



Research Article

**A CLINICAL STUDY TO EVALUATE THE RASAYANA EFFECT OF ASTHISHRINKHALAGHRITA IN JARA**

**Kavitha C. K<sup>1\*</sup>, Waheeda Banu<sup>2</sup>**

<sup>\*1</sup>PG Scholar, <sup>2</sup>Professor and HOD, Department of Kayachikitsa, Karnataka Ayurveda Medical College, Mangalore, Karnataka, India.

**ABSTRACT**

Modern medicine has made a great deal of progress in understanding the aging process and in controlling age-associated health issues. The problems of Aged were neglected by Ayurvedic science and recently there started new advancements in this branch of Ayurveda which is insufficient for the current needs. This had led to lack of active longevity with more disability and dependency. Thus, this study was taken up to evaluate the *Rasayana* (Anti- ageing) effect of *Asthishrinkhalaghrita* in *Jara janya vyadhi* (Diseases due to senility). Methods: In present study, 30 subjects were diagnosed with the *Jara janya vyadhi*, selected randomly and were given with 15 ml of *Asthishrinkhalaghrita* in the morning for 30 days. The data obtained were recorded, tabulated and statistically analyzed using appropriate statistical methods. Results: Study showed mild improvement in overall treatment. Though no statistically significant results were obtained, there was a good improvement for the patient in Climbing stairs, Sleep disturbance, *Shwasa vridhi* (Dyspnoea), *Malabadhata* (Constipation), *Agni mandya* (loss of appetite) and weight gain with p value < 0.05 and *Slatha sandhi* (laxity of joints) and walking with p value > 0.05. Conclusion: Thus *Rasayana chikitsa* can improve the longevity, positive health; provide the resistance to fight against the diseases, keeping the excellence in the tissues including mental faculties.

**KEYWORDS:** *Jara, Rasayana, Asthishrinkhala ghrita, Anupana.*

**INTRODUCTION**

The death is inevitable with all unfavorable progressive changes of Ageing with decline in vigor. Current statistics put the number of worldwide elderly population at 962 million in 2017; it is expected to cross 2.1 billion by the year 2050<sup>[1]</sup>. In Ayurveda ageing is described of two types: *Kalaja* (timely) and *Akalaj* (Untimely)<sup>[2]</sup>. The *Kalaja jara* which occurs due to progress of time is *Yapya* (manageable)<sup>[3]</sup>, this can be stopped or delayed by using the proper measures. As an answer to solve the problems of healthful longevity, the *Rasayana Chikitsa* is helpful. It prolongs the longevity, develops the positive health, mental faculties and imparts the resistance and immunity against the diseases by keeping the excellence in the tissues<sup>[4]</sup>.

*Asthishrinkhala*<sup>[5]</sup> is also known as *Cissus quadrangularis* L. belongs to family Vitaceae. It is an old Indian medicine. Almost all parts like, Root, Stem, Leaf are most important part used medicinally. The *Ghrta* in the current study is prepared using this single herb which will impart following properties to the *Ghrta* such as, *Madhura rasa, Laghu* and *Ruksha guna, Ushna virya* with *Vrushya* in turn *Rasayana* and *Sandhaneeya* properties.

As a preventive tool *Jara chikitsa* has got good scope in the today's scenario. In the aged *Vatadosha* is physiologically in a dominant state and *Rasadi dhatus* are in a deficient state<sup>[6]</sup>. There are certain rules and regulations mentioned for the same and *Rasayana* therapy is the best one among them which can act both in physical and mental aspects.

**AIMS AND OBJECTIVES**

To study the *Rasayana* effects of *Asthishrinkhalaghrita* in *Jara*- the elderly subjects.

**MATERIALS AND METHODS**

A single group of 30 elderly subjects presenting with the classical signs and symptoms of ageing irrespective of gender, religion, occupation and socio- economic status were included into the study. An elaborative case taking proforma was specially designed for the purpose of incorporating all the aspects of disease on Ayurvedic parlance. For the present study patients who fulfill the inclusion criteria were selected randomly from OPD and IPD of Karnataka Ayurveda Medical College Hospital Mangalore irrespective of gender, religion and occupation. Informed consent was taken from each patient.

**Inclusion criteria**

- Subjects above the age of 60 yrs
- Subjects with classical signs and symptoms of *Jara*

**Intervention****Exclusion criteria**

- Subjects who are suffering from terminal illness.
- Subjects who are completely physically disabled.

**Table 1: Intervention**

Intervention	Dose	Route	Anupana	Study duration	Time of administration
<i>Asthishrinkhala ghrta</i>	15 ml	Oral	Milk	30 days	Morning before food

**Investigations**

Routine blood investigation, Lipid profile, Fasting Blood Sugar.

**Assessment Criteria<sup>[7]</sup>****Subjective parameters****I) Sarva Kriya Asamarthata- (Physical disability)****1. Toilet using**

- Grade 1: Independent without difficulty (0%)
- Grade 2: With mild difficulty in sitting and getting up (25%)
- Grade 3: With moderate difficulty in sitting and getting up (50%)
- Grade 4: With marked difficulty in sitting and getting up (75%)
- Grade 5: Needs support (100%)

**2. Bathing**

- Grade 1: Independent without difficulty (0%)
- Grade 2: With mild difficulty in bathing (25%)
- Grade 3: With moderate difficulty in bathing (50%)
- Grade 4: With marked difficulty in bathing (75%)
- Grade 5: Needs other help (100%)

**3. Dressing**

- Grade 1: Independent without difficulty (0%)
- Grade 2: With mild difficulty in dressing (25%)
- Grade 3: With moderate difficulty in dressing (50%)
- Grade 4: With marked difficulty in dressing (75%)
- Grade 5: Needs other help (100%)

**4. Walking**

- Grade 1- without difficulty (0%)
- Grade 2: Getting fatigue after covering  $\frac{3}{4}$ <sup>th</sup> of distance to cover earlier (25%)
- Grade 3: Getting fatigue after covering  $\frac{1}{2}$  of distance to cover earlier (50%)
- Grade 4: Getting fatigue after covering  $\frac{1}{4}$ <sup>th</sup> of distance to cover earlier (75%)
- Grade 5: Needs help (others) & cannot even walk  $\frac{1}{4}$ <sup>th</sup> distance to cover earlier (100%)

**5. Stairs**

- Grade 1: Without difficulty in climbing (0%)
- Grade 2: Experiencing mild difficulty climbing 30 steps (25%)
- Grade 3: Experiencing moderate difficulty in climbing 30steps (50%)
- Grade 4: Experiencing marked difficulty in climbing 30 steps (75%)
- Grade 5: Needs support in climbing (100%)

**II) Nidranasha (Insomnia)****1. Disturbance during sleep**

- Grade 1: No disturbance
- Grade 2: 1-2 time disturbance
- Grade 3: 3-4 times disturbance
- Grade 4: 6 times disturbance
- Grade 5: >7times disturbance

**2. Difficulty in initiating sleep**

- Grade 1: No Difficulty
- Grade 2:  $\frac{1}{2}$  -2 hours Difficulty
- Grade 3: 2-3 hours Difficulty
- Grade 4: 3-4 hours Difficulty
- Grade 5: >4 hours Difficult

**3. Sleep time /Duration of sleep**

- Grade 1: 8 hours sleep
- Grade 2: 6-8 hours sleep
- Grade 3: 4-6 hours sleep
- Grade 4: 2-4 hours sleep
- Grade 5: 0-2 hours sleep

**III) Shwasa Vruddhi (Exertional Dyspnea)**

- Grade 1: Dyspnea on unaccustomed exertion
- Grade 2: Dyspnea on accustomed exertional work
- Grade 3: Dyspnea on routine activities like moving about in the house etc.
- Grade 4: Dyspnea on rest

**IV) Malabaddhata (Constipation)**

- Grade 1: No constipation
- Grade 2: Regular bowel movement, consistency hard excessive straining and prolonged defecation time
- Grade 3: 3-6 bowel movements per week, consistency hard.
- Grade 4: 2- 3 bowel movements per week, consistency hard.
- Grade 5: bowel movement once or less than one per week, consistency hard.

**V) Shlatha Sandhi (Loosening of Joints)**

Leg mobility will be assessed by asking the patient to perform a simple test. The patient sitting on a chair will be asked to get up and walk 20 feet distance and then return to the chair and sit down.

- Grade 1: Normal L.M.T.  $\leq 15$  second
- Grade 2: 15- 20 seconds
- Grade 3: 20- 25 seconds
- Grade 4: 25- 30 seconds
- Grade 5: 30- 35 seconds

**VI) Agnimandya (loss of appetite)**

- Grade 1: good appetite
- Grade 2: partial loss of appetite
- Grade 3: complete loss of appetite (loss of interest)
- Grade 4: aversion towards food.

**Objective parameter****Weight**

- Grade 1: 0kg.
- Grade 2: 0-1kg.
- Grade 3: 1-2kg.
- Grade 4: 2-3kg.
- Grade 5: 3kg and above

**OBSERVATION****RESULTS****Table 2: Effect of treatment on walking and stairs coming under Sarvakriya asamartha**

Symptom	Measures			%	S.D (+.)	S.E (+.)	t value	p value	
	BT								
Walking	1.30	AT	1.30	0.00	0.00	0.254	0.047	0.00	>0.05
		AF	1.23	0.07	5.13	0.430	0.080	0.58	>0.05
Stairs	1.73	AT	1.60	0.13	7.69	0.498	0.093	1.01	>0.05
		AF	1.13	0.60	34.62	0.346	0.064	5.26	<0.05

In the sample taken for the study, 50% of males were registered in comparison to 50% of females. Analysis of age incidence of 30 patients suffering from *Jara* showed more number of patients between the age group of 60-69 years i.e. 80%. 73.33% of the patients were *Samyak* and 26.67% of the patients were *Asamyak* in *Mutra Pravrutti*. Out of them 33.33% of patients were Housewife. 90% patients were married and 10% patients were unmarried. In the study as whole maximum patients in *Mala Pravrutti* were *Asamyak* (70%). Out of 30 patients' maximum patients Diet were mixed (86.67%). Out of 30 patients' maximum patients were *Pittakapha* (33.33%) followed by *Vatapitta Prakruti* (30%). Maximum patients Education were High School (60%). Maximum patients habit were NS (66.67%). Out of 30 patients' maximum patients *Nadi* were *Pittakapha* (43.33%). Most of the patient's *Jihwa* were *sama* (63.33%). Maximum patients *Akruti* were *Madhyama* (63.33%) and Socio Economic Status were Middle class (46.67%). Maximum patients *Vikruti* were *Vatakapha* (50%). Out of 30 patients' maximum patients *Shabda* were *Prakrutha* (100%) and most of the patients *Sparsha* were *Prakrutha* (100%). Maximum patients *Drik* were *Vaikruta* (100%) and *Sara* were *Madhyama* (96.67%). Out of 30 patients' maximum patients *Samhanana* were *Madhyama* (96.67%) and *Pramana* were *Madhyama* (96.67%). Out of 30 patients' maximum patients *Satwa* were *Madhyama* (100%). Maximum patients *Satmya* were *Madhyama* (100%). Most of the patients *Abhyavaharana Sakthi* were *Madhyama* (100%). Out of 30 patients' maximum patients *Jarana Shakti* were *Madhyama* (100%) and patients *Vyayama Shakti* were *Madhyama* (100%). Out of 30 patients' maximum patients *Vaya* were *Vridhha* (100%).

**Table 3: Effect of treatment coming under Nidranasha**

Symptom	Measures			%	S.D (+.)	S.E (+.)	t value	p value	
	BT								
Disturbance during sleep	1.50	AT	1.33	0.17	11.11	0.504	0.094	1.09	>0.05
		AF	1.07	0.43	28.89	0.254	0.047	3.50	<0.05
Difficulty in initiating sleep	1.40	AT	1.37	0.03	2.38	0.535	0.099	0.24	>0.05
		AF	1.10	0.30	21.43	0.305	0.057	2.57	<0.05
Sleep time/Duration	2.10	AT	1.93	0.17	7.94	0.466	0.087	1.39	>0.05
		AF	1.80	0.30	14.29	0.407	0.076	2.61	<0.05

**Table 4: Effects of treatment on other parameters**

Symptom	Measures			%	S.D (+.)	S.E (+.)	t value	p value	
	BT								
<i>Shwasa Vruddhi</i>	1.50	AT	1.40	0.10	6.67	0.479	0.089	0.77	>0.05
		AF	1.17	0.33	22.22	0.379	0.070	2.88	<0.05
<i>Mala Baddhata</i>	1.93	AT	1.30	0.63	32.76	0.640	0.119	4.38	<0.05
		AF	1.00	0.93	48.28	0.000	0.000	7.99	<0.05
<i>Shlatha Sandhi</i>	1.10	AT	1.10	0.00	0.00	0.000	0.000	0.00	>0.05
		AF	1.10	0.00	0.00	0.305	0.057	0.00	>0.05
<i>Agni Mandya</i>	1.60	AT	1.20	0.40	25.00	0.498	0.093	3.41	<0.05
		AF	1.00	0.60	37.50	0.000	0.000	6.60	<0.05
Weight Gain	1.00	AT	1.13	0.13	13.33	0.596	0.111	2.11	<0.05
		AF	1.70	0.70	70.00	0.596	0.111	6.43	<0.05

**Table 5: Overall effect of treatment**

Overall Effect of Treatment		
Grading	Relief in Percentage	Relief in Patients
No Improvement	0-25 %	18
Mild Improvement	26-50 %	12
Moderate Improvement	51 – 75 %	0
Marked Improvement	76 – 100 %	0

## DISCUSSION

The drug *Asthishrinkhala* is explained in all the *Nighantus* (the dictionaries). The drug *Asthishrinkhala* has wide range of uses; including the *Vrishya* property, in turn the *Rasayana* effect and when used in *Ghritha* medium can have an exaggerated effect. It has property of *Madhura rasa* (sweet taste). The qualities of *Madhura rasa* are *Tarpayathi*, *Shlesmanabhivardhayati*. Because of *Ushanaveerya* (hot potency) it acts as *Vata hara*. It also contains anabolic steroid hormone, vitamin-c, carotene, protein, fat etc. By its analgesic property it will help in the reducing pain and inflammatory condition. *Cissus* also leads to much faster increases in bone tensile strength and very much helpful in degenerative condition of bone. All these properties

are useful in treating the *Jarajanyavyadhis* where the *Vatadosha* is the predominant one.

In this study maximum patients were *Vata-Pitta* and *Kapha-Pitta* predominant. It is clearly mentioned in our texts that lifestyle and various activities should be planned opposite to *Prakriti* for the maintenance of health. As *Vata* is the predominant *Dosha* during *Jara*, *Vata prakriti* people tend to suffer more due to *Jara janya vyadhis*. In this present study it is noticed the same that the patients with *Vataprakriti* are more afflicted. And the treatment with *Ghritha* made good changes in them physically and mentally.

The *Ushna* and *Vatakaphahara* property of *Asthishrinkhala* can act as a pain reliever with

*Vatahara* action and as the *Asthishrinkhala Ghrita* is administered, the *Ghrita* has *Vatahara* and *Balya* action. It had a good effect in pain on walking as it is indicated in *Asthiruja*. As this *Ghrita* is *Vrishya* and in turn *Rasayana*, slowly it does the rejuvenation of the joints.

## CONCLUSION

*Jara chikitsa* in Ayurveda is a method to control or slowdown the process of ageing in human being. There is a need for extensive research on the subject, owing to its influence on the quality of life. The progressive nature of *Jara* can affect the patient's daily life. Such conditions require more preventive line of management.

The main purpose of *Rasayana* therapy is to impede the ageing process and to delay the degenerative process in the body. All the *Rasayana* drugs are different from one another having different properties & actions like *Medhya*, *Balya*, *Dhatupushtikara*, *Brimhaniya*, *Jivaniya*, *Agnivardhaka* etc. Proper understanding and application of this concept in practice of Ayurveda would only lead to perfect and precise treatment. Though the results obtained showed mild improvement in overall treatment statistically, there was a good improvement for the patients suffered from *Malabadhata*, *Agni mandya*, difficulty in walking and weight gain.

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### \*Address for correspondence

**Dr Kavitha C. K**

PG Scholar,

Department of PG Studies in

Kayachikitsa, Karnataka Ayurveda

Medical College, Mangalore, Karnataka

Email: [kavithanambiar013@gmail.com](mailto:kavithanambiar013@gmail.com)

Mob: 8086763930

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