

**ROLE OF RASAYANA THERAPY IN GERIATRIC DISORDER****Dhakar Jyoti<sup>1</sup> Mishra Pramod kumar<sup>2</sup> Soni Anamika<sup>3</sup> Sharma B.N<sup>4</sup>**<sup>1</sup>MD Scholar, <sup>2</sup>MD, Ph.D (Ay.) Associate Professor & HOD, <sup>3</sup>MD (Ay.) Assistant Professor,<sup>4</sup>MD, Ph.D (Ay.) Assistant Professor,

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**ABSTRACT**

Ageing is a process of physical, psychological and social change in multidimensional aspects. The world population of the elderly is increasing significantly, and by the year 2050, adults older than 65 years will comprise 1/5th of the global population. In India 3.8% population are older than 65 years age. According to an estimate the likely number of elderly people in India by 2016 will be around 113 millions. The Ayurveda has very much potential in prevention of diseases by promotion of health & management of various syndromes & diseases occurring in old age. The leading causes of illness and death among aged peoples comprise degenerative conditions such as Osteoarthritis, Osteoporosis, Alzheimer's disease, Depression, Psychiatric disorders, Parkinson's disease and Urinary incontinence diminish the quality of life. Prevention and management of health problems could help the elderly to improve quality of life and remain independent for their daily activities to certain extent. *Ayurveda* attributes primary importance to preventive and promote health care and the maintenance of positive health. *Rasayana* therapy is a specialized branch of clinical medicine in *Ayurveda* aimed at preventing the effects of aging and to improve intelligence, memory, and complexion, sensory and motor functions. Numerous *Rasayana* medicines possessing diversified actions like immuno-enhancement, free-radical scavenging, adaptogenic or anti-stress and nutritive effects are described in *Ayurveda* literature for their use in health promotion and management of diseases with improvement in the quality of life. Undoubtedly the strength of *Ayurveda* in the context of Geriatric care is *Rasayana* therapy, which is unique because of its ability to promote longevity and influence all aspects of health in a positive way. Describing the effects of *Rasayana*, the classical texts of *Ayurveda* say that from *Rasayana* one attains longevity, improved harmony and intelligence, freedom from disorder, youthful vigor, excellence of luster, complexion and voice, optimum strength of physique and senses, command over language, respectability and brilliance. Some singal herbal *Rasayana* drugs- *Eindri* (*BacopaMonieri*), *Atibala* (*Abutilon Indicum*), *Aswagandha* (*WithaniaSomnifera*), *Amalaki* (*EmbllicaOfficinalis*) etc. Some Herbal compounds *Rasayana* are- *Chyavana Prash*, *AmalakiRasayana*, *NagbalaRasayana*, *BalaRasayana*, *BrahmiGhirta*, *Aswagandhaleha* etc. are really beneficial in prevention and cure of Geriatric disorders.

**Keywords:** Geriatric disorders, *Rasayana*, *RasadiDhatu*s, *ChyavanaPrash*, *NagbalaRasayan*.

## INTRODUCTION

Ageing is the process of becoming older, a process that is genetically determined and environmentally modulated. Normal ageing often refers to the most common or usually encountered functional state of the nervous system in a population of older individuals. Aging is the process that converts young adults, most of them healthy and in no need of assistance from physicians, into older adults whose deteriorating physiological fitness leads to progressively increasing risks of illness and death.<sup>1</sup>

*Ayurveda* is one of the world's oldest system of health. It is not just a health care system but a complex approach to healthy living. *Ayurveda* is the science of life which has two objectives, to maintain & promote the positive health of healthy individuals and to cure the disease of diseased ones. *Ayurveda* is practiced in the form of *Astanga Ayurveda* (Eight fold *Ayurveda*) which includes *Salya* (Surgery), *Salakya* (E.N.T.), *Kayachikitsa* (General medicine), *Kumarabhrtya* (Pediatrics), *Agadatantra* (Jurisprudence & Toxicology), *Bhutavidya* (science dealing with devils), *Rasayana* (Geriatrics) and *Vajikarana* (Virity promoters).<sup>2</sup>

*Ayurveda* is the knowledge of *Ayu* (life) and describes each and every dimensions of life. *Ayu* is mentioned widely in *Ayurveda* everywhere. A long healthy life is wish of every being since antiquity. *Ayurveda* is the Science of life with the aim of attaining health and curing diseases of sufferings. According to *Ayurveda* the *Jara* (ageing) is a natural phenomenon like hunger thirst and sleep. *Sushrut* mentions a group of naturally occurring diseases named *Swabhava Bala Roga*, which include *Kshuta*, *Pipasa*, *Nidra*, *Jara*,

*Mrityu*.<sup>4</sup> *Acharya Dalahan* while commenting over this mention that, these occur due to *Prakritika Shakti* (natural power). *Charaka*, *Sushruta*, *Vagbhatta*, *Ataraiya*, *Kanthopani-sada* has been clearly mentioned the total life span is 100 years. *Charak* in *Vimana S-thana* mentioned the total life span is 100 years and *Vagbhatta* also mentioned one hundred year of life. According to *Charaka Vaya* is classified in 3 stages :- 1. *Balyavastha*- Childhood (0-16 years). 2. *Madhyavastha*- middle age (16- 60 years). 3. *Vridhahavastha* – old age (60- 100 years).<sup>3</sup>

**Vayanusarkshyaya concept according to Ayurveda:-** Aging is a slow and continuous process, which affects various organs or tissues at different time. *Sharangdhar* presents an interesting scheme of loss of different biological factor during life. According to him an individual loses different decades of life in a sequence manner. The issue is described more elaborately by *Acharya Sharangdhar* according to whom a person loses his 1. *Balaya*, 2. *Vridhhi*, 3. *Chhavi*, 4. *Medha*, 5. *Twaka*, 6. *Drshiti*, 7. *Shukra*, 8. *Vikrama*, 9. *Buddhi* and 10. *Karmendriya* in the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> ... upto 10<sup>th</sup> decades of life respectively. Thus specific *Rasayana* drugs will have to be selected and administered in respective age groups.<sup>5</sup>

**Jara:-** Etymology the term *Jara* has been derived from *Panini's Samskrit* root '*Jri-Vayihanou*' by using the sutra '*Sidbhidibhyona*' this term is indicative of loss in period of life span. The last phase of life span has been referred as *Jara*. It is described as a natural and inevitable processes as well as natural diseases. Other terms that are synonyms of old age- '*Jirna*, *Sthavira*, *Jiran*, *Jaran*, *Vridhdhata*. In this stage *Dhatu*, *Vriya*, *Indriya*, *Bala* and *Utsaha* decrease day by

day. It is just like an old house which gets wet in rainy season and has the tendency to fall at any moment. *Charaka* considers that after 60 yr of age there is gradual loss of *Dhatu*, *Rasa*, *Rakta*, perception, retention and retrieval abilities speech and general knowledge these may be decrease in the qualities of *Dhatu* leading to the predominance of *VataDosha*.<sup>6</sup> Most of the authors have described the *Jara* in the forms of *Kalaj* and *AkalajJara*. *AkalajJara* can be considered as early ageing process due to various etiological factors, so our efforts are made for preventing the early ageing process or *AkalajJara*. *Ayurveda* system of medicine is probably the first which efforts to protect life from disease and ageing. *Ayurveda* describe much about the science of gerontology and *Rasayana* therapy. *Rasayanatantra* is one of the eight major clinical disciplines of *AstangAyurveda*, which exclusively devoted to the study of ageing and its prevention. *Rasayana* therapy means Rejuvenation therapy affords a comprehensive physiological and metabolic restoration.

**Aetiology of Jara:-**In *Ayurveda* all the etiological factor of ageing can be differenced in three categories:-

1. *AharatmakHetu- GramyaAhara* (unhealthy food), *AmalSevan*(excessive use of sour), *Lavan*(excessive use of salt), *KatuSevan* (excessive used of punjent food), *KsharaSevana* (excessive use of alkaline food), *Virudha&Asatmya* food (incompatible unaccustomed food) etc.
2. *ViharatmakaHetu- Diwaswapana, Visham&AtimatraVyayama*.
3. *ManasikaHetu- BhayaBahulata, KrodhaBahulata, PapKarma, LobhaBahulata* etc are upsets normal physiological rhythm involving the premature senility.

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### **Sign and Symptoms in JaraAwastha:-**

Different classical ancient texts have mentioned a lot of sign and symptoms of *JaraAwastha*. These include both physical and mental sign & symptoms like as- *DhatuKshya*, *IndriyaKshya*, *BalaKshya*, *ViryaKshya*, *UtsahaKshya*, *OjoHani*, *Vali*, *Palita*, *Khalitya*, *PaurushaHani*, *ParakramaHani*, *PrabhaHani*, *MedhaHani* & *TwakPaurushya* etc.<sup>8</sup> In modern era the symptoms of human ageing include an accumulation of abdominal fat, muscle wasting, a thickening of the skin with deep wrinkles present, poor sleep, cognitive problems like increased short term memory loss, mood changes (particularly increased depression), weakened bones (especially in women suffering from osteoporosis), decreased sexual drive and performance, impaired heart and kidney function (for instance partial incontinence). Vision and hearing becomes less acute and we become susceptible to any one of the diseases associated with ageing including: Alzheimer's, Stroke, Heart attack, Cancer, Osteoporosis, Diabetes, Parkinson's, Arthritis, Cataracts, Glaucoma and Deafness.<sup>9</sup>

### **Ayurvedic Role in Geriatric Disorders-**

*Ayurveda* has two main objects:-

1. To maintain the healthy state
2. To cure the disease of individual

**Types of Bhesaja-** On the basis of their therapeutic effects, *Bhesaja* is described to be of two types-

1. *Swasthasyorjaskara-* That *Bhesaja* which promotes strength and immunity in the healthy.
2. *Roganuta* or *Rogaghna-* That *Bhesaja* which alleviates various disorders.<sup>10</sup>

With the administration of promotive treatment i.e. *Swasthasyorjaskara Bhesaja*, one attains longevity, memory, intelligence,

freedom from disease, youthful age, excellence of lusture, complexion and voice, optimum strength of physique and sense organs, successful words, respectability and brilliance. *Rasayana* (promotive treatments) means the way of attaining excellent *Rasa Dhatu* etc. *Charak* also mention the two type of drug first type of drug are those which maintain the healthy state as *Rasayana* and *Vajikarana* and second are those by which we can treat different disease. *Ayurveda* describe much about the science of gerontology and *Rasayana* therapy. *Rasayana tantra* is one of the eight major clinical disciplines of *Ashtanga Ayurveda*, which exclusively devoted to the study of aging and its prevention. *Rasayana* therapy means rejuvenation therapy affords a comprehensive physiological and metabolic restoration as it evident from fundamental statement of *Charaka*.

**Definition of Rasayana:-**The term *Rasayana* (*Rasa + Ayana*) essentially refers to nutrition and nourishment. More specifically it refers to bioavailability of nutrition. There can be many mechanisms through which a *Rasayana* remedy may accelerate the phenomenon of nourishment. Logically it seems that a *Rasayana* may act at three levels of biosystem to promote nutrition such as -

1. At the level of *Agni* by promoting the digestion and metabolism.
2. At the level of *Srotasa* by promoting the microcirculation and tissue perfusion.
3. At the level of *Rasa* itself by acting as direct nutrition.

*Acharya Charaka* has mentioned that on administration of *Rasayana* one attains longevity, memory, intelligence, freedom from diseases, youthful age, excellence of lusture, complexion and voice, respectability and brilliance.<sup>11</sup> *Acharya Susruta* has clearly stated that *Rasayana* drugs are *Urjaskara* in

nature and they prevent disease and old age. Thus the *Rasayana* remedies act essentially on nutrition dynamics and rejuvenate the body and psyche. They are the powerful means of promotion of health, longevity and prevention of disease. They sustain the *Ojas* status and *Bala* in the body and promote *Vyadhiksamatva* i.e. Immunity. Many *Rasayana* drugs of *Ayurveda* have been recently demonstrated to possess immune-enhancer activity when tested on scientific parameters.

**Vayasthapanam-** Means stabilizing the life span upto 100 years ( upto full period), *Ayuskar* means extends it even beyond 100 year thud according to *Sushrut* the *Rasayana* performs three type of action-

- i) Stabilizes youthfulness and prevent senility.
- ii) Promotes life span, intellect and strength.
- iii) Prevents and cure disease.

*Rasayana* is also used after the cure of disease. It gives strength to body and prevent the further attack of disease.

**Pharmacodynamics of Rasayana Drugs:-**A systematic study conducted by various scholars to work out the *Rasa, Guna, Virya, Vipaka & Prabhava* of the known *Rasayana* drugs have revealed that most of the *Rasayana* drugs have revealed that most of the *Rasayana* drugs are *Tikta & Madhura* in *Rasa*, Some have *Katu & Kashaya Rasa*. Most of the *Rasayana* drugs are *Laghu* in *Guna*, some are *Snigdha & Ruksha Guna* dominant. Similiarly *Ushna & Shita Virya* drugs are equally common. *Rasayana* drugs have *Madhura & Katu Vipaka* in equal preponderance. *Rasayana* drugs having *Madhura, Guru, Snigdha & Shita* properties act the level of *Rasa* by improving the nutritional value of the *Poshak Rasa* which helps to ob-

tain the best qualities of *Dhatus* viz. *Shatavari*, *Bala*, *Yastimadhu*, *Amalaki* etc. *Rasayana* drugs with *Laghu – Guna*, *UshanaVirya* & *KatuRasa* may act at the level of *Agni* by improving metabolism; they improve the quality of *Dhatus*. Similarly the Drugs with *Katu*, *Tikta*, & *KasayaRasa*, *Vishada*, *Ruksha* & *LaghuGunas*, *UshanaVirya*, *KatuVipaka* may cause *Srotoshodan* and thus inducing the *Rasayana* effect. *Rasayana* effect of a drug is governed by not only its *Gunas*, but also by *Prabhava* of these drugs.<sup>12</sup>

**Mode of Action of Rasayana Drugs:-**The word *Rasayana* addresses the optimization of circulating the nourishing foods through tissues & cells. So getting adequate quantity & quality of *AharaRasa* with its proper circulation through channels is the main concept of *Rasayana* therapy. The concept of *Rasayana* therapy is not a single drug treatment but it is a comprehensive and specialized regimen capable of producing healthful longevity and improved mental faculties by acting at the level of *Rasa*(Nutrition), *Agni*(digestion & metabolism) and the *Shrotansi* (microcirculation), thus enabling the organism to procure the best qualities of different *Dhatus*. The *Rasayana* therapy is supposed to influence the very fundamental mechanisms of the living organism and to have rejuvenating effects on the body as well as the mind.<sup>13</sup>

### Classification of Rasayana-

#### 1. According to mode of Administration of Rasayana

- (i) *Kutipravesika* (In door Regimen)
- (ii) *Vatatapika* (outdoor Regimen)
- (iii) *DroniPravesika* (Special Regimen)

#### 2. According to purpose of Administration

- (i) *KamyarAsayana* (Promotor of normal health)
  - (a) *PranaKamy* (Promotor of life- vitality and longevity)
  - (b) *MedhaKamy* (Promotor of intellect)
  - (c) *SriKamy* (Promotor of complexion and lusture)
- (ii) *NaimittikaRasayana* (Promoters of specific vitality in specific diseases)
- (iii) *AjasrikaRasayana* (Dietary *Rasayana*)

#### 3. According to Mode of Action

- (i) *SamsodhanaRasayana*
- (ii) *SamsamanaRasayana*

#### 4. AcharaRasayana (Conduct Rasayana)

- (i) *AharaRasayana* (Dietary Modalities)
- (ii) *AcharaRasayana* (Behavioural Modalities)
- (iii) *DravyaRasayana* (Drug based measures)

#### 5. According to BhesjaBheda( According to Drug Measures Used)

- (i) *DravyaBhutaRasayana* (Drug *Rasayana*)
- (ii) *AdravyaBhutaRasayana* (Non-Pharmacological *Rasayana*)

#### 6. According to PadaBheda

- (i) *AbhyamalkiRasayanaPada-6*
- (ii) *PranakamiyaRasayanaPada-36*
- (iii) *KaraPrachitiaRasayanaPada-16*
- (iv) *AyurvedaSamutthaniyaRasayanaPada-4*

The concept of *NaimittikaRasayana* appears to be subsequent development in *Rasayana-Tantra* where specific *Rasayanas* were conceived for use in patients of specific disease. This concept emerges in *SushrutSamhita* and is more clearly stated by *Dalhana*. Specific role of certain *Rasayanas* in the care and management of specific diseases such as *Shilajatu* in *Prameha* and *Tuvaraka* in *Kushta* is an unique idea and adds newer dimen-

sions of *RasayanaTantra*. *NaimittikaRasayana* is used in a diseased person as an adjunct to the specific therapy. Thus, it must be clear that *NaimittikaRasayana* is not the specific medical treatment for a particular disease but it should be used as an adjunct to the specific therapy. However in the present day society in our country where the curative medicine has still the priority over the positive health programmes the *NaimittikaRasayana* are of greater value.

Following are the popularly used *NaimittikaRasayana* in specific diseases:-<sup>14</sup>

1. *Drshti Mandya- Jyotismati, Triphala, Satavari, Yastimadhu.*
2. *Kustha and Skin Disorder- Tuvaraka, Bhallataka, Vidanaga, Somaraji, Gandhaka.*
3. *Rajayaksma – Pippali, Rasona, Nagbala, Shilajatu, Chayavanaprash.*
4. *Swash – Agastya Rasayana, Bhallataka.*
5. *Premeha – Shilajatu, Haridra, Amalaki.*
6. *Hridroga – Shalparni, Arjuna.*
7. *Grahani and Gulma Roga- Pippali, Bhallataka.*
8. *Pandu – Lauha, Amalaki.*
9. *Vata Vyadhi - Rasona Guggulu, Bala, Nagbala.*
10. *Medo Roga – Guggulu, Haritaki.*
11. *Hypertension – Medhya Drugs, Rasna , Bala, Rasona.*
12. *Allergic Disorders – Haridra.*
13. *Hypotension – Kasturi, Kupilu.*
14. *Amavata – Amrita, Bhallataka.*
15. *Shita – Pitta – Haridra*

#### **Biological Effects of Rasayana Drugs<sup>15</sup>:-**

The concept of *Rasayana* had invoked a good deal of scientific enthusiasm way back in late 60's. Few herbs have been explored for their specific biological effects on different dimension of health.

1. Anabolic effect-Herbs like *Gambhari (Gmelinaarborea)* have shown anabolic effect and promote tissue building.
2. Anti stress, Adaptogenic effects- Drugs like *Aswagandha (Withaniasomnifera)* and *Shilajatu* have *Rasayana* quality can benefit the uses in two distinct ways. Firstly, it can neutralize the negative effect of stress on physiology and restore homeostasis.
3. Immunomodulatory effect.
4. Anti oxidant effect- *Rasayana* drug enhances the natural enzymatic defence mechanism of the body. While most of the *Rasayana* drugs exhibit antioxidant activity, they are likely to have some kind of tissue specificity.
5. Anti ageing effects- *Rasayana* drugs could influence the secretion of a hormone DHEA the deficiency of which is implicated in the process of ageing. Neurotransmitter substance such as Norepinephrine, Acetyl Choline or Dopamine (also known as DHEA- Dihydroxy phenyl alanine) are released in stress conditions. Repeated stress on every cell causes ageing process.

*Rasayana* therapy is thus, associated with multidimensional effects on the physiology.

**Management of Jara (Ageing) with Rasayana-** As mentioned earlier *Jara* (ageing) and death are *Swabhavika* (Natural) phenomenon and *AcharyaCharaka* considers them as *SwabhavaNispratikriyahai*.e. by nature these are incurable. But in another context, while describing the best *Bhava* (Things/*AgryaSangraha*) for the various medical problems, *AcharyaCharaka* mention “*JaraYapyanama*” which means *Jara* (ageing) is on the top amongst the diseases which cannot be cured but the patient may be kept symptoms free by the proper treat-

ment. Acharya Charaka mentioned the importance of Rasayana therapy and said it promoter of life. Rasayana maintains positive health, perverse youth and cures morbid, sleep, drowsiness, physical as well as mental fatigue, laziness and weakness maintain proper balance between Vata, Pitta and Kapha. Produce stability cures sluthness of muscles, stimulates the enzyme responsible for digestion and metabolism and bring about excellence in lusture complexion as well as voice. Rasayana drugs are capable in prevention and management of the early ageing or AkalajaJara. Acharya Chakrapani while commenting on the word Nispratikriya mentions that ordinary treatment has got no effect on ageing, but Rasayana therapy (specially KutiPravasikaRasayana) is effective against it. It has been clearly mentioned in CharakaSamhita that old ChyavanaRishi become the younger after the use of Rasayana therapy. Similiarly in Vedic literature references of Rejuvenation of RishiVandan is found. In this way the premature ageing can be treated successfully by the Rasayana therapy. However, Rasayana is also not a complete cure of the Jara as it can just check or delay the ageing process for sometime and as soon as the effect Rasayana vanishes, the process of ageing start again leading to the end of life. As mentioned earlier Acharaya Dalhana is of the view that AkalajJara can easily be cured while KalajaJara requires continuous care with Rasayana drugs i.e. it is of "Yapya" type. Rasayana therapy is effective for both Kalaja&Akalaja types of Jaraby means of treating AkalajaJara and retarding the Kala-jaJara maintains the physical and mental health of the aged, so that they may remain relevant to the society even in their last decades of life. The probable mode of action of

Rasayana drugs could be through chelation of free radicals (ferrous ions) and also as a chain breaker. It has been reported by scientific studies that Rasayana drugs are potent antioxidant drugs.<sup>16</sup>

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