



Clinical Research

Clinical efficacy of *Guduchyadi Medhya Rasayana* on Senile Memory Impairment

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Abstract

Aging has become one of the distinctive demographic phenomena in the 21st century and its social, economic and health implications are the most challenging issues. Senile Memory Impairment is a common condition characterized by mild symptoms of cognitive decline and occurs as a part of the normal aging process. It can be correlated to “*Jarajanya Smritibhramsha*” according to *Ayurveda*. The present study deals with the efficacy of *Guduchyadi Medhya Rasayana* on Senile Memory Impairment. A total of 138 patients aged in between 55–75 years were registered and randomly divided into two groups as the trial and control groups. The drugs were administered for 3. The trial drug showed memory enhancement, anti-stress, anti-depressant and anxiolytic properties. The trial group showed better results in the management compared to the control group.

Key words: Aging, *Guduchyadi Medhya Rasayana*, Senile Memory Impairment

Introduction

Aging has become a great issue for many countries due to a worldwide life prolongation. Number of people over 60 years has grown rapidly to 10% of the world population.^[1] In India too, in the last decade, increasing population aged has been projected significantly.^[2] So, it is associated with physiological, functional, and pathological changes affecting physical, psychological, emotional and social well-being.^[3] The major consequences of the increasing number of individuals in advanced age group is the increase in number of patients suffering from age-related disorders. Conservative estimation revealed that 25% of the elderly persons have significant psychiatric symptoms^[4] and the number of psychologically ill elderly persons was estimated to be 9 million in the year 2005.^[5] Though psychological disorders are common among the aged, it frequently remains undetected and untreated. It induces functional disability, disturbs rehabilitation, burdens the health system and impairs the quality of life of elderly individuals.^[6] Research based on the psychological health revealed that age-associated cognitive like memory disorders are found in high prevalence among the aged.^[7] Subjective complaints from individuals with age-associated memory impairment often include difficulties in remembering names

and words, etc. So, this condition is the result of physiological changes in the aging brain and not a specific neurological disorder.^[8] In *Ayurveda* literature, impairment of memory is mentioned as *Smritibhramsha* which occurs due to vitiation of *Rajas* and *Tamas Doshas* in the mind.^[9] The appearance of *Jara* (aging) at the appropriate age is termed as “*Kalaja Jara*”,^[10] and memory impairment appears as a clinical *Rupa* (feature) of *Jara*,^[11] hence Senile Memory Impairment can be correlated as *Jarajanya Smritibhramsha* according to *Ayurveda*.

In *Sarangadhara Samhita*, it is clearly emphasized that *Medha* (intellect) and *Buddhi* (wisdom) deteriorate in the fourth and ninth decades of life accordingly.^[12] Both are closely associated with the mind and help for the normal function of the mind. If these components decrease in the mind, then it will affect the normal function of mind.

Moreover, *Caraka* has noted that cognitive functions are thoroughly affected in old age as *Grahana* (power of understanding), *Dharana* (power of retention), *Smarana* (power of memorizing), *Vachana* (speech) and functions of sense organs qualitatively.^[13]

Importance of *Medhya Rasayana* on aging

The aging process occurs over all the body. It does not occur in the same way in every human being. People’s lifestyles also have additional influence on aging.^[14] The decline in brain weight and volume, degeneration of intracellular organelles, changes in cellular DNA and RNA, neuronal degeneration as well as significant loss of synapses are the salient features of aging in the brain.^[15] Therefore, psychological and neurological manifestations often form the hallmark of senility. Hence, *Ayurveda* clearly

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emphasizes that in the fourth and ninth decades of lifespan, individuals are subjected to the loss of *Medha* (intellect) and *Buddhi* (wisdom). Hence, it seems therapeutic measures of *Medhya Rasayanas* are exclusively needed for elders because they are brain tonics and improve the psychological faculties. It is responsible for *Dhi* (intelligence), *Dhrti* (retention power), *Smriti* (memory) and also possesses anti-stress and adaptogenic effect.^[16]

Having considered all literary views and ideas as above mentioned, *Guduchyadi Medhya Rasayana* (GMR)^[17] has been attempted to evaluate its efficacy on Senile Memory Impairment.

Materials and Methods

Selection of the patients

Total 138 patients having symptoms of memory impairment attending O.P.D. and I.P.D. of Department of Kaya Chikitsa of I.P.G.T. and R.A., Gujarat Ayurved University, Jamnagar were selected for the present study. A purposive sampling technique was adopted irrespective of their sex, religion, occupation, educational status, etc.

Criteria of inclusion

1. Patients aged 55 and above up to 75 years of age.
2. Complaints of memory impairment on the basis of short term and long term.
 - I. Short term, e.g. misplacing objects, difficulty in remembering multiple items to be purchased, difficulty in recalling information quickly, problems in remembering names and telephone numbers.
 - II. Long term, e.g. difficulty in recall of special events of personal life, difficulty in recall of previous histories of life and recognition.
3. Patients suffering from dementia.

Criteria of exclusion

1. Patients below 55 years and above 75 years of age.
2. Patients with evidence of delirium, confusion or other disturbances of consciousness, Parkinson's disease, stroke, intracranial hemorrhage, brain tumors, history of alcoholism or drug dependence, use of any psychotropic drug, Alzheimer's disease, diabetes mellitus, etc.

Investigations

Routine hematological and biochemical tests were carried out before and after the treatment. Among the biochemical tests, serum Acetylcholine Esterase (AChE) estimation, as a biomarker of Senile Memory Impairment, was carried out.

Plan of the study

Patients fulfilling the inclusion criterion were grouped in to two after obtaining written consent.

Group A (Trial Group)

Patients of this group were administered with the Granules of *Guduchyadi Medhya Rasayana* (GMR), which contains *Guduchi* (*Tinospora cordifolia* Wild.), *Apamarga* (*Achyranthes aspera* Linn.), *Vidanga* (*Embelia ribes* Burm. f.), *Shankhapushpi* (*Convolvulus pluricaulis* Chois.), *Vaca* (*Acorus calamus* Linn.), *Haritaki* (*Terminalia chebula* Zetz.), *Kushtha* (*Saussurea lappa* C.B. Clarke), *Shatavari* (*Asparagus racemosus* Wild.), Cow's ghee and sugar.

Dosage: 5 g, 3 times per day, after meal

Anupana: Water in sufficient quantity

Duration: 3 months

Total, 73 patients were registered.

Group B (Control Group)

Patients of this group were administered *Sarkaradi* Granules (SG).

Dosage: 3 g, 3 times per day, after meal

Anupana: Water in sufficient quantity

Duration: 3 months

Total 65 patients were registered..

Both the drugs were prepared at Pharmacy, Gujarat Ayurved University, Jamnagar.

Criteria of assessment

Effects of *Medhya Rasayana* on memory impairment were assessed in two ways, i.e. as subjective and objective, before and after the treatment.

After completion of the treatment, the patients were graded into five groups based on their improvement in order to ascertain the overall therapeutic efficacy. The data so obtained were analyzed using SPSS and Sigma Stat statistical packages. Observations and results pertaining to clinical parameters were presented in tabular form along with the findings of statistical analysis. Paired “*t*” test was adopted to find out the effect of therapy for each group individually, while unpaired “*t*” test used for comparative effect.

Subjective criteria

Assessments on improvements in signs and symptoms were carried out using appropriately designed scoring method, with the scores ranging from 0 to 4. Cognitive state was assessed by Mini Mental State Examination.^[18] and psychological health of the patients was evaluated with Hamilton Rating Scales for Depression and Anxiety.^[19]

Objective criteria

Serum AChE estimation was carried out as a biomarker of Senile Memory Impairment.

Observations and Results

Total 138 patients of Senile Memory Impairment were registered in the study. Forty-three patients in the Group A (trial group) and 56 patients in the Group B (control group) completed the treatment, while 30 patients in Group A and 9 patients in Group B discontinued. In this study, various etiological factors were identified. Maximum number of patients reported *Chinta* (thoughts; 92%), followed by *Krodha* (anger; 83.3%), *Shoka* (worries; 70.2%), *Chittodvega* (anxiety; 64.4%), *Bhaya* (fear; 51.4%), *Ruksha Ahara* (dried food; 55.7%), *Rattri Jagarana* (awaking at night; 87%), etc.

Effect of therapy

Both the groups showed highly significant ($P < 0.001$) relief from all the chief complaints [Tables 1 and 2].

In comparison to Group B, Group A showed highly significant relief in symptoms such as names forgotten (63.56%), numbers forgotten (61.62%), and memory impairment in recalling special events in life (59.71%) at a level of $P < 0.001$, and forgetfulness (68.60%), losing of valuables (73.64%), difficulty in remembering multiple items to be purchased (68.21%), inability to concentrate (68.14%), impaired recognition (79.7%), memory impairment of recall of previous histories (60.66%) at a level of $P < 0.01$, and a significant relief ($P < 0.05$) from difficulty in recalling information quickly (71.57%), depression (89.66%), and inability to relax (82.93%) [Table 3].

With respect to *Dosha Dushti*, the Group A showed significant relief from *Vata Dushti* (85.48%), *Pitta Dushti* (94.15%) and in *Kapha Dushti* (84.3%), while the Group B showed significant relief from *Vata Dushti* (68.3%), *Pitta Dushti* (61.78%) and in *Kapha Dushti* (62.75%).

On Hamilton Anxiety Rating Scale, both the groups showed highly significant relief ($P < 0.001$) from all the symptoms individually. In comparison to the results obtained from Group B, the Group A showed highly significant relief with respect to intellectual cognitive functions (79.03%), somatic (muscular) disorders (83.71%), depression (74.12%), and a significant relief from fear (81.11%). On Hamilton Depression Rating Scale, both the groups showed highly significant relief ($P < 0.001$) from all the symptoms individually. However, the comparative results were insignificant. The results of symptoms of Mini Mental State Examination showed that both the groups provided highly

significant ($P < 0.001$) improvement individually. In comparison with SG, GMR showed highly significant improvement in registration (9.30%), attention and calculation (24.49%), and a significant improvement in language (13.51%) and in total score (14.89%) [Table 4]. The results obtained with hematological parameters reveal that Group A showed [Table 5] highly significant increase in total RBC (1.20%) count, a significant increase in Hb% (1.34%), packed cell volume (PCV) (1.30%) and a significant decrease in erythrocyte sedimentation rate (ESR) value (7.40%), while Group B showed highly significant decrease in RBC count (4.30%), PCV (3.34%), and a significant decrease in Hb% (1.55%).

With regard to the biochemical parameters, Group A showed highly significant decrease ($P < 0.01$) in serum cholesterol, serum triglyceride, low density lipoprotein (LDL), and very low density lipoprotein (VLDL) levels, while high density lipoprotein (HDL) increased highly significantly ($P < 0.01$) and a significant decrease ($P < 0.05$) was found in blood urea (13.80%) as well as serum AChE (3.67%) within normal limits [Table 6]. The Group B showed highly significant increase in blood urea (10.04%), but it was within normal limit. Other parameters were found to be statistically insignificant.

Regarding the overall effect, Group A showed marked improvement in 18.6% patients, moderate improvement in 74.4% patients and mild improvement in 7.0% patients, while Group B showed moderate improvement in 32.2% patients and mild improvement in 67.8% patients.

Table 1: Effect of GMR in Group A on the symptoms of Senile Memory Impairment

Symptoms	n	Mean BT	Mean AT	Mean difference	% of relief	SD	SE	t	P
Forgetfulness	43	3.04	1.00	2.04	68.60	0.53	0.82	25.20	<0.001
Misplacing objects (SM)	43	2.62	0.86	1.76	67.44	0.61	0.93	18.97	<0.001
Losing of valuables (purse, key, etc.)	43	2.67	0.76	1.90	73.64	0.60	0.09	20.50	<0.001
Difficulty in remembering multiple items to be purchased (SM)	43	2.67	0.79	1.83	68.21	0.61	0.09	19.60	<0.001
Names forgotten (SM)	43	2.81	1.04	1.76	63.56	0.75	0.11	15.43	<0.001
Numbers forgotten (SM)	43	2.83	1.09	1.74	61.62	0.78	0.12	14.48	<0.001
Feeling of anxiety	41	2.40	0.42	1.97	88.33	0.78	0.12	16.40	<0.001
Difficulty in recalling information quickly	43	2.51	0.81	1.69	71.51	0.59	0.09	18.58	<0.001
Impaired attention	43	2.30	0.39	1.90	83.72	0.71	0.10	17.42	<0.001
Inability to concentrate	43	2.60	0.86	1.74	68.41	0.65	0.10	17.38	<0.001
Recognition (LM)	39	1.65	0.37	1.27	79.27	0.82	0.12	10.15	<0.001
Decreased efficiency in household activities	39	2.07	0.45	1.61	79.83	0.82	0.12	12.7	<0.001
Memory impairment of recall of previous histories (LM)	32	1.93	0.95	0.97	60.66	0.83	0.12	7.71	<0.001
Memory impairment of recall of special event of life (LM)	33	1.97	0.93	1.04	59.71	0.87	0.13	7.87	<0.001
Depression	25	1.32	0.16	1.16	89.66	1.11	0.16	6.86	<0.001
Making mistake in accounts	9	2.11	0.77	1.33	77.7	0.50	0.16	8.00	<0.001
Inability to relax	42	2.53	0.44	2.09	82.93	0.68	0.10	20.07	<0.001
Sleep disturbances	43	2.32	0.13	2.18	94.96	0.62	0.09	18.5	<0.001

SM = Short memory; LM = Long memory; BT = Before treatment; AT = After treatment

Table 2: Effect of SG in Group B on the symptoms of Senile Memory Impairment

Symptoms	n	Mean BT	Mean AT	Mean difference	% of relief	SD	SE	t	P
Forgetfulness	56	3.44	1.73	1.71	48.95	0.59	0.07	21.58	<0.001
Misplacing objects (SM)	56	2.87	1.39	1.48	50.89	0.71	0.09	15.55	<0.001
Losing of valuables	56	2.89	1.41	1.48	50.44	0.78	0.10	14.11	<0.001
Difficult in remembering multiple items to be purchased (SM)	56	2.83	1.42	1.41	49.85	0.70	0.09	14.91	<0.001
Names forgotten (SM)	56	3.30	2.03	1.26	39.28	0.70	0.09	13.54	<0.001
Numbers forgotten (SM)	56	3.48	2.28	1.19	34.67	0.74	0.10	11.95	<0.001
Feeling of anxiety	56	2.69	0.78	1.91	72.02	0.93	0.12	15.21	<0.001
Difficulty in recalling information quickly	56	2.73	1.37	1.35	50.74	0.84	0.11	12.08	<0.001
Impaired attention	55	2.30	0.57	1.73	73.91	0.79	0.10	16.25	<0.001
Inability to concentrate	56	2.48	0.71	1.33	48.95	0.69	0.09	14.42	<0.001
Recognition (LM)	52	1.51	0.62	0.89	62.50	0.56	0.07	11.89	<0.001
Decreased efficiency in household activities	48	2.03	0.66	1.37	69.79	0.88	0.11	11.60	<0.001
Memory impairment of recall of previous histories (LM)	45	2.23	1.57	0.66	28.14	0.66	0.08	7.40	<0.001
Memory impairment of recall of special event of life (LM)	45	2.21	0.57	0.64	28.51	0.69	0.09	6.80	<0.001
Depression	43	1.78	0.58	1.96	68.60	1.01	0.13	8.80	<0.001
Making mistake in accounts	17	0.51	0.17	0.33	68.62	0.58	0.07	4.37	<0.001
Inability to relax	56	2.75	1.41	1.76	71.42	0.80	0.10	16.30	<0.001
Sleep disturbances	53	2.44	0.33	2.10	84.74	0.94	0.12	16.64	<0.001

SM = Short memory; LM = Long memory; BT = Before treatment; AT = After treatment

Discussion

It has been mentioned in texts that GMR contributes to enhance the memory power within a short period. On the basis of *Rasapanchaka*, the pharmacotherapeutic properties reveal that it contains *Katu*, *Tikta* and *Madhura* in *Rasa*, and the effect of *Katu* and *Madhura* in *Vipaka*. Moreover, due to various properties of *Tikshna*, *Laghu*, *Ruksha*, *Sara*, *Guru* and *Snigdha*, it possesses markedly *Ushna Virya* and *mildly Sheeta Virya*. Accordingly, GMR was considered to be an effective treatment for *Tridoshahara*. In Ayurveda, it is clearly emphasized that *Smritibhramsha* (memory impairment) results due to *Rajas* and *Tamasdoshas* in the mind. These *doshas* are responsible for producing *avarana* over the mind. The relief from the symptoms has been found to be statistically highly significant.

These observations reveal that the drug might have counteracted or pacified *Raja* and *Tamo Doshas*, so *Avarana* of mind was removed and the disease was subsided or controlled. Further pharmacological studies have proven that *Vaca* (*Acorus callemus* Linn.) and *Shankhapushpi* (*Convolvulus pluricaulis* Choisy) have anxiolytic, memory enhancing, anti-stress, antidepressant, tranquilizing and sedative activities.^[20,21] Further, it was found that there was a significant improvement by 14.84% on the total score of the Mini Mental State Examination

[Table 4]. So, these evidences indicate the positive role of *Medhya* property of GMR on Senile Memory Impairment among elderly individuals. Considering the symptoms of memory impairment along with the cognitive decline, a highly significant result was obtained both from GMR and SG [Tables 1 and 2]. However, in comparison, GMR has given better relief for the majority of symptoms [Table 3]. The *Medhya Rasayanas* are special Ayurvedic neuro nutraceuticals which are specific to brain and nervous system. They are claimed to promote cognitive function of the brain.^[22] Further, it was mentioned in the *Caraka Samhita* that *Shankhapushpi*, a *Rasayana* drug, has the property of promoting intellect.^[23] Moreover, Group B also showed improvement of memory due to the *Medhya* effect of ghee.^[24] The serum AChE value has shown an upper range in both the groups before the treatment and a significant decrease was observed after the treatment in Group A [Table 6]. The recent advances in clinical research reveal that AChE activity is increased in human cerebrospinal fluid during aging^[25] and scientists believe that dementia-related memory issues stem from the increased breakdown of acetylcholine due to a preponderance of AChE which degrades acetylcholine.^[26] Furthermore, a decrease in AChE activity has noted in the treated animals, leading to an increase in the cholinergic activity in the brain.^[27] The significant reduction of AChE in Group A

Table 3: Comparison of the effects of GMR and SG on the symptoms of Senile Memory Impairment

Symptoms	df	% of relief (group A)	% of relief (group B)	Mean difference	SE	t	P
Forgetfulness	97	68.60	48.95	0.386	0.117	3.289	<0.01
Misplacing objects (SM)	97	67.44	50.89	0.233	0.146	1.587	>0.05
Losing of valuables	97	73.64	50.44	0.448	0.142	3.182	<0.01
Difficulty in remembering multiple items to be purchased (SM)	97	68.21	49.85	0.426	0.135	3.144	<0.01
Names forgotten (SM)	97	63.56	39.28	0.500	0.146	3.409	<0.001
Numbers forgotten (SM)	97	61.62	34.67	0.548	0.155	3.523	<0.001
Feeling of anxiety	95	88.33	72.02	0.193	0.173	1.111	>0.05
Difficulty in recalling information quickly	97	71.51	50.74	0.341	0.151	2.252	<0.05
Impaired attention	96	83.72	73.91	0.211	0.159	1.326	>0.05
Inability to concentrate	97	68.41	48.95	0.405	0.137	2.940	<0.01
Recognition (LM)	89	79.27	62.50	0.471	0.156	3.004	<0.01
Decreased efficiency in household activities	85	79.83	69.79	0.244	0.175	1.390	>0.05
Memory impairment of recall of previous histories (LM)	75	60.66	28.14	0.511	0.153	3.339	<0.01
Memory impairment of recall of special event of life (LM)	76	59.71	28.51	0.564	0.163	3.440	<0.001
Depression	66	89.66	68.60	0.442	0.202	2.180	<0.05
Making mistake in accounts	29	77.7	68.62	0.278	0.215	1.291	>0.05
Inability to relax	96	82.93	71.42	0.302	0.155	1.946	<0.05
Sleep disturbances	94	94.96	84.74	0.078	0.165	0.472	>0.05

Table 4: Comparison of the effects of GMR and SG on the symptoms of mini mental state examination

Symptoms	df	% of relief (group A)	% of relief (group B)	Mean difference	SE	t	P
Orientation	97	11.32	12.67	0.080	0.142	0.563	>0.05
Registration	97	9.30	2.38	0.208	0.072	2.868	<0.01
Attention and calculation	97	24.49	12.67	0.418	0.136	3.065	<0.01
Recall	97	17.08	18.75	0.099	0.113	0.874	>0.05
Language	97	13.51	10.21	0.407	0.154	2.641	<0.05
Total score	97	14.89	11.62	0.817	0.333	2.451	<0.05

Table 5: Effect of GMR on hematological parameters in Group A (n=43)

Parameters	Mean BT	Mean AT	Mean difference	% of relief	SD	SE	t	P
Hemoglobin percentage	12.20	12.37	0.17	1.34	0.44	0.06	2.56	<0.05
Total leukocytes	7032.55	7041	9.30	-2.29	1196.01	182.39	-0.523	>0.05
Neutrophils	61.18	63.88	2.70	3.82	1.76	0.26	1.472	>0.05
Lymphocytes	32.39	29.60	2.79	7.30	6.04	0.92	3.29	<0.01
Eosinophils	3.23	3.62	0.39	1.01	1.76	0.26	1.47	>0.05
Monocytes	3	2.9	0.09	13.25	1.19	0.18	0.525	>0.05
Total red blood cell count	4.62	4.68	0.06	1.20	0.121	0.018	3.08	<0.01
Erythrocyte sedimentation rate	23.37	20	3.37	7.40	9.30	1.41	2.37	<0.05
Packed cell volume	38.61	39.10	0.49	1.30	1.30	0.19	2.48	<0.05

Table 6: Effect of GMR on biochemical parameters in Group A (n=43)

Parameters	Mean BT	Mean AT	Mean difference	% of relief	SD	SE	t	p
Fasting blood sugar	97.13	96.62	0.51	0.325	6.5	0.99	0.513	>0.05
Serum protein	7.32	7.27	0.05	0.59	0.30	0.04	1.10	>0.05
Serum creatinine	1.04	1.08	0.037	2.74	0.15	0.15	1.56	>0.05
Blood urea	28.81	23.41	5.39	13.80	9.49	1.44	3.72	<0.01
SGPT	16.25	15.79	0.46	2.68	13.62	2.07	0.224	>0.05
Serum acetylcholine esterase	10,150	9718	432	3.67	810.86	169.077	2.55	<0.05
Serum cholesterol	205.18	190.81	14.37	5.49	29.29	4.46	3.21	<0.01
Serum triglyceride	127.27	107.02	20.25	10.75	44.80	6.83	2.96	<0.01
LDL	139.36	124.77	14.58	7.60	28.36	4.35	3.37	<0.01
VLDL	25.60	21.35	4.24	11.36	9.03	1.37	3.08	<0.01
HDL	40.23	44.58	4.34	6.28	10.23	1.56	2.78	<0.01

LDL = Low density lipoprotein; VLDL = Very low density lipoprotein; HDL = High density lipoprotein; SGPT = Serum glutamic pyruvic transaminase

shows that GMR exerts its effect on memory enhancement by increasing the cholinergic function by preventing the breakdown of acetylcholine in the aging human brain.

Conclusions

Senile Memory Impairment can be correlated to *Jarajanya Smritibhramsha* according to Ayurveda, and imbalance of *Trigunas* through aggravation of *Rajas* and *Tamas Doshas* in the mind leads to development of Senile Memory Impairment among elders. Modern literature reveals that Senile Memory Impairment is closely associated with cognitive decline during aging. All the patients of Senile Memory Impairment were having features of impairment of short memory and long memory in this study. *Manasika Nidana* (psychic factors), *Aharaja* (dietary) and *Viharaja* (behavioral) factors, which were reported by the patients, play a major role in the pathogenesis of Senile Memory Impairment by vitiating *Rajas* and *Tamas Doshas* in the mind. Those factors were *Chinta* (thoughts), *Krodha* (anger), *Shoka* (worries), *Chittodvega* (anxiety), *Bhaya* (fear), *Moha* (illusions), *Ruksha Ahara* (dried food), *Ratri Jagarana* (awaking at night), etc. GMR has shown statistically highly significant improvement on short memory impairment as well as long memory impairment in Senile Memory Impairment, at the level of $P < 0.001$. Reduction of AChE showed enhancement of memory functions due to improvement of cholinergic actions in the human brain in the trial group (Group A). GMR has shown memory enhancing, antidepressant, anti-stress, and anxiolytic potential. Hence, *Guduchyadi Medhya Rasayana* therapy has proved so as to provide better improvement in comparison to the control group.

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हिन्दी सारांश

जराजन्य स्मृतिहास पर गुडुच्यादि मेध्यरसायन की कार्मुकता का निर्धारण

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२१ वीं शताब्दी में वयोवृद्ध व्यक्तियों की जनसंख्या अभिवृद्धि ध्यानाकर्षक घटना बनती जा रही है। अतः आज सामाजिक, आर्थिक दृष्टि से स्वास्थ्य विषयक चिंतन समस्यारूप बनता जा रहा है। वृद्धावस्था में स्मृतिहास विकृति होती है, जो जरा के परिचायक परिवर्तनों का अंश है। सेनाईल मेमरी इम्पेरेमेन्ट की आयुर्वेदोक्त जराजन्य स्मृतिहास के साथ तुलना की जा सकती है। प्रस्तुत अध्ययन गुडुच्यादि मेध्यरसायन की जराजन्य स्मृतिहास पर कार्मुकता निर्धारण हेतु किया गया है। इस हेतु १३८ रुग्णों का चयन किया गया। वे ५५-७५ वर्ष आयु के थे। इन रुग्णों को दो वर्गों में विभाजित किया गया। (अ) औषधि वर्ग (ट्रायल ग्रुप) एवं (ब) नियमन वर्ग (कंट्रोल ग्रुप)। इन रुग्णों को गुडुच्यादि मेध्य रसायन ५ ग्राम ३ बार ३ मास तक प्रतिदिन दिया गया। नियमन वर्ग के रुग्णों को गोघृत एवं शर्करा ३ मास तक प्रतिदिन दिया गया। ९९ रुग्णों की संपूर्णकाल तक चिकित्सा की गई। औषधवर्ग के रुग्णों को गुडुच्यादि मेध्यरसायन - गुडुची, अपामार्ग, आमलकी, गोघृत एवं शर्करा का योग देने से स्मृति में अभिवृद्धि, तनाव-न्यूनता, विषाद अल्पता, उद्वेग हास देखा गया। दोनों वर्गों की तुलना में औषधिवर्ग में अधिक प्रशस्त परिणाम मिला। उसमें १८.६% प्रवर सुधार, ७४.४% मध्यम सुधार और ७.००% रुग्णों में अल्पसुधार देखा गया।

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