EFFICACY OF SHIVA GUTIKA WITH SARASWATARISHTA IN THE MANAGEMENT OF AGE ASSOCIATED MILD COGNITIVE IMPAIRMENT (AAMCI)

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ABSTRACT

Objective: To find the efficacy of Shiva gutika with Saraswatarishta in management of Age Associated Mild Cognitive Impairment (AAMCI). To review the literature of mild cognitive impairment, Jara, and aging as per modern science and Ayurveda. To observe side effects of the drug if any. To access effect of drug on other signs and symptoms of Jara.

Method: Open Trial study was conducted on 25 patients having AAMCI and were selected for the study randomly. The patients received 1gm Shiva gutika once a day with 40ml Saraswatarista as Anupan for 3 months.

Assessment Criteria: Improvement in all the six cerebral higher functions such as MMSE, CAMCOG (CAMDEX), ADL/IADL, GDS.

Follow up: 0, 15th, 30th, 45th, 60th, 75th, 90th day.

Duration: Total duration study was 90 Days. This study was carried out in Bharati Vidyapeeth Deemed University College of Ayurved & Hospital Pune in Year 2010 and 2011.

Results: Comparing all the symptoms before and after treatment had significant action in age associated mild cognitive impairment (AAMCI). No side effects of the drug during clinical trial were seen.

Statistical Analysis: The Statistical Analysis reveals that Shiva gutika with Saraswatarista as Anupan effective in age associated mild cognitive impairment (AAMCI).

Conclusion: Shiva gutika with Saraswatarista shared significant results in AAMCI. The overall effect of drug on ADL & IADL showed significant result.

INTRODUCTION

The problem of ageing is common globally. In India also with improved health care facilities and standard of living, life expectancy is going up. It has risen from 57 years in 1990 to 65 years today. The present number of senior citizens is 65 million but is expected to cross 177 million by the year 2025. The incidence of chronic degenerative disease increases and the incidence of morbidity is higher, as the age increases the decline in cognitive abilities and memory with advancing age is well documented. Cognitive dysfunction often is taken for granted both by health care practitioners and by the public at large. A pattern of progressive cognitive decline which usually becomes noticeable in middle age has traditionally been dismissed as part of getting old. This assumed casual link between ageing and cognitive dysfunction is not scientifically supportable, as many individuals age into their 90s with only modest loss of mental skills.¹

But for people who show measurable cognitive decline, failure to positively interval can prove disastrous, as abnormally lowered cognitive performance during the sixth decade has been linked to increase risk of dementia in later life.²

Age related cognitive dysfunction (ARCD) signifies a symptom cluster of accelerated mental decline documented after the age of 50. By definition age related cognitive dysfunction is an age linked condition and not a disease. Although ARCD is not as
severe as dementia. The worst causes of ARCD are at higher risk for dementia. A cognitive problem that has begun to subtly interfere with daily activities is referred to as mild cognitive impairment (MCI). MCI refers to the presence of cognitive impairment that is not severe enough to meet the criteria of dementia. A sizeable proportion of persons with MCI will progress to frank dementia usually caused by Alzheimer’s disease (AD). The conversion rate from MCI to AD is ~12% per year.

A cross sectional study done on Indian population showed that the prevalence of MCI is 14.89% in elderly patients.

In Ayurveda old age (Jara) is considered at the age of 60 to 70 years. It is characterized by decline of Dhatu, Indriya (sense organ), Bala, Vata, Patalya, Khaliyta, Karma-akshma, Kasa and Shwasa. In aging the somatic changes are clearly observed, the mental variations include Grahan-Dharaa-Smaraa-Vachana-Vidnya hani along with Pourush-Parakram-Utsahakshaya. Cognition can be correlated with Medha. (Cha. Sa.) Dhi is the component of Buddhi, which always perceives the knowledge correctly. Buddhi is broad term. As Mentioned above Medha and Budhi are synonyms. Dhi, Dhruvi, Smruti along with Mana are its subcomponents. Decline in Medha (intellect) starts from the 4th decade of life.

Ayurved has group of certain highly appreciated for their effect to promote various faculties of human body. In this respect Rasayana is one of the important branch of Asthang Ayurveda which deals with the promotion of physical & mental health. All Rasayana drugs are supposed to improve mental faculties in their beneficial effect to the body.

In Ayurveda science Jara chikitka developed as a specialization. Rasayan therapy indicated in treating Jara (natural aging). Achievements of this branch of medicine are still unsatisfactory. So this study was undertaken to observe the effects of Shiva gutika as a Rasayan dravya on AAMCI. Shiva gutika11 and saraswatarishta12 mentioned in Bhaishya Ratanavalai was undertaken as a trial drug. The present study was designed with the objectives of understanding Age associated mild cognitive impairment in Ayurvedic parlance and to evaluate the efficacy of Shiva gutika with Saraswatarishta in the management of Age associated mild cognitive impairment. All the drugs used in Shiva gutika and Saraswatarishta were authenticated and drug was prepared at Bharati Vidyapeeth College of Ayurved Pharmacy. Standardization of final drug was done at Bharati Vidyapeeth Deemed University College of Ayurved Pharmacy Pune.

Materials and Method

Patients attending OPD of Kayachikitsa Dept., College of Ayurved, Bharti Vidyapeeth, Pune suffering from Age associated mild cognitive impairment, fulfilling the criterion of selection, were selected irrespective of Cast, race, religion, between the age group of 60 to 80 yrs. A detail examination of patient was done before and after the treatment.

Assessment criteria

1) Subjective parameter: Improvement in all the six cerebral higher functions on the basis of various tests

i. MMSE (Mini Mental State Examination)
 ii. CAMCOG (CAMDEX) (Cognitive Function Test)
 iii. ADL/IADL (Instrumental Activities of Daily Leaving)
 iv. GDS (Geriatric Depression Scale)

• MMSE (Total Score 30) : Normal Score Above 24 and below 24 is positive
• CAMCOG (CAMDEX) (Total Score 100) : Normal Score Above 78 and below 78 is positive

2) Objective parameters: MRI-BRAIN was done before treatment

Inclusion Criteria

Considering different definition of Mild Cognitive Impairment, the inclusion criteria for present study were as follows.

1. Age group above 60 years and below 80 years, selection of patient was irrespective of sex, work and socioeconomical status.
2. The patients whose score on Mini mental state examination (MMSE)11 – minimental state examinations <24 were included.

Exclusion criteria

1. Patients having major psychological or major neurological problems.
2. HIV infected patients /AIDS.
3. Malignancy.
4. IHD, Hypothyrodism, uncontrolled DM

Drug & Dose

The selected patients were administered Shiva gutika, 1 gm once in a day in Rasayan kal with Saraswatarishta (40ml) as a Anupan for the period of 3 month. After the completion of the treatment, the follow up study of 90th day’s (after every 15th day) was done to note the recovery of signs and symptoms. A generalized Pathy-apathy is advised to each patient.

Investigations

Complete Blood count, Urine (routine and microscopic) were carried out.

Criteria of Assessment

Improvement in the patient was assessed mainly on the basis of CAMCOG scale.12 Also the improvement in the signs and symptoms of the disease was also assessed.

Observations & Its Graphical Representation

Score tables of six cerebral higher functions on the basis of various tests (scale/questionory).
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The pharmacological properties of the drugs are the resultant of the different permutations and combinations of the five Bhuta. The Akashiya, Tejas and Apya drugs having the Satva guna predominance are mainly responsible for the promotion and nourishment of Medha, Parthiva drugs may also be helpful in the nourishment of the Medha. Elements predominant in Vaya act at the level of mind.

In addition to its primary effect on "Medha" as conceived in Ayurveda, the Medhya Rasayana drugs have specific effect on mental performance and higher central nervous system (C.N.S.) functions.

As far as the pharmacodynamics of Medhya Rasayana is concerned maximum drugs are having "Shita Virya" and "Madhura Vipaka" whereas some of them are "Ushna Virya" and "Tikta Rasa". Medha confines in to - Grahana- Dharana - Smriti. Pitta is Ushna, Ashukari, Tiksna and instinct or enhances the Sattva which helps to retain or recapitulate the things. Therefore Pitta Vardhaka, Ushna Virya drugs are considered as Medhya drugs. Secondly Kapha provides "Dharana" by "Shthirita" & "Saumyata" and thereby helps in retention of congnition. Hence Shita Virya and Kapha Vardhaka drugs are quoted as Medhya drugs. Thus it can be said that "Ushna Virya Medhya" drugs are helpful mainly in "Grahana" and "Smarana" functions whereas Shita Virya Medhya drugs are helpful in "Dharana" function. Therefore Shiva gutika and Saraswatarishta acts on Buddhi and improves in Mild cognitive impairment.

CONCLUSION

In Ayurvedic literature detailed explanation of factors responsible for Jara & process of Jara are scattered. The study of these concepts correlates with concepts of aging in modern science. There is no particular & complete concept to explain the process of aging & AAMCI in modern science till date. Shiva gutika and Saraswatarishta has showed positive results in AAMCI. The word aging correlated with Jara. The old age considered by Charaka at 60 yrs & above is similar to that of modern geriatrics which is accepted universally. Shiva gutika with Saraswatarishta is effective in AAMCI. As per statistical analysis Shiva gutika with Saraswatarishta showed positive result on CAMCOG scale. No serious adverse effects were found both groups.

REFERENCES

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