain function resulting in impairments in memory, abstract thinking or judgment.^[2] Major NCD corresponds to the condition also mentioned in DSM –IV as dementia. Mild NCD have similar symptoms to major NCD.^[3] The key distinction between major and mild NCD is that persons with major NCD experience a substantial decline in function (loss of independence) as a result of profound cognitive impairment, whereas subjects with mild NCD experience only a modest cognitive decline and, as a result, function relatively independently.^[1]

The prevalence of mild neurocognitive disorder increases sharply with age, with the foremost significant rise occurring in patients over the age of 60. It's estimated that approximately 12% of these aged 65 and older, and the maximum amount as 30% of these aged 85 and older, are diagnosed with dementia. Considering that mild neurocognitive disorder is usually diagnosed with dementia, the prevalence of dementia could even be an indicator of mild neurocognitive disorder.^[4] mild NCD Depends on age and underlying etiology and categories between 3% and 22%.^[1] This condition isn't met as a disease entity in separate chapters of Ayurvedic classics but sign and symptoms are often correlated with Smritibhramsha explained in Ayurveda. Smriti bhramsha may be a condition during which raja and tama dosha does avarana of mana causing impairment of memory.^[5] At this point, no treatment is out there to vary the relentless deterioration of this disease. Varieties of attempts are made for neurotransmitter replacement therapy, but these drugs cause hepatotoxicity.

The general management is extremely difficult and frustrating as there is no specific treatment and thus the first specialize in long-term amelioration of associated behavioral and neurologic problems. Building rapport with the patient's relations and other care givers is extremely essential for successful management, but is found to be very difficult. Moreover, the available conventional medications are hepatotoxic, necessitating frequent testing of liver function and adjustment of the dose.^[6]

FDA has only approved acetylcholinesterase inhibitors (AChEIs) like donepezil, galantamine, and rivastigmine, and therefore the N-Methyl-D-Aspartate (NMDA) antagonist, memantine. Tacrine.⁷ within the Ayurvedic system of medicine, Rasayana therapy are very useful within the management of dementia^[6] Rasayana can contain jara

(aging), smriti nasha (loss of memory) and increase medha, bala etc. Medhya Rasayana drugs are such drugs, which are getting used for the promotion of psychological state in healthy also as within the diseased.^[8] these drugs are getting used in management of the many neuropsychiatric disorders. Current study explores the role of Brahmi ghrita within the management of mild NCD

PHYSIOLOGY OF MANAS

In order to know the etiopathogenesis of mild Neuro cognitive disorder within the light of Ayurvedic literature it's necessary to review the overall physiology of manas and therefore the Buddhi. The knowledge of relationship between Mana, Buddhi, Medha, Dhriti and Smriti is vital before discussing etiology and psychopathology of Smritibhramsha. Buddhi is that the power that determines, within the process of data, the character, merits and demerits of an object. within the process of evolution Budhhi and mana are related with Karyakarana Sambandha, for the event of Indriyas and Mana buddhi is that the first tatva.^[9]

The objects of the mind are described as मनसस्तु चिन्त्यमर्थ^[10] Chakrapani has commented

On this as excessive or weak or wrong conveyance of the Chintya etc. objects leads to Abnormal or diseased condition of the mind.^[11] Objects is perceived with the help of sense organs in conjunction with mind. This perception is merely mental within the start, the sensible advantages or disadvantages are ascertained thereafter. The intellect which determines specific properties of the thing impels a personal to speak or act intelligently.^[12]

CONCEPT OF BUDDHI

Chakraphani in Charaka Samhita Vimana 4/8, has given the definition of Buddhi as अवस्थानं स्थिरमतित्वम् the word avasthanam meaning centralization of the knowledge after grasping, sthiramtivam may be a function of Dhi and therefore the means for retaining the knowledge for extended period and Abhibhramena is that the end of Buddhi, where no more doubts and confusions arise and therefore the fact is crystal clear.^[13]

TYPES OF BUDDHI

Prajna and Buddhi are termed as synonyms in Amarkosh.^[14] there are 3 main components of Prajna namely Dhi, Dhriti and Smriti.^[15]

1. DHI: -Charaka has said समं बुद्धिर्हि पश्यति which means he has tried to identify dhi through his specific work.^[16] Chakrapani comments on this that there's a way of "knowledge of an object because it's i.e. "Yatharthanubhava" or the perception of true knowledge. This is often specified as उचिता बुद्धिः समं यथाभूतं यस्मात् पश्यति^[17]

2. DHRITI: charaka said that Dhriti is the power that controls the factor which prevents the Manas from indulging in harmful and non-beneficial objects, that's why the importance of association of Dhriti with Manas has been stressed under the function of Manas within the context of "Swanigraha" धृतिर्हि-नियमात्मिका^[18]

3. SMRITI:

- Charaka says that recollection of things directly perceived, heard or experienced earlier is named Smriti दृष्टश्रुतानुभूतानां स्मरणात् स्मृतिरुच्यते^[19]

According to the concept of ayurveda Mastishka & Mastulunga are originate from Majja Dhatu it's sort of a semisolid Ghrita. Important features in females is. Asthi Majja Kshaya same as in dementia thanks to neurodegenerative diseases are more common in females than male. Shiras plays a important role within the formation of Buddhi^[6]

MECHANISM OF GENERATING KNOWLEDGE

Indriya receives Arthas when related to Manas.^[20] This perception needs a sequence of Artha, Indriya, Manas and Atma.^[21] This perception is named as Uho reasoning.^[22] After this, process of actual analysis starts by Manas, i.e., Chintya, Vichara, Uha, Samkalpa are performed. It gives the determination to perception. Hence, the journey from perception to determination, i.e. Nischayatmaka Buddhi is that the half of the physiology of Manas.^[23]

The last half of physiology of Manas is said with Karmendriyas i.e. Manas with the assistance of determined knowledge i.e. Nichayatmaka Buddhi initiates or stimulates for the further action to be administered by Karmendriya.^[24]

From above description it's confirms that Manas is that the important think about the origin of prajnya and hence, all activities (karmas) which are being done. However, Mana itself is regulated by vata and in adulthood (vridhdhavaastha), vatavaigunya is already present hence functions of manas is additionally affected physiologically to a superb extent.

Dhi-vibhramsha

Refers to derangement of understanding where by the eternal and thus the non-eternal (Nityanitya), good and evil (Hitahita) are mistaken one for the opposite, for true understanding always perceive things in proper prospective.^[17]

Dhriti-bhramsha

within the event of the derangement of the desire (Dhriti), the psyche (Satva) which is usually reaching out for its favourable objects, is incapable of being restrained from undesirable objects, for the will (Dhriti) is that the controller and-regulator.^[18]

Smritibhramsha

तत्त्वज्ञाने स्मृतिर्यस्य रजोमोहावृतात्मनः। अश्रयते स स्मृतिभ्रंशः स्मर्तव्यं हि स्मृतौ स्थितम्॥ it's clearly mentioned that memory is impaired due to a personal being overcome by Rajas and Tamas. That cause Smritibhramsha.^[5]

CONCEPT OF AGING (MODERN ASPECT)

Aging could even be a progressive process that is related to decline in the structure and performance, impaired maintenance and repair system, increased susceptibility to disease and death & reduced reproductive capacity. Adulthood is the most independent risk factor for chronic diseases & associated mortality that are most prevalent in developed countries like heart condition cancer, and neurodegenerative disorders.^[25]

Biological theories of aging have two main categories^[26]

1. Programmed Theory
2. Damage or Error Theory.

The programmed theory of aging follows a biological timetable, continuation of that theory which regulates childhood growth and development. This regulation

would depend on changes in phenomenon that affect the systems which is responsible for maintenance, repair and defense responses.

The damage or error theory basically emphasize on the cumulative damage at various levels of living organism caused due to the aging process

CONCEPT OF AGING (AYURVEDA CONCEPT)

The stage of old age has been referred with synonyms such as Vriddha, Vardhakhya and Jara etc. This is the stage for gradual decline. Sushruta opines the age after 70 years accompanies the day to day decline in Dhatu, senses, strength, virility, courageousness, valour, and enthusiasm associated with wrinkled skin, grey hair & baldness, the person often suffers from attacks of cough, dyspnea etc. and will be incapable of any work.^[27]

Charaka opines the same decrements of different faculties and in addition considers the lapses in perception, retention and retrieval abilities, speech & general knowledge. There will be breakdown in the qualities of Dhatu and probably the predominance of Vata Dosha. By the fall of all these, man gradually suffers the decline till the age of 100 years^[28]

According to Ayurveda, Jara (ageing) is a natural phenomenon like hunger, thirst, and sleep. Sushruta mentions a group of naturally occurring diseases named as Svabhava-Bala-Pravritta, which includes Kshut (hunger), Pipasa (thirst), Nidra (sleep), Jara (ageing) and Mrityu (death). Sushruta has divided the Svabhava-Bala-Pravritta diseases into 2 the group Kalaja and Akalaja can therefore also be considered as jara kalaja jara and Akalaja jara.^[29]

1. KALAJA JARA: The ageing (Jara) coming at or after the proper age defined for it i.e. 60 years in human beings may be known as Kalaja Jara. The Kalaja Jara is Pari-Rakshana-Krita, which means that it occurs at the proper age even after following the daily and seasonal routine described in Svasthavritta and use of Shodhana (purification) at the proper time.^[29]

2. AKALAJA JARA: The appearance of signs and symptoms of ageing (Jara) before the age of 60 years may be termed as Akalaja Jara. This type of Jara has been said to be Aparirakshana Krita, which suggests that it occurs before the prescribed age thanks-to not-taking the-right care of-private hygiene (Svasthavritta) and not getting done Shodhana (Purification).^[29]

Kalaja Jara is Yapya i.e. it can slow down the process of ageing by the treatment with Rasayana, Akalaja Jara is curable by treating the Dosha and along with the rasyana therapy^[30]

AGEING IN TISSUES^[31,32]

According to Vriddha Vagbhata and Acharya Sharangdhara, citizenry loose one biological entity with the passing of every decade of life. Acharya Sharangadhara has given “dashvidha kshaya” (decade wise aging) which shows that ageing happens to be in several body tissues in several manner and doesn't occur simultaneously. Sharangdhara says there's gradual declination of a specific quality/feature of the body with each decade of life .by the top of that specific decade, the standard is lost which suggests with ageing certain power or faculties of the body become diminish.

Table no. 1: Showing loss of body tissue during various decades of life.

Decade of Life	Loss mentioned	
	Sharangdhara purva kahnada ^[37]	Ashtanga Sangraha ^[38]
1 st	Childhood	Childhood
2 nd	Growth	Growth
3 rd	Complexion or body glow	Complexion or body glow
4 th	Medha (intellect)	Medha (intellect)
5 th	Skin	Skin
6 th	Vision	Shukra(reproduction)
7 th	Shukra (reproduction)	vision
8 th	Valour	hearing
9 th	Buddhi (reasoning)	mind
10 th	Motor organs (Karmendriya)	All the remaining Indriyas (sensory & motor power)
11 th	Mind	-
12 th	Life	-

NIDANA

Rajasika and Tamasika Diet and “Prajnaparadha” (derangement of the three components of Pragyna, viz. Dhi, Dhriti and Smriti) should be considered as a Nidana of Manasaroga. The Pragynaparadha is defined as the derangement of the three components of Pragyna, viz. Dhi, Dhriti and Smriti & chinta shokha bhaya etc. which may vitiate the Rajas and Tamas which may be ultimately lead to Smritibhramsha.^[17]

SAMPRAPTI OF SMRITIBHRAMSHA

The regular consumption of diet dominant in *tamas* and *rajas* *gunas* increases the *Tama* and *rajo* *doshas* in the mind. The increased *rajas* supports the *Tamas* to develop *smritibhramsha* the *Rajas* diet depreciate the *Dhriti*^[33] *Doshas* are the functional representatives of our body. Control and stimulation of *Manas* is under the influence of *Vayu*.^[34] The control of *Buddhi* and *Manas* are the functions of *Prana*.^[35] The vitiated *Prana* loses this control and causes *Upaghata* of these factors.^[36] The main *dosha* involved for the process of attaining *smriti* is *Udana* *vayu* & responsible for the recollection of past experience i.e. the memory.^[37] Therefore in the vitiation of *Udana*, *Dhi* as well as *Dhriti* are hampered. The perception of knowledge and the understanding by the *Manas* are also hampered to some extent.^[38] Stability and concentration of *Manas* is dependent upon the normal condition of *Vyana*.^[39] The vitiated *Vyana* causes disturbances in the function of the *Manas* up to some extent (*Chittopaplava*) and loss of enthusiasm as well as loss of interest in work. Likewise, the *Kaphavritta* *Vyana* causes aches and pains in different parts of the body.^[40]

Normal mental functions like concentration, tolerance, endurance are under control of normal functioning of *pitta*.^[41] *Sadhaka* *pitta* residing in *hridaya* is responsible for the proper functioning of *buddhi* & it is responsible for good *Medha*.^[42] Hence its impairment results in the impairment of *Medha* and consequently in the impairment of its faculties like *Dhi*, *Dhriti* etc. *Tarpaka* *kapha* residing in head provides nourishment and protection to centers of sense organs in the brain.^[43] Its obstruction due to *Kapha* (*Kaphavritt* *Udana*) also hampers its functions like *Prayatna*, *Urja* and *Vakpravriti*. This condition results in loss of interest, loss of energy and low intended speech respectively. It also develops *Aharsha*, *Mandagni*, *Aruchi* and *Vaivarnya*.^[44]

Prana *vayu*, *Udana* *vayu*, *Sadhaka* *pitta*, *Tarpaka* *kapha* are the subtypes of *vata*, *pitta*, *kapha* which involves in the processing of memory. Thus, a vitiation of any of these *Vayus* and *Sadhakagni* results in vitiation of *Rajas* and *Tamas* which again leads to the within the disturbances within the functions of *Buddhi*, *Dhriti* and *Manas* which ultimately leads to gradual *Smritibhramsha*.

CHIKITSA

As *Smritibhramsha* occurs mainly due to old age and due to impairment of *Buddhi*. Management by *Rasayana* drugs would be the acceptable line of treatment. Furthermore, prior to *Rasayana* therapy, *Panchakarma* is very essential for *Deha* *Suddhi*. To attend the

course of conduct relating to virtue wealth and desire, to render service to the person well versed in the nature and cure of psychic disease To obtain all around knowledge about the self.^[45] Sattvavajaya is a component of adavyabhootchikitsa described for management of mental disorders (Rajas and tamas). As smritibhramsha occurs mainly due to old age and due to impairment of buddhi. Management by rasayana drugs would be the acceptable line of treatment.^[46] Furthermore prior to Rasayana therapy, Panchakarma is very essential for Deha Shuddhi. Then administration of Rasayana and Medhya drugs orally.^[47]

Charaka mentions that Rasayana improves intelligence, power of recollection, power of sense organs perfection in speech. Improvement in the physical qualities Rasayana also helps to regain youthfulness, longevity, strength complexion, voice.^[48] Ghrita promotes memory, intelligence, Agni, semen, ojas, kapha and medas; alleviates vata, pitta, poison, insanity, phthisis, inauspiciousness and fever.^[49] While describing the therapeutic application of Ghrita; it has been advocated by Charaka as best suited for those who seek Smriti, Medha, Agni, Buddhi, Indriya bala.^[50]

DISCUSSION

MNCD (mild neuro cognitive disorder) is not properly symptomatically managed by contemporary modalities for long time treatment and having some side effects. As this disease is not directly explained in Ayurveda but in this study, some similar clinical symptoms and presentation of mild Neuro Cognitive disorder are considered as Smritibhramsha. So MNCD describes the pathological condition based on some parameters e.g., dosha, dushya, srotas, and Agni etc. By keeping the symptomatology of mild Neuro Cognitive disorder in conscious, Ayurveda has a multidimensional approach for the diagnosis and treatment of this disease.

CONCLUSION

Cognitive impairment is a Yapya condition (irreversible, but can be maintained). Early detection of the problem and early starting of the appropriate

Cognitive impairment is a Yapya condition (irreversible, yet manageable). It is essential to detect the issue early and to initiate the appropriate rasayanas promptly to halt the progression of the condition. Medhya drugs play a significant role in both the prevention and management of cognitive impairments, effectively enhancing not only the quality of life for

the patient but also benefiting caregivers and family members in a broader context. In conclusion, the management of aging and the prevention of cognitive impairments can be achieved through Rasayana, which, in various ways, contributes to an increase in life expectancy.

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