



Review Article

CRITICAL REVIEW OF GERIATRIC CARE IN AYURVEDA WITH SPECIAL REFERENCE TO JARA

Piyush Chaudhary *¹, Neha Lamba ²

¹Assistant Professor, MSM Institute of Ayurveda, BPS Women's University, Khanpur Kalan, Sonapat, Haryana, India

²Medical Officer (Ay.), ESI Hospital, Jalandhar, India

*Corresponding Author Email: piyush0911@gmail.com

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ABSTRACT

Geriatric medicine is the specialized branch of medicine that deals with the problem of elderly persons. Increase in average life span due to enhanced medical facilities has resulted in demographic shift towards older age. Also, a lot has been stated in Ayurveda texts regarding longevity and vitality in terms of Jara chikitsa and Rasayan. This study was undertaken to critically review the Ayurveda texts and re-evaluate the concept of jara (ageing) and to analyse the various considerations and therapeutic interventions which have promotive, preventive and curative effect on diseases of old age. The three main texts of Ayurveda, i.e. Brihatryi were explored regarding the aspects of ageing and non-pharmacological as well as drug approaches were studied. Analyses of the texts revealed that the preventive aspects of ideal regimen, healthy dietary habits, use of Rasayana drugs and Panchkarma purification procedures, if adopted in daily routine can have a positive effect in improving vitality and longevity of the body. This also improves the quality of life especially in the elderly.

Keywords: Geriatrics, Jara, Rasayan

INTRODUCTION

The word GERIATRICS has been derived from latin word "geras" meaning "To grow old. Geriatric medicine is the specialized branch of medicine that deals with the problem of elderly persons"¹. Demographic trends reveal that population of people in old age is growing at an enhanced rate. Due to increased geriatric population, the prevalence of geriatric specific diseases is also increasing. A need is felt to develop newer strategies for geriatric health care. This branch of medicine is relatively new and the vast therapeutic treasure of Ayurveda has a lot to contribute towards jara chikitsa. Geriatrics or Jara Chikitsa of Ayurveda is a method to slow down or delay the process of ageing in human beings during the later stages of life when degeneration of body tissues and senses occurs at an enhanced rate. Ayurveda advocates healthy ageing through Rasayanachikitsa (jarachikitsa), Panchkarma, principles of daily and seasonal regimen and code of conduct like sadvritta. For a better understanding of Jarachikitsa, the concept of ageing (jara) should be first acknowledged. Ageing is a universal, intrinsic, progressive and deleterious process². Normal ageing refers to the common complex of diseases and impairments that characterize many of the elderly whereas successful ageing refers to a process by which deleterious effects are minimized, preserving function until senescence makes continued life impossible. The Ayurveda concepts related to geriatrics were searched in the three-main treatise of ancient medicine and have been discussed here.

Concept of Ayurveda on ageing- Jara

Ayurveda has prominently described the concept of ageing as 'Jara'. The word Jara itself has been derived from root word

'Jru' which means decline stage or old age. Jara is defined as, phenomenon of becoming old by the act of wearing out. It is synonymic as "vardhakya" meaning increasing age³. The last stage of human life-Vridhhaawastha corresponds to the old age of modern ideology. According to Acharya Charak, ageing or vridhhaawastha is between 60 -100 years⁴. Swabhav and Kala play pivotal role in the process of ageing. Jara is considered as natural phenomenon like hunger, thirst and sleep⁵. Modified improper dietary habits, sedentary life style, excessive stress and anxiety enhance the process of ageing.

Types of Jara

Jara has been divided into two types physiologically-

Kalaja jara- It refers to chronological ageing. The symptoms of ageing occur at the appropriate age of the person due to swabhav and kala. It is a naturally occurring inevitable process.

Akalaj jara (Premature ageing)- Ageing which occurs before the appropriate age of the individual i.e. before old age is Akaalaj jara⁵

Clinical features of jara viz. ageing - During the stage of Vridhhaawastha, gradual deterioration of functions of mental and physical faculties occur at an enhanced rate. In this stage of life, there is diminution of Dhatu (body tissues), strength of sense organs, virility, energy, retention, power and memory⁶. Thus, both the physical and psychological changes occur in old age. Changes of ageing are always degenerative in nature⁷. The features and consequences of vridhhawastha have been tabulated in Table 1 & 2 ^{6,7}

Table 1: Physical features

Vali-wrinkles	Palitya-grey hair
Khalitya-baldness	Dantashaithilhya-teeth loosening and fall
Krishta-emaciation	Kampta- tremors
Namana-kypnosis	Shaktiheenta-power loss
Balahani- energy loss	Viryakshaya- decrease of fertility potential
Agnimandya-decrease in digestive power	Drishtimandya-diminution of vision
Vakashaktihani-diminution of speech	Ayukshaya- diminution of immunity.

Table 2: Psychological features

Gambhira-seriousness	Avasada-depression
Ekagratakhaya- loss of concentration power	Ekantpriyata-loneliness
Smritinasha-loss of memory	CHINTA-anxiety, stress
dhrutinasha-loss of retention power	

Common Problems of old age

Many chronic inflammatory and degenerative conditions occur in old age. The leading cause of mortality among aged people comprises respiratory problems, heart diseases, stroke and cancer. Common Physical and psychological disorders of old age are highlighted in a Table 3.

Table 3: Common Physical and psychological disorders of old age

Cardiovascular system	Hypertension, Congestive heart failure, IHD
Respiratory system	Bronchial Asthma, Bronchitis
Gastrointestinal system	Dyspepsia, APD, Flatulence, Constipation
Musculoskeletal system	Osteoarthritis, Rheumatoid arthritis, Spondylosis, Fragility fractures
Genito-urinary system	Nocturia, BPH
Ophthalmic and auditory system	Senile Cataract, Glaucoma, Deafness
Psychiatric problems	Anxiety, Depression, Dementia, Insomnia
CNS	CVA, Alzheimer's

DISCUSSION

Ayurveda offers multi-dimensional approach for the prevention of early ageing and management of diseases of old age. Modern research trends on healthy ageing also revolve around the Ayurveda principles of management of jara. Various Ayurveda guidelines and therapies have been stated which may delay the onset of debilitating symptoms of ageing process.

Ideal lifestyle Regimen – Principles of ideal lifestyle regimen laid down by the ancient scholars is the foremost step in the prevention of early ageing and disorders of old age. Dinacharya (daily regimen) and Ritucharaya (seasonal regimen) are concerned with the personal aspect of individual. Physical and mental ageing of one's life can be prolonged by adopting these principles.

Sadvritta- The path of ethical, social, mental, moral and physical conduct induces a positive influence on the mind and body. It helps to lead a healthy life. The person who behaves as per the principles of code of conduct (sadvritta) becomes more

divine and lives a good quality of life, thus preventing early ageing⁸

Rejuvenation therapy- Ageing cannot be cured but can be delayed with the help of rejuvenation therapy. Concept of anti-ageing is embodied in Jarachikitsa (Rasayana). This is the unique modality of Ayurveda which can be extensively utilized for the preservation of health and longevity in the aged. Sushruta has described Rasayana as one, which delays ageing, increases the life-span, promotes intellect and memory, and increases resistance to diseases⁹. This shows an immune-stimulant, anti-oxidant and nootropic effect of this therapy on human body. This is also responsible for combating the effect of age related problems. Rejuvenation therapy offers a comprehensive physiological and metabolic restoration. Decline in body tissues occur as the age increases and it has been quantified with decades of life as mentioned in Table 4. Specific rasayana for different age groups may be beneficial in restoration of bio-values of the respective age groups and have been mentioned in Table 4¹⁰

Table 4: Rasayan for different age groups

Age (in years)	Decade wise decline	Desirable Rasayan drugs
1-10	Balyam - childhood	Vaca (<i>Acorus calamus</i>), Kasmari (<i>Gmelina arborea</i>), Svarna (<i>Aurum</i>)
11-20	Vridhhi – growth	Kasmari (<i>Gmelina arborea</i>), Bala (<i>Sida cordifolia</i>), Aswagandha (<i>Withania somnifera</i>)
21-30	Chhavi - lusture	Amalaki (<i>Phyllanthus emblica</i>), Lauha Rasayana
31-40	Medha – sharpness in perception	shankhapushpi (<i>Convolvulus pluricaulis</i>), Yashtimadhu (<i>Glycyrrhiza glabra</i>), Aswagandha (<i>Withania somnifera</i>), Guduci (<i>Tinospora cordifolia</i>)
41-50	Twak - skin and appendages	Bhringaraja (<i>Eclipta alba</i>), Bakuchi (<i>Psoralea corylifolia</i>), Priyala (<i>Buchanania lanzen</i>), Haridra (<i>Curcuma longa</i>)
51-60	Drishti – visual acuity	Triphala ghrita, Saptamrita lauha,
61-70	Shukra - fertility	Kapikacchu beeja (<i>Mucuna pruriens</i>), Aswagandha (<i>Withania somnifera</i>), Krishna Musli (<i>Curculigo orchioides</i>), Milk, ghrita etc.
71-80	Vikram – valour and courage	These age group are not fit for Rasayana karma
81-90	Buddhi - cumulative intellect	
91-100	Karamindriya - physical capacities	

Age stabilising drugs – Apart from the rasayan drugs, Cgaraka has mentioned a unique group of drugs namely Vayasthapana Mahakashaya for maintaining vitality and managing ageing and its allied ill effects. Vayasthapana mahakashaya is a group of drugs having rasayana properties which promotes overall nourishment of body tissues. Ten Vayasthapana drugs which can be used for anti-ageing purpose are - Amrita (*Tinospora cordifolia*), Abhaya (*Terminalia chebula*), Dhaatri (*Embilica officinalis*), Rasna (*Pluchea lanceolata*), Shveta (*Alpenia*

galanga), Jeevanti (*Leptadenia reticulata*), Atirasa (*Asparagus racemosus*), Mandookaparni (*Centella asiatica*), Sthira (*Desmodium gangeticum*) and Punarnava (*Boerhavia diffusa*)¹¹

Medicinal plants for diseases of old age - Numerous single drugs and compound formulation are prescribed by physicians which help in prevention and cure of diseases of old age. Few of these are listed in table 5.

Table 5: Single & compound drugs prescribed for different systems of body

Disorders pertaining to system of the body	Single drugs	Compound formulations
Cardio-vascular System	Arjuna (<i>Terminalia arjuna</i>), jatamansi (<i>nordostachys jatamanasi</i>), pushkarmoola (<i>Inula racemosa</i>)	Prabhakar vati, arjunarishta, pravala pishti, mukta vati, sarpghandhaghan vati, etc
Respiratory system	Tulsi (<i>ocimum sanctum</i>), Shunti (<i>Zingiber Officinale</i>), Vasa (<i>Adathoda vasica</i>), Pippali (<i>Piper longuma</i>)	Sitopladi churna, talisadi churna, lavangadi vati, gojihvadi kwath, trikatu churna, chyavanprash, vasaaveleha
Musculoskeletal System	Ashwgandha (withania somnifera), satavari (<i>Asparagus racemosus</i>), asthi srinkhala (<i>cissus quadangularis</i>)	Yograj guggulu, Tryodashang guggulu, mukta pishti, godanti bhasama, maharasnadi kwath External application- Maha Narayana tail, vishgarbha tail, ksheerbala tail, panchuguna taila
Gastro-intestinal tract	Isabgola (<i>plantago ovata</i>), madhuyasti (<i>glycyrrhiza glabra</i>), ajmoda (<i>apium graveolens</i>), pippali (<i>Piper longum</i>)	Avipattikara churna, hingvastak churna, lavanabhaskara churna, chitrakadi vati, drakshaarishta
Genito-urinary system	Gokshura (<i>Tribulus terrestris</i> Pashanbheda (<i>Bergenia ligulata</i>) Varuna (<i>Crataeva nurvola</i>), Punarnava (<i>Boerhavia diffusa</i>)	Gokshuradi guggulu, Chandraprabha vati, trinpanchmoola kwath, Candanasava
Drugs acting as memory enhancer and Anxiolytic	Brahmi (<i>Bacopa monnieri</i>), Shankhpushpi (<i>Convolvulus pluricaulis</i>), Yashtimadhu (<i>Glycyrrhiza glabra</i>), Guduchi (<i>Tinospora cordifolia</i>), tagar (<i>Valeriana wallichii</i>)	Brahmi vati, sarasvatarishta, Ashwgandharishta, manasmitravatak, kalyanak ghrita. External application- brahmi taila
Eye & ENT	Amla (<i>Embilica officinale</i>), Drakasha (<i>Vitis vinifera</i>), yashti madhu (<i>Glycyrrhiza glabra</i>)	Triphala ghrit, saptamrit loha, triphala churna, khadiradi vati
CNS	Erand (<i>Ricinus communis</i>), Rasona (<i>Allium sativum</i>)	Yogendra rasa, ekangveer rasa, balarishta, dashmoolarishta, ashwgandharishata External application-narayana taila, ksheerbala tail, sahcharadi taila

Panchkarma- Panchkarma therapy possesses numerous preventive, curative and promotive potentials which impart rehabilitative effect and helpful in maintaining physical fitness. These therapies aim at promoting longevity in life by guiding the individual in the prevention of disease and delaying ageing¹². Some intermediary palliative measures like Abhyanga (massage), Swedana (oleation) including Pinda Sveda and Kaya Seka are very suitable in providing relief to patients having complaints related to musculoskeletal system. Panchkarma procedures should be administered with great precaution and after careful monitoring of the general health and accompanying diseases in the elderly. Vamana (medical emesis) and virechana (therapeutic purgation) especially of mridu type and matra basti (therapeutic oil enema) are best suited for old aged individuals. Palliative measures like shirodhara and shirobasti are useful in anxiety, tension headache, insomnia, psychiatric and neurodegenerative conditions. Periodical use of panchkarma therapy helps in overall maintenance of physical fitness and promotion of health.

The various types of Ayurveda principles of treatment are useful for prevention and management of geriatric problems. Modern trends of research for anti- ageing treatment also revolve around these principles. Combined application of ideal lifestyle through dinacharya, ritucharya, sadvritta, rasayan and panchkarma is a consolidated effective package for geriatric care. Adoption of ideal life style, following the principles of sadvritta has positive influence on mind and body and improves the quality of life and happiness quotient of an individual. Rasayana dravyas are rich

in antioxidants which removes free radicals from body. Free radicals in body produce progressive damage to body tissues and cause pre- mature ageing. Various studies have proven the anti-oxidant effect of rasayan drugs like Amla (*Embilica officinalis*)¹³ and Guduchi (*Tinospora cordifolia*)¹⁴

Several Medhya Rasayana like brahmi (*Centella asiatica*), shankhpushpi (*Convolvulus pluricaulis*) drugs have actions influencing the memory. They not only enhance the intellectual capacity but also rejuvenate the whole system and its pathways. Medicinal plants and compound formulations are useful for cardiovascular, respiratory, orthopaedic and psychiatric problems of old age.

CONCLUSION

Ayurvedic system of medicine provides elaborative description about ageing. The signs and symptoms of the jara-awastha (old age) mentioned in Ayurveda texts resembles with the problems of old age of present modern ideology. Geriatric problems are best confronted by preventive measures than curative ones through the ancient science. General awareness should be created among people regarding these preventive aspects and various rasayan modalities must be included in practice. This will go a long way in increasing the happiness quotient of our population.

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