JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

''AYURVEDIC INTEGRATED REVIEW OF DEMENTIA AND ITS MANAGEMENT. ''

Dr Sonal A. Shah[1], Dr Shraddha Wavare,[2] Dr Gunvant H. Yeola[3], Dr. Abhijeet P. Shah[4]

1) HOD and Professor at Loknete Rajarambapu Patil Ayurved college,P.G Institute and Reseach Centre,Islampur,Sangli, Ph D Student, Dr D.Y. Patil College of Ayurved &Research Centre, Dr D.Y. Patil Vidyapeeth (Deemed to be University), Maharashtra, Pimpri- Pune-411018
2) PG Scholar, Dept. of kayachikitsa, Loknete Rajarambapu Patil Ayurved college,P.G Institute and Reseach Centre,Islampur,Sangli.
3) Dean and Professor of Dr D.Y. Patil College of Ayurved &Research Centre, Dr D.Y. Patil Vidyapeeth (Deemed to be University), Maharashtra, Pimpri- Pune-411018
4) Asso. Professor, K.E.Societys Rajarambapu Institute of Technology, Sakharale, Shivaji University, Kolhapur

ABSTRACT-

Alzheimer's disease is the most common type of an dementia and can be defined as slowly progressive of neurodegenerative disease. The clinical manifestation includes loss of cognitive functioning like thinking, remembering and reasoning and behavioral abilities. The definitive etiology of this condition is unknown. recently there is no cure in modern medicine for Alzheimer's disease, although there are available treatments that just improve the symptoms. In Ayurveda, such condition is considered primarily as type of Manas vyadhi and can be co-related with Jara janya Smrutibhramsha.

Method- The review article is an integrated management of Alzheimer's disease. Materials related to concept of Alzheimer's disease, aetiology, patho-physiology, sign and symptoms and also available treatment options have been collected from Ayurvedic and modern medicine textbooks, various websites and articles.

Result & Conclusion- The article attempts to simplify Alzheimer's disease management and touches maximum aspects of this disease with a integrated approach (Ayurvedic and modern medicine). The holistic approach by an integrating salutary lifestyle, detoxification by Panchkarma and integrative palliative medicine will definitely prove an effect in the management of Manas vyadhi with special reference to Dementia and Alzheimer's Disease.

Keywords: *Manas vyadhi, Smrutibhramsh, Rasayana, Dementia, Alzheimer's disease.*

INTRODUCTION-

In Ayurveda, Alzheimer's disease or Dementia condition is considered as a Jara janya Smrutibhramsh is type of Vataj Manas vyadhi seen in late middle age. Hence, the objective of treatment is focused on Majja Dhatu, Satva and Manas through Aachar Rasayan, Shodhankarma and Dravyachikitsa for maximum good results in Dementia[1]. The purpose of integrated review is to give information from Ayurveda in view of aetiology, patho-physiology, and available treatment options as per stage of disease and details of contemporary texts of modern medicine related to Alzheimer's disease or Dementia.[2]

Increase in age is a major risk factor for dementia, a clinical neuro-degenerative syndrome characterized by impaired memory and activities of daily living, altered behaviour, personality, and other cognitive dysfunctions. Several types of dementia have been reported in human patients, including Alzheimer type of dementia (AD), vascular dementia, Lewy body dementia, and dementia as a result of diseases such as stroke, AIDS, and multiple sclerosis.[3] Among these, AD is the most common cause of dementia and is characterized by progressive memory loss and other cognitive deficits, including impaired judgment and decision-making, and language disturbances. In contrast, vascular dementia is defined as loss of cognitive function resulting from ischemic, hypoperfusive, or haemorrhagic brain lesions.[4] Major risk factors for dementia include old age, long-term consumption of "western" diet, physical and cognitive inactivity, and epigenetic and environmental factors. Other risk factors for dementia include cardiovascular and cerebrovascular problems, excessive alcohol consumption, social isolation, traumatic brain injury.[5]

AD having a prevalence of approximately 20% (prevalence is higher than 20%. It may be very hard to diagnose depression precisely in dementia.[6] The patient may not be able to report their symptoms unfailingly due to impairment in memory, insight and comprehension. Therefore, Observations and detailed history are important in doing the diagnosis. Depression symptoms are often present in patients with dementia in the absence of coexistent depression. Due to an increase in life expectancy, it is estimated that the number of elderly people worldwide will increase to approximately 2.1 billion by the year 2050.[7]

MATERIAL AND METHODS

In this review article, contemporary texts of Ayurveda related to Manas Vyadhi with special reference to Dementia and Alzheimer's disease have been documented to understand integrated and holistic treatment approach towards Alzheimer's disease management. information from modern medicine texts in view of etiology, pathogenesis, clinical manifestations and established management as per disease.

Alzhiemer's Disease- Ayurveda Perspective

Based on resemblance in pathology and clinical manifestations of this degenerative disorder, it can be considered as a type of Vataj vyadhi. It's one common form of dementia, which starts in late middle age (around 40-60 year), hence we need to take care of our Majja Dhatu- Mashtishka as well as Satva and Manas to not fall prey to this Alzheimer's disease. One more thing about this disease is that Alzheimer's disease is not

stationary, but it's a progressive condition and that's why the management needs measures to stop progress of the disease as well as reverse it, however reversal of pathogenesis is very difficult as nerve cells do not regenerate once damaged.[8]

Satva Vichar - Our body is comprised of Sharir, Satva and Aatma. Further, Satva has 3 important factors- [9]

- Dhee (Original intelligence),
- Dhriti/Dhairya (Act according to process)
- Smruti (Memory).

Manas Vishay are Chintya, Vichar and Uhya. Similarly, Manas lakshna are Jnyanasya Bhav leading to Dnyan prapti and Jnyan Abhaav. Further, Mann controls both Karmendriya and Jnyanendriya.

Samprapti (Pathogenesis) of Dementia-

Doshas involved in activity of Man are Vata (Pran, Udan, Vyan), Pitta (Sadhak Pitta), Kapha (Tarpak, Avalambak and Ras - Majja Dhatu are mainly vitiated; hence Preenana and Chitta tushti is important factor in the management. Also, 3 factors involved in the pathogenesis are Majja, Ojus and Shukra Dhatu. The main Hetu considered is Vaya and Akalaj Jara. Vitiation of Vata is mainly due to Margavarodh and Dhatukshay. Akalaj Jara is due to Jeern Kshayaj Vyadhi, such as Rajyakshma, Pandu, Aamvata, Sthaulya , Vataj Prameh and immuno compromised patients. whereas, its relevant to discuss that in most of these conditions (particularly while treating Vataj Prameh, Sthaulya and Aamvata), routinely lot of Langhna and strict dietary regime advocated causing Jeern Kshay vikruti and further Vata vruddhi leading to Akalaj Jara. Similarly, Dhatu Kshay and Langhan Atiyog, Aticharan, Vyasana, , Vish, Anusangik Vyadhi also results in Akalaj Jara.

According to Ayurvedic concept all type of Vata specially Pranavrutta Vyan, Saman and Udanavrutta Pran, Sadhak Pitta, Avalambaka, Kledaka, Bodhaka,Tarpaka. Kapha, Rajas- Tamas, Bheej Bhav, Ras-Rakta-Majja Dhatu, Purisha, Mutra, Sved , Rasavaha, Majjavaha, Manovaha Srotas are the Samprapti Ghatak involved in the pathogenesis of Dementia / Alzheimer's disease.[10]

Chikitsa Sutra (Management of Dementia/ AD)-

Manas vyadhi specially Dementia / Alzheimer's disease needs holistic approach and can be treated with combination of Shodhan (Purification by Panchkarma), Shaman (pacification by palliative medicines) and Rasayan chikitsa (tissue rejuvenating therapy).

Acharya Charak has mentioned rationale Shodhan chikitsa in the management of Manas vyadhi, moreover, rather than putting all the patents of Alzheimer's disease directly to vigorous Shodhan chikitsa, one should choose one of them desired as per patient.[11]

Rasayan purv Shodhan Yoga-

Acharya Charak has suggested a very distinct Rasayan purv Shodhan Yoga (formulation) which is to be administered to patient before entering to Kuti Praveshik Rasayan therapy aiming at Jeern Sakrut Shodhan (Bowel cleansing). This particular Yoga gives very significant results, if given to patients prior to Rasayan chikitsa. Similarly, it also reduces Matra and Kalavadhi of the therapy. Shodhan Yog- Haritaki, Saindhav,Aamalak, Gudam, Vacha, Vidang, Pippali, Haridra Shunthi in desired combination should be prescribed with luke warm water prior to Rasayan chikitsa. This Yoga should be given to patients of Alzheimer's disease as Shodhan and after achieving Koshth Shodhan, one can start treatment for Smruti Sthapan and Rasayan chikitsa. If one feel that person should not get Akalaj Jara, then shall focus particularly on Jara, Jara vyadhi and Akalaj Jara.

Ayurvedic text has mentioned 2 Gana such as-

- Sadnya sthapan Gana – (Hingu, Kaitay, Arimeda, Chorak, Vayastha, Golomi, Jatila, Palankashaa, Shok rohini)
- Vay sthapan Gana- (Amruta, Abhaya, Dhatri, Mukta, Swetjivanti, Atirasa, Madukparni, Sthira, Punarnava) where in, the Vay sthapan Gana drugs maintain Tarunya i.e. optimum functioning, strength and capacity of all body elements.

Ayurveda advocates that one has to select treatment considering various factors related to patient such as Vaya, Bala, Koshth, Prakruti etc. Hence, we cannot offer tailored treatment or generalized line of treatment. If we identify the type of disease properly (as per predominant Dosha) and select specific formulation/ modality to treat patient, then prognosis will be better.[12]

Vata

- Ashwagandha
- Brahmi
- Shankhapushpi
- Mandookparnee
- Shilajeet
- Guduchi
- Triphala

Pitta

- Triphala
- Ashwagandha
- Brahmi
- Shankhapushpi
- Guggulu
- Haridra
- Mandookparnee

Kapha

- Haridra
- Ashwagandha
- Brahmi
- Mandookparnee
- Triphala
- Shilajeet
- Guggul

Panchkarma in Manas vyadhi (Dementia/ AD): Nasyakarma (inta nasal drug therapy)- After achieving Koshtth Shodhan , the most important and effective Panchkarma is Nasyakarma (inta nasal drug therapy) because the drugs administered by Nasya directly reach into Mashtishka (Brain), wherein no need of crossing BBB and gives prompt result. Some of the effective formulations (medicated oils) used for Nasyakarma in Manas Vyadhi/AD are-Kshirbala Nasya, Mash tail, Panchendriya vardhan, Vacha, Varanadi etc. Basti karma (medicated Enema)- In set of Panchkarma, Basti karma is considered as Ardhya chikitsa (major and effective therapy) of Vata vyadhi (Vata disorders). Bruhan, Yapan, Rajyapan, Yoga Vasti , Ksheera Vasti, Majja Basti can be administered to patient which gives wonderful results. Similarly, Majja Basti can also be tried but, our observation reveals that Majja Basti is more effective in Sandhi Vata (Osteo Arthritis), muscular dystrophy and demyelinating diseases, but not in Manas vyadhi or dementia.[13]

DISCUSSION

Since the Dosha involvement is Kapha with associated Vata, treatments were aimed to mitigate this Doshas along with Medhya drugs to prevent further brain degeneration and which helps to regain back the neuronal health were adopted. Initial Deepana Pachana is essential. As Smrti bramsha occurs in dementia and result in impairment of Buddhi. This can be managed by Rasayana drugs especially Medhya Rasayana. Medhya Rasayana drugs work on the hypothalamus adrenal axis (HPA axis) and normalize the secretion of neurotransmitters such as dopamine, serotonin, and acetylcholine and thus can improve the mental functions. Furthermore, before Rasayana therapy, Shodhana is a prerequisite. Though Sodhana is a prerequisite before Rasayana treatment.

Dravya effective in Management of Dementia-

The herbal drugs effective in the management of Manas vyadhi can be categorized as –1) Majja shamak drugs and 2) Majja prabodhak drugs.

Sr. No.	Dravya	Properties
1.	Yashtimadhu (Glycyrrhiza glabra)	In recent study it was found that water extract of Yashtimadhu helps to prevent brain cell death.[14]
2.	Ashwagandha (Withania somnifera)	Ashwagandha is used tonic for nervous system. It performs antioxidant activity. Ashwagandha plays important role in stress so can be usedin the patients of Alzheimer's disease. Ashwagandha increases memory and ability of learning. It also increases the choloinergic activity. As perrecent researchAshwagandha has an ability to stimulate nervous system.[15]
3.	Haridra (Curcuma longa)	Usually Haridra is used in cooking as spice in Asia. Haridra has active components such as tumerone oil and water soluble curcuinoids. Curcuminhas antioxidant and anti-inflammatory properties. Haridra helps to balancecholesterol levels, fight against allergens and to boost immunity. In recent studies, oral supplementation of curcumin in dose of 4gm/day was found safe.[16]
4.	Brahmi (Bacopa monnieri)	Brahmi is used as tonic for nervous system, tonic for cardiac system and also in diseases such as epilepsy, asthma. The major constituent of Brahmi is saponins and triterpenoid bacon saponins. Brahmi can prove the memory restorative agent in the treatment of Alzheimer's and dementia.[17,18]
5.	Guduchi (Tinospora cordifolia)	Guduchi plays important mechanism for immune stimulation. Also has property of memory enhancing and also helps in the synthesis of acetylcholine. Thus contributing in increased choline level which shows that it has memory enhancing property.[19]
6.	Shankhpushpi (Convovulu spluricaulis)	Plant of Shankhpushpi is commonly found inIndia and is used tonic for nervous system. Shankhpushpi regulated adrenalineand cortisol. It might be used in stress, anxiety, mental fatigue andinsomnia.[20]

Panchkarma-

Nasyakarma- After achieving Koshtth Shodhan , the most important and effective Panchkarma is Nasyakarma (inta nasal drug therapy) because the drugs administered by Nasya directly reach into Mashtishka, wherein no need of crossing BBB and gives prompt result.Some of the effective formulations used for Nasyakarma in Manas Vyadhi are Kshirbala Nasya, Mash tail, Panchendriya vardhan, Vacha, Varanadi etc.Basti karma In set of Panchkarma, Basti karma is considered as Ardhya chikitsa of Vata vyadhi. Bruhan, Yapan, Rajyapan, Yoga Vasti, Ksheera Vasti, Majja Basti can be administered to patient which gives wonderful results. Similarly, Majja Basti can also be tried but, our observation reveals that Majja Basti is more effective in Sandhi Vata, muscular dystrophy and demyelinating diseases, but not in Manas vyadhi or dementia.

Rasayan therapy-

Rasayanchikitsa is supposed to be Jara and Vyadhi- vidhvansi (anti-ageing and immune modulator) particularly for Smruti bhransh patients. Medhya Rasayana drugs mentioned in Charak Samhita, termed as Neuroceuticals which are effective in improving power of neurons or nervous system. These formulations can be given in particular patient, as per predominating Vata , Pitta and Kapha Dosha.such as-

- Amrut Raspak- Bhallatak Rasayana
- Aamalaki swaras mixed with Madhu, Seeta, Ghrit
- Brahmi swaras with makshik
- Shatavari and dugdha
- Vacha with Dugdh
- Dadhi mastu
- Til tail
- Brahmi patra with Ghrit

Bahyopachar-

There are certain external effective treatment modalities known as Murdhni taila which can be given to the patients suffering from Manas vyadhi. Procedures such as- Shiropichu, Shirobasti, Shirodhara (Medicated oil irrigation), Shiroabhyang can be administered to such patients.

Abhyang- Abhyang or light massage is the best therapeutic procedure for Manas vyadhi because Abhyang is supposed to be Jara-Shram Vatahar.

CONCLUSION-

Alzheimer's disease is degenerative disease with unknown etiology according to modern science. It's the most common form of Dementia which usually starts in late middle age or upto in old age. It results in impaired thinking, progressive memory loss, disorientation and changes in personality and mood

probably due to Degeneration of brain neurons especially in cerebral cortex and presence of neurofibrillary tangles and plaques containing beta amyloid cells. It is the progressive disease that destroys memory and other important mental functions characterized by progressive impairment in memory, cognitive function, language, judgment and ADL. The established medicines for Alzheimer's disease have definite adverse effects in the body and may lead to further anxiety in the patient. So, timely and appropriate management is necessary. The present review of AD treated with Ayurvedic medications and therapies yielded changes in depressive and cognitive symptoms associated with AD thereby helped the patient to improve his day-to-day functioning. There is a further scope in the field of Ayurveda in managing such as condition as well as in providing better outcome both in health status of the affected

References-

1) Vaidya. Y.G. Joshi. Kayachiktisa. July 2009. Pune; Sau. Sampada Shyam Kopardekar. 248.
2) Dileepkumar K J, Shreevathsa S, Bharathi Hiremath, Shivappa Pujari. Alzheimer's Disease: An Ayurvedic Perspective. Jour. of Ayurveda & Holistic Medicine. 2014; Volume-II, Issue IX: 39.Dharma Singh Khalsa. Yoga and MedicalMeditation as Alzheimer's Prevention Medicine. Alzheimer's Research and Prevention Foundation, Tucson, Arizona.2014.
3) United Nations Department of Economic and Social Afairs -Population Division, World Population Ageing 2015 (ST/ESA/SER.A/390), United Nations, New York, NY, USA, 2015.
4) WHO, "Dementia," http://www.who.int/mediacentre/factsheets/fs362/en/.
5) A.L. Sosa-Ortiz, I. Acosta-Castillo, and M. J. Prince, "Epidemiology of Dementias and Alzheimer's Disease," Archives ofMedical Research, vol. 43, no. 8, pp. 600–608, 2012.
6) Wimo A, Prince M. The Global Economic Impact of Dementia. Alzheimer's disease International.2010
7) G. C. Roman, "Vascular dementia: distinguishing characteristics, treatment, and prevention," Journal of the American Geriatrics Society, vol. 51, no. 5, supplement 2, pp. S296–S304, 2003
8) Acharya JT, editor. Agnivesha, Elaborated by Charaka and Dridhabala, Commentary by Chakrapani. Charaka Samhita, nidana Sthana, Unmadanidanam Adhyaya, 7/11-98. Varanasi: Chaukhamba Surbharati Prakashan; 2014. p. 470-4.
9) Vagbhada. Ashtanga hridayam. Reprint 2010. [Prof.K.R.Sreekantamurthy, trans]. Vol. 2. Varanasi: Chaukhambha Krishnadas Academy; Nidanasthana, chapter 16, Vathasonithanidanam; p167-168.
10) Paradkara H. Vagbhata. Ashtanga Hridaya, Commentary by Arunadatta and Hemadri, Uttara tantra, Unmadapratishedhamadhyaya, 6/6-9. 1st ed. Varanasi: Chowkhamba Surbharati Prakashan; 2010. p. 498
11) The Ayurvedic Formulary of India, Part I, Second Edition, The Controller of Publications, Civil Lines, Delhi, 7:30, Page No 115
12) Paradkara H. Vagbhata. Ashtanga Hridaya, Commentary by Arunadatta and Hemadri, chikitsa sthana, 17/14-16. 1st ed. Varanasi: Chowkhamba Surbharati Prakashan; 2010. p. 525
13) Vaidya. Y.G. Joshi. Kayachiktisa. July 2009. Pune; Sau. Sampada Shyam Kopardekar. 248.

14) Bilge S, Ilkay O. Discovery of drug candidates from some. Turkish plants and conservation of biodiversity. Pure ApplChem, 2005; 77: 53-64.

15) Russo A, Izzo AA, Cardile V, Borrelli F, Vanella A. Indian medicinal plants as antiradicals and DNA cleavage protectors. Phytomedicine. 2001; 8:125–132.

16) Baum L, Lam CW, Cheung SK, Kwok T, Lui V,. Six-month randomized, placebo-controlled, double-blind, pilot clinical trial of curcumin in patients with Alzheimer disease. J Clin Psychopharmacol. 2008; 28:110–113.

17) Aggarwal BB, Sundaram C, Malani N, Ichikawa H. Curcumin: the Indian solidgold.AdvExp Med Biol. 2007; 595:1–75

18) Lannert H, Hoyer S. Intracerebroventricular administration of

19) streptozotosin causes long term diminutions in learning and memory abilities and in cerebral energy metabolism in adult rats. BehavNeurosci, 1998; 112: 1199-208.

20) Bilge S, Ilkay O. Discovery of drug candidates fromsome. Turkish plants and conservation of biodiversity. Pure ApplChem, 2005; 77: 53-64.