

A REVIEW ARTICLE ON GERIATRIC CARE IN AYURVEDA

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ABSTRACT

Aging is the process that reduces the number of healthy cells in body; therefore, the body loses its ability to respond to a challenge (external or internal stress) to maintain homeostasis. *Ayurveda* science has addressed geriatric health issues under a heading “*Jara*”. In *Ashthang Ayurveda* “*Jara*” is incorporated at 7th number among its eight branches. “*Rasayan Tantra*” a special branch of medicine in *Ayurveda*, exclusively devotes to “*Jara Janya Vyadhi*”. *Ayurveda* science basically aims at promotion of health of individual and management of diseases. That’s why the foremost classic of *Ayurveda*, the *Charakasamhita* begins its *Chikitsasthana* with *Rasayanachikitsa*. Use of *Rasayan* therapy in “*Jara Janya Vyadhi*” works at primary level of our biological system as well as it saves the patient from side effects of modern medicine.

Key words – Aging, *Rasayan*, Senile diseases, side effect.

INTRODUCTION

Ageing is a process of physical, psychological and social change in multi-dimensional aspects. The World population of the elderly is increasing and by the year 2050, adults older than 65 years will comprise 1/5th of the global population. In India 3.8% of the population are older than 65 years of age. According to an estimate the likely number of elderly people in India by 2016 will be around 113 million¹. The leading causes of mortality among aged people comprise respiratory problems, heart dis-

eases, cancer and stroke. Significant causes of morbidity among this group are chronic inflammatory and degenerative conditions such as arthritis, diabetes, osteoporosis, depression, psychiatric disorders, Parkinson’s disease and age related urinary problems. *Ayurveda*, the Indian traditional holistic health science has got the potential for prevention of diseases by promotion of health and management of diseases occurring in old age. It has a focused branch called *Rasayana* (Rejuvenation) which deals with the problems related to ageing and methods to

counter the same. Geriatrics or *Jara chikitsa* or *Rasayana* in Ayurveda is a unique therapeutic methodology to delay ageing and to minimize the intensity of problems occurring this degenerative phase of one's life. *Ayurvedic* literature record numerous single and compound plant based medicines, herbo-mineral, herbo-metallic (a few) formulations for general wellbeing and in disease specific conditions relating to geriatrics. The present review intends to evaluate the ancient concepts and recent developments in the field of geriatric care in *Ayurveda*.

The Dimensions of Geriatric Care

Geriatric Care has two distinct dimensions: No. 1. Promotion of health and longevity, No.2. Management of diseases of old age. The conventional modern medicine is apparently strong in terms of the second dimension, although the final outcome may not be significant because most of the diseases of old age are incurable. *Ayurveda* is notably strong in terms of the first dimension of the problem as it has rich potential to promote health of the elderly, besides the scope of rejuvenation and promotion of longevity. As stated earlier *Ayurveda* is essentially the Science of life and longevity.

The Phenomenon of Aging

Aging is essentially a physiological phenomenon which results because of time bound inherent evolutionary processes by the evolutionary changes occurring in the mind-body system. Such changes begin right in the beginning of life and get more and more complex with advancing chronological age. The progressing involution ultimately precipitates into extreme senescence and finally death. Thus life-span is a time bound entity and everybody is mortal. The main

issue in geriatric care is not merely the concern about the physiological phenomenon which is inevitable; rather it is more the medical health problems and diseases specifically afflicting an individual in old age warranting medical management in order to sustain a comfortable and healthy aging. Thus geriatric care has to address to two-fold problems, firstly the delaying of physiological aging and secondly the medical management of diseases and disorders specifically occurring in old age such as hypertension, ischemic heart disease, diabetes, senile dementia, Alzheimer's disease, parkinsonism, degenerative arthritis, osteoporosis, opportunistic infections, prostatic enlargement, degenerative eye diseases like cataract, a range of angiopathies, neurodegenerative diseases and senile psychoses which cause major morbidity in old age.

Ayurveda, being fundamentally the science of life and longevity, seems to have addressed these issues in a unique holistic manner involving not merely the biological care, rather also encompassing the psychosocial and spiritual dimensions. There are strong possibilities to develop a safe and cost-effective package for geriatric care on the basis of *Ayurvedic* life-style management, *Rasayana* therapy and practice of *yoga*.

Ayurveda links the phenomenon of biological aging with the doctrine of *Tridosha*. In principles the childhood is embedded with *Kapha* in the body (Growth activity), adulthood with *Pitta* (Metabolic activity) and old age with *Vata Dosa*(Degenerative activity). *Vata Dosa*, by nature, dries and decays the body and produces senile changes². Thus the phenomenon of aging can be evaluated in terms of the *tridosika* physiology, and aging

can be managed in tune with the *Tridosha* theory with *Yukti* of *Samanya* and *Vishesa* i.e. homology versus heterology besides specific rejuvenative *Rasayana* measures.

The important medieval *Laghutrayi* text of *Ayurveda*, namely *Sarangadhara Samhita* describes the process of aging depicting the involutory features of specific bio-losses occurring during different decades of life due to aging³.

Other important features of aging process are weakening of *Agni*, loss of integrity of *Srotamsi* and *ojabala*. Hence geriatric care warrants management of *Agni*, *Ama Oja* and *dosa* at biological level. *Ayurvedic* classics propound a unique concept of *Ojas*

Besides many other life-style related factors the generic remedy prescribed for promoting *Ojas* status is *Rasayana* therapy. All *Rasayanans* are beloved to promote *Ojas*. Another *Rasayana* described in *Ayurveda* i.e. *Ajasrika Rasayana* refers to daily rejuvenative dietetics. Regular use of *Ghee*, milk, fruits and vegetables in diet acts as *Rasayana*.

Role of *Medhya Rasayana* :

Besides general features of biological aging which occurs all over the body in all organs, tissues and cells, the brain is most common organ of changes. This is why the mental and neurological manifestations often form the hallmark of senility. Accordingly the care of neurodegenerative manifestations warrants the first attention in geriatric health care. *Ayurveda* seems to have understood this fact and has categorically described the psyche-brain deficit occurring in the fourth and ninth decades of the hundred year's life-span in terms of loss of *Medha* and *Buddhi*⁴. In terms of the science of today human brain is a highly sophisticated structure, its basic

functioning units - the neurons are known to be energetically most powerful units but have extremely poor repair and regeneration potential and hence are prone to rapid senescence and degenerative changes.

The *Ayurvedic* classics and *yogic* texts describe a set of rejuvenative measures to impart biological sustenance of the bodily tissues, i.e. the *Dhatus*. These remedies are called *Rasayana* and are claimed to act as micronutrients. Though, the *Rasayanans* are generic rejuvenative remedies but some of them are specific to nervous system and are called *Medhya Rasayana*. *Medhya Rasayans* are new class of neuronutrients with cognition and memory enhancing, anti-aging and neuro-regenerative effect. *Ayurveda* considers aging as an inbuilt natural disorder. *Sharangadhara* (1300 AD) while describing the sequence of aging suggests that *Medha*, i.e. intellect stops growing by Fourth decade of life and *Buddhi*, i.e. thinking is lost by Ninth decade reading to senile dementia in a person of stipulated 100 years life span⁵. *Brahmi* (*B.monniara*) is now used as a memory enhancer and *Mandukaparni* (*C. asiatica*) is used in the care of mental retardation. *Ashwagandha* (*W. somnifera*) is an established antistress and adoptogen besides its efficacy in augmenting neuro-regeneration.

The *Rasayana* Therapy and Its Mode of Action:

Rasayana (*Rasa* = nutrition + *Ayana* = circulation and promotion) especially deals with the science of nutrition, geriatric care and rejuvenation. The strength of *Ayurveda* in the context of Geriatric care is *Rasayana* therapy. *Rasayana* stands as an answer in preventing premature ageing and to solve the problems due to ageing; it also ensures

healthful longevity including mental health and resistance against various geriatric disease conditions⁶. There are specific *Rasayana* for different age groups, which help

in restoring the loss of specific bio-values of respective ages.

Table: - Specific *Rasayana* drugs according to age⁷

Age in yrs.	Bio-values which are on decline	Suitable Rasayana
1-10	<i>Balya</i> (Childhood)	<i>Vacha</i> (<i>Acorus calamus</i> Linn.), <i>Kasmari</i> (<i>Gmelina arborea</i> Linn.), <i>Svarna</i> (<i>Aurum</i>)
11-20	<i>Vridhhi</i> (Growth)	<i>Kasmari</i> (<i>Gmelina arborea</i> Linn.), <i>Bala</i> (<i>Sida cordifolia</i> Linn.), <i>Ashwagandha</i> (<i>Withania somnifera</i> Dunal)
21-30	<i>Chavi</i> (Colour and complexion)	<i>Amalaki</i> (<i>Phyllanthus emblica</i> Gartn), <i>Lauha Rasayana</i>
31-40	<i>Medha</i> (Intelligence)	<i>Shankhapuspi</i> (<i>Convolvulus pluricaulis</i> Choisy), <i>Yasthimadhu</i> (<i>Glycyrrhiza glabra</i> Linn.), <i>Ashwagandha</i> (<i>Withania somnifera</i> Dunal), <i>Guduchi</i> (<i>Tinospora cordifolia</i> (Wild) miers.)
41-50	<i>Tvak</i> (Skin Lusture)	<i>Bhringaraja</i> (<i>Eclipta alba</i> Hussk), <i>Somaraji</i> (<i>Psoralea corylifolia</i> Linn), <i>Priyala</i> (<i>Buchanania lanzen</i> Spreng.), <i>Haridra</i> (<i>Curcuma longa</i> Linn.)
51-60	<i>Drishti</i> (Vision)	<i>Triphala ghrita</i> , <i>Saptamrta lauha</i> , <i>Kataka</i> (<i>Strychnos potatorum</i> Linn.f.)
61-70	<i>Shukra</i> (Semen)	<i>Kapikacchu bija</i> (<i>Mucuna pruriens</i> Hook), <i>Ashwagandha</i> (<i>Withania somnifera</i> Dunal), <i>Krishna musali</i> (<i>Curculigo orchoides</i> Gaertn), Milk, <i>ghrita</i> etc.
71-100		These age group are not fit for <i>Rasayana karma</i>

Rasayana signifies not a single drug or medication, rather refers to a rejuvenate regimen. The primary levels/modes of *Rasayana* effect are^{8,9,10,11,12}

- At the level of *Rasa* (Promoting directly the nutrient value of plasma),
- At the level of *Agni* (Promoting biofire system responsible for digestion and metabolism)
- At the level of *Srotas* (Promoting micro-circulation and tissue perfusion)

CLASSIFICATION OF RASAYAN:

(1) As per scope of use:

A. *Kamyas Rasayana* - which is used in healthy persons for further promotion of

health.

It is again of three sub-

types:

- Prana kamyas* to promote longevity.
- Srikamyas* to promote body lusture.
- (iii) *Medha kamyas* to promote mental competence

B. *Naimittika Rasayana*- which is used specifically in the treatment of specific diseases viz *Silajatu* in diabetes mellitus.

(2) As per method of use:

- Vatatapika Rasayana* i.e. outdoor regimen.
- Kutipravesika Rasayana* i.e. intensive indoor regimen including biopurification by *Panchakarma* and consumption of selected *Rasayana* in well controlled conditions.

(3) As part of life-style:

- i. *Ajasrka Rasayana* as content of daily diet.
- ii. *Acharya rasayana* (Good conduct) :- Ayurveda adopts *Satvavajaya chikitsa* (non-drug psychotherapies) that includes various codes of conduct (*Acharya rasayana*) for maintenance of better mental health and to prevent various mental disorders
- iii. *Divya Rasayana* i.e. devine *Rasayana*

SOME OTHER SPECIFIC RASAYANA:

Tissue and Organ Specific *Rasayana*:

Besides the above mentioned three generic modes of action of *Rasayana*, some *Rasayanas* are organ and tissue specific and are used for specific indications like *Medhya Rasayana* as brain tonics, *Hrdya Rasayana* as cardiotonics, *Vrsya Rasayana* as sex tonics, *Twacya Rasayana* as skin tonics, *Stanya Rasayana* as lactogenic tonics, *Keishya Rasayana* as hair tonics, *Caksusya Rasayana* as eye tonics, *Kanthyas Rasayana* as tonics for throat and speech and so on.

Disease Specific *Rasayana*:

Some *Rasayanas* are also disease-specific and are used in specific disease states as they induce specific immune and bio-strength to combat a particular disease. Such *Rasayanas* are called *Naimittika Rasayana*. The classical *Naimittika Rasayanas* are *Silajatu* for diabetes mellitus and *Tubaraka* for skin diseases and leprosy. There can be many other *Naimittika Rasayanas* identifiable by proper *yukti*.

Method of Administration of *Rasayana*¹³

The *Rasayana* therapy is administered in two broad forms with two main objectives. Firstly as outdoor regimen (*Vatatapika Rasayana*) for ordinary routine *Rasayana* benefits as a tonic or food supplement. Secondly

as an intensive indoor regimen (*Kutipravesika Rasayana*) for Rejuvenation or *Kayakalpa*, where the patient is observed in a specially designed *Trigarbha Rasayana Kuti* i.e. a well-protected therapy chamber equipped with all therapeutic amenities. In the latter case the patient first undergoes a bio purification (*Shodhan*) therapy by *Pancha Karma*. After *Pancha Karma* he consumes the specific *Rasayana* for him in a prescribed dose and duration along with the prescribed dietetics (*Ajasrika Rasayana*) and the appropriate life-style and conduct (*Aacharya Rasayana*). *Rasayana* administered without proper biopurification and without the *Ajasrika* and *Aacharya* requirements, may not yield adequate results.

The *Rasayana* Effect and Rejuvenation:

The *Rasayana* remedies described in *Ayurveda* are claimed to possess special nutritional supplement effect. Generally most of the *Rasayanas* are micromolecular nutrients and they act through nutrition dynamics and not really on pharmacodynamics like other drugs. The *Rasayana* drugs are likely to be nutrient tonics, antioxidants, anti-stress, adaptogen and immuno-modulators. The net effect of all these attributes is the anti-aging effect. Certain recent studies on popular *Rasayana* remedies like *Amalaki*, *Ashwagandha*, *Gudachi*, *Brahmi* and classical compound *Rasayana Chyavanaprash* have shown evidence to suggest their efficacy as anti-aging remedies

Role of Panchakarma in Geriatric care

In *Ayurveda* Panchkarma have its own five bio-purificatory processes with rejuvenates activity. In geriatric practice an *Ayurvedic* physician uses selective rehabilitative *Panchkarma* therapy avoiding the drastic evacuator practices like *Vamana* and strong

Virechana procedures. The schedule in the elderly should consist of medicated massage, sudation, *Kayaseka*, *Pindasweda*, *Sirodhara* and *Brimhana Basti* suitably planned for each individual. Such a package could appropriately considered 'Geriatric *Pancakarma*'.

Ayurvedic Management of Diseases of old Age

Besides the rejuvenative approaches *Ayurveda* has notable potential to afford significant complementary therapeutic care in a range of diseases of the elderly and the same needs to be known to the practicing physicians of all streams. *Arjuna*, *Guggulu* and *Puskarmula* as cardioprotective in cases of Ischaemic heart disease, *Brahmi* and similar other *Medhya* drugs in treatment of senile dementias, *Varuna* and *Shigru* in treatment of senile enlargement of Prostate, *Triphala* in senile visual disorders, *Kapikacchu* in treatment of Parkinsons disease, *Amrita* and *Amalaki* in immunodeficiency, *Sirodhara* and *Sirobasti* in tension headaches and different kinds of neurodegenerative conditions are some of the potential areas where *Ayurvedic* treatment has promise. Similarly the *Pindasweda* procedure of *Keraliya Panchkarma* therapy is known for its rehabilitative effect in many neurodegenerative conditions and myopathies.

The *Ayurveda*-based package of geriatric care may consist of use of *Dashvidha pariksha*, *Sadvritta*, *Swasthvritta*, *Satvika diet*, *Yoga*, *Meditation*, *Geriatric panchkarma* and *Rasayana* Therapy.

CONCLUSIONS

Population-Aging and the increasing number of elders in the population is a matter of great significance because of its likely impact on public health and socioeconomic

growth of a nation. *Ayurveda*, being the science of life and longevity, offers a treasure of geriatric care. It deliberates on the science and philosophy of life and longevity with the goal of healthy aging and long life to achieve the *Purusartha chatustaya*

-*Dharma*, *Artha*, *Kama*, *Moksha*. It considers aging as *Swabhava* of life and describes in details the pattern of sequential losses of biological strength with advancing age in relation to the doctrine of *Tridosha* and advocates the management of aging and diseases of aging on principles of *Samanya* and *Vishesa* (Homology versus Heterology). The central focus of strength of *Ayurveda* in geriatric care swings around the concept of *Rasayana* therapy which compensates the age-related biological losses in the mind-body system and affords rejuvenative effect to a notable extent. Combining *Ayurvedic Rasayana*, rehabilitative *Panchkarma* therapy dietetics, *Swasthavritta*, *Sadvritta*, *Yoga* and spirituality it is possible to develop an effective package for geriatric care today for global use. There is a need to generate awareness among the masses about the consequences of Population-Aging and about the strength of *Ayurveda* in Geriatric health care.

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Source of support: Nil

Conflict of interest: None declared