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AN OBSERVATIONAL STUDY ON THE EFFICACY OF ASHWAGANDHADI LEHYA IN HEALTHY ELDERS

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ABSTRACT

Aging is a natural process with decline of all physiological activities. Rasayana medicines mentioned in Ayurveda are anti-oxidant, adoptogenic in nature which tackles the ill effects of free radicals in old age. *Ashwagandhadi Lehya*, a *Rasayana* formulation is used in the management of aging related symptoms in this study. *Ashwagandhadi Lehya* was administered in 109 apparently healthyelders out of which 100 subjects completed the study. The clinical parameters were analysed statistically to observe improvement in general sense of wellbeing. Other clinical parameters like dizziness, aching muscles, constipation, pain in joints, disturbed sleep, fatigue, urge incontinence and general weakness reduced showing statistically highly significant improvement with p value <0.001. The study showed significant improvement in stiffness in joints and loss of appetite with p value <0.05. The study observes health benefits of *Ashwagandhadi Lehya* which can help elders to live a healthy life.

Keywords *Ashwagandhadi Lehya, Withania somnifera, Rasayana*, old age,

INTRODUCTION

The senile population all over the world are on a high and theycontinue to rise in the forthcoming decades. According to WHO statistics quoted in 2011, the number of people aged 65 or older is projected to grow from an estimated 524 million to nearly1.5 billion in 2050 with most of the increase in developing countries.[1]In India both the share and size among elderly population is increasing over time.From 5.6% in 1961, it is expected to rise to 12.4% of population by the year 2026[2]. This demographic picture points towards the increased concerns about health status and quality of life in elderly population. Aging is characterised by deterioration in the levels of vigour, valour, potency, enthusiasm, intellect, perception, concentration, memory, ability to learn new skills and body mass. It is associated with loosening of joints, dryness of skin, greying of hair, baldness, tremors, decreased appetite and vitiation of Vata[3,4].Ayurveda offers total holistic approach for upliftment of body, mind as well as spirit. Rasayana therapy mainly aims at the promotion of strength and vitality by replenishing Rasa (nutritive essence) and other Dhatu(tissue like elements).Rasayana therapy is attributed with the merits of preventing or delaying aging, imparting longevity, physical stamina, intellectual ability and vigour. Naimittika Rasayana, Ajasrika Rasayana, Medhya Rasayana and Achara Rasayana are various types of Rasayana which provides diverse

benefits. Naimittika Rasayana is mentioned in the treatment of a particular illness or condition. The definition 'Jaravyadhinashanam' speaks about reducing or reversal of the deleterious effects of aging.Ayurveda classics citemany drugs which are endowed with the merits of Rasayana. Ashvagandha is one such drug which is commonly available in India and highly used in the treatment of multipleailments. Studies conducted across India have established the adoptogenic and anxiolytic activity of bioactive glycowithanolides present in Ashvagandha[5].

A formulation of Ashwagandha, known as Ashwagandhadi Lehya is described by Pharmacopoeia of Hospital of Integrated Medicine, Madras. The ingredients of *Ashvagandhadi Lehya* are *Sharkara* (sugar), Ashwagandha (Withania somnifera), ShvetaSariva (Hemidesmusindicus), ShvetaJeeraka (Cuminumcyminum), Madhusnuhi (Smilax china), Draksha (Vitesvinifera), Ghrita (clarified butter) ,Madhu (honey), Ela (Elattariacardamomum) and water. The dosage is 6-12 grams with anupana of milk. It is Balya, Rasayana and Vajikarana in nature[6]. This study was planned to observe the efficacy of Ashwagandhadi Lehya on clinical parameters pertaining to old age.

Objectives of the study: To study the efficacy of Ashwagandhadi Lehya on aging parameters in healthy elders.

Source of data: Subjects reporting to IPD and OPD of Department of Manasaroga , Shree Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka

Methodology

Inclusion criteria Co-operative and conscious apparently healthy elderly subjects of age group 50 to 70 years and willing to undergo study.

Exclusion criteria - Subjects with established diabetes mellitus, severe bronchial asthma, COPD, cancer, dementia, cardiac diseases, chronic debilitating conditions like hepatic or renal insufficiency; any acute or serious illness, fever and delirium.

Clinical assessment - Dizziness, constipation, urge incontinence, aching muscles, pain in joints, stiffness in joints, abnormal sleep, loss of appetite, fatigue, generalised weakness and sense of wellbeing. The parameters were graded based on Visual Analogue Scale 0 to 100.

Study design – Observational study

Formulation –*Ashwagandhadi Lehya*

Dose - 12 grams orally once in the morning before food

Duration – 12 weeks

Anupana– Milk

Follow-up – 4 weeks after completion of treatment

Statistical analysis - The statistical assessment of clinical parameters was conducted before and after intervention using nonparametric tests.

Institutional ethical committee (IEC) clearance–SDMCAH/17074/10-11/ dated 10/01/11

Observations

A total of 109 subjects who fulfilled the inclusion criteria by signing the written consent were registered for the study. A total of 100 subjects completed the intervention. The study involved 51.37% of males and 48.62% of females, i.e.almost equal registration of both genders.Maximum number of subjects i.e., 46.87% belonged to the age group of 55-60 years.Based on physical activity, nature of work was assessed where 43.11% subjects had sedentary lifestyle and 39.4% were in to moderate labour. Majority of subjects (36.69%) belonged to Vata-Pittaja Prakriti.

Thefrequencies of clinical parameters with their severity based on Visual Analogue Scale (VAS) are depicted in the table 5.

Table 1: Incidence of age distribution in 109 subjects

Age(in yrs.)	Frequency	Percentage
50-55	33	35.97
55-60	43	46.87
60-65	21	22.89
65-70	12	13.8
Total	109	100%

Table 2: Incidence of Gender in 109 subjects

Gender	Frequency	Percentage
Male	56	51.37
Female	53	48.62
Total	109	100.0

Table 3: Incidence ofPrakruti in 109 subjects

Prakruthi	**Frequency**	**Percentage**
Pittaja	18	16.51
Kaphaja	13	11.92
Vatapittaja	40	36.69
Vatakaphaja	10	9.17
Pitta kaphaja	28	25.68
Total	109	100.0

Table 4: Incidence of physical exercise among 109 subjects.

Physical exercise	Frequency	Percentage
Heavy labour	10	9.17
Moderate labour	43	39.4
Office job	9	8.25
Sedentary	47	43.11
Total	109	100.0

Table 5: Frequencyof clinical parametersamong 109 subjects

Sl No	Clinical parameters	Nil	Not very severe	Quite severe	Severe	Very severe
1	Dizziness	64 (58.7%)	26 (23.8%)	14 (12.8%)	05(4.58%)	Nil
2	Constipation	87(79.8%)	13(11.9%)	9(10%)	nil	Nil
3	Urge incontinence	74(67.8%)	22(20.18%)	13(11%)	nil	Nil
4	Aching muscles	25(22.9%)	28(26.6%)	34(31.1%)	22(20.1%)	Nil
5	Pain in joints	42(38.5%)	26(22%)	24(20.1%)	12(11%)	5(4.5%)
6	Stiffness in joints	93(85.32%)	12(11%)	4(3.6%)	nil	Nil
7	Abnormal sleep	44(40.3%)	30(27.5%)	23(21.1%)	9(8.25%)	3(2.75%)
8	Loss of appe-	88(80.7%)	16(14.67%)	5(4.58%)	nil	Nil

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9	Fatigue	44(40.36%)	38(34.86%)	14(12.84%)	10(9.17%)	3(2.75%)
10	Generalised weakness	56(51.37%)	26(23.85%)	18(16.5%)	9(8.25%)	Nil
11	Sense of wellbeing	64 (58.7%)	26 (23.8%)	14 (12.8%)	05(4.58%)	Nil

RESULTS AND DISCUSSION

Ashwagandhadi lehya showed highly significant improvement in dizziness, constipation, urge incontinence, aching muscles, pain in joints, abnormal sleep,fatigue and generalised weakness with p value <0.001. Significant improvement was observed in stiffness in joints and loss of appetite with p values0.001 and 0.04 respectively (<0.05).

Highly significant improvement was observed inSense of wellbeingwith p value <0.001 which shows improvement in general health.

Table 6: Improvement in clinical parameters among 100 subjects assessed using Friedman's test

Sl No	Clinical parameters	Mean rank			N	Chi square	Df	P value
		BT	AT	FU				
1	Dizziness	2.3	1.84	1.86	100	46.621	2	<0.001
2	Constipation	2.15	1.97	1.88	100	19.385	2	<0.001
3	Urge incontinence	2.18	1.9	1.92	100	19.918	2	<0.001
4	Aching muscles	2.67	1.66	1.67	100	115.111	2	<0.001
5	Pain in joints	2.44	1.73	1.83	100	60.286	2	<0.001
6	Stiffness in joints	2.1	1.92	1.98	100	14	2	0.001
7	Abnormal sleep	2.42	1.8	1.78	100	56.946	2	<0.001
8	Loss of appetite	2.09	1.97	1.94	100	6.462	2	<0.05
9	Fatigue	2.49	1.69	1.82	100	81.011	2	<0.001
10	Generalised weakness	2.27	1.86	1.87	100	28.416	2	<0.001
11	Sense of well being	1.67	2.19	2.14	100	30.766	2	<0.001

The above said clinical parameters, except the sense of wellbeing, point towards the deterioration of general health as sign of aging. Ageing is associated with decrease in antioxidant status.Age dependent increase in lipid peroxidation is the consequence of diminished production of anti oxidants[7].The free radical theory of ageing has been widely acceptedwhich proposes the deleterious action of free radicals whichare responsible for the functional variations associated with ageing[8].

The pharmacological effects of the roots of Ashwagandha (Withania somnifera) are attributed to the presence of withanolides, a group of steroidal lactones. Withania somnifera has pharmacological value as an adaptogen, antibiotic, aphrosidiac, astringent, antiinflammatory, diuretic, narcotic, sedative, and tonic. Studies conducted showed the herb produced an increase in the levels of three natural antioxidantssuperoxide dismutase, catalase and glutathione peroxidase[9].Withanolides, steroidal lactones, phenolics and flavonoids present in the root of Ashvagandha are active chemical markers and act as health promoter[10].

Ashwagandha **(**Withania somnifera) is known to have improved the physical performance and strength parameters in a study. It helps in delaying onset of fatigue and thus increasing the time for exhaustion and maintaining the power for relatively longer period. Withania somnifera may therefore be useful for generalized weakness and to improve speed and lower limb muscular strength and neuro-muscular coordination[11].

Other ingredients mentioned in Asvagandhadi Lehya, namely ShvetaSariva, ShvetaJeeraka, Madhusnuhi, Draksha, honey and Ghrita have strong appetizer , digestant , carminative and Rasayana properties. A combination of all these ingredients has helped in improving the appetite and nourishment of further Dhatus, through which the catabolic activity of the body was kept under control. Nootropic agents like Ghritaand Draksha have helped reducing the stress levels by providing better sleep, thus enhancing the sense of well-being. A combination of Ashwagandhadi Lehya with milk has improved the health status of the elderly subjects by reducing their somatic complaints. A study describes about the efficacy of Ashwagandha and milk in providing prophylaxis and treatment of infectious agents which is upheld in this study also[12].

CONCLUSION

Based on the results obtained in this study, it may be concluded that Ashwagandhadi Lehya helps as a health tonic in reducing complaints related to aging like dizziness, aching muscles, urge incontinence, generalised weakness etc. This indicates that regular consumption of Ashwagandhadi Lehya can reduce the deleterious effects of aging and improve their general health by-facilitating anactive, independent and stress- free life in elderly population.

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