

CONCEPT OF JARA (AGEING) IN AYURVEDIC ACUMEN: A BIRD EYE VIEW

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ABSTRACT

Introduction: *Jarachikitsa* is the branch of *Ayurveda* that deals with the problem of elderly persons. *Ayurveda* has explained about longevity and vitality in terms of *Jarachikitsa* and *Rasayana*. The aspects of ageing in pharmacological as well as non-pharmacological approaches have been explained meticulously in *Ayurveda* classics. Geriatrics is emerged as a main challenging speciality because of over growing population of aged people all over the world including India. **Aims and Objectives:** To review the concept of *Jara* and to explore the prevention and treatment of ageing in *Ayurvedic* literature. **Materials and Methods:** *Brihatrayi*, *Laghutrayi* and materials pertaining to *Jara* available in the internet were thoroughly screened, compiled, analyzed and presented in a systematic manner. **Discussion:** According to *Ayurveda*, ageing is the outcome of *Swabhavabalapravrittvyadhi* i.e. the diseases which are produced by the diminished strength of natural factors such as *Kshudha* (hunger), *Pipasa* (thirst), *Jara* (ageing), *Mrityu* (death), *Nidra* (sleep) etc. *Charaka* states that the means of obtaining maximum nourishment to body tissues are called as *Rasayanas*. *Sushruta* defines *Rasayan* as a measure which prolongs and provides positive health, improves mental state as well as immunity against diseases. *Jara* is caused by onset of deterioration of cell structure in the body. In the current era, the entire world is focusing light on the ageing process to improve the average life span of individual and measures are being planned accordingly. In first half of 21st century, old age dependency ratio is expected to double in more developed region and triple in less developed. Thus the aged people are going to be big problem for the society. **Conclusion:** *Ayurveda* emphasizes the promotion of health and prevention of diseases with different measures like wholesome diet in proper quantity, *Dincharya*, *Ratricharya*, *Rtucharya*, *Sadvrittupalana*, *Achara Rasayana*, *Dharaneeya* and *Adharaneeya vega*, Practice of yoga, *Rasayana*, *panchakarma* and regular use of some herbal drugs like *Ashwagandha*, *Guduci*, and *Amalaki* etc. An individual has to adopt these measures to prevent from *Akalaja Jara* (early aging).

Key words: Ageing, *Jara*, *Panchakarma*, *Rasayana*, *Swabhavabalapravrittvyadhi*.

INTRODUCTION

The word "Ayu" is derived from "Etigacchati iti ayuh"; "Unn gamanaseela" means continuation. Charaka and Vagbhata named the very first chapters of their treatise viz. *Deerghamjivitiyam* and *Ayuskamiyam* respectively which indicates the measures for a healthy life and longevity. It clearly shows that the concept of geriatrics was embedded in Ayurveda since beginning.

'Ayu' is the integral combination of *Sattwa* (psyche), *Atma* (soul), *Sarira* (body) and *Indriyas* (senses). Leaving *Atma*, which is immune to the cycle of birth, death and disease, the other three components have to be considered for understanding the aging process. Ayurveda incorporates various techniques for promotion of health and prevention of diseases in old age. 'Maharsi Cyavana' was rejuvenated to youth putting the clock back, by a course of *Rasayana* treatment which is also called 'Kaya Kalpacikitsa', performed by the well-known *Aswinidevas*. Though this could well be a pigment of imagination or exaggeration, at least it proves that the rejuvenation of the human body was within the sphere of specialization and experimentation of scholars even in the Vedic Period.

'Jarachikitsa' of Ayurveda is the process of delay in ageing of human beings during the later stages of life when degeneration of body tissues and senses occurs at quick rate. Ayurveda advocates healthy ageing through *Rasayanachikitsa* (*Jarachikitsa*), *Panchakarma*, principles of daily regimen, seasonal regimen and *Sadvritta* (code of conduct). For a better understanding of *Jarachikitsa*, the concept of ageing (*Jara*) should be first acknowledged. Ageing is a universal, intrinsic, progressive and deleterious process¹.

Concept of ageing (*Jara*) in Ayurveda

Ayurveda has described the concept of ageing as 'Jara'. The word *Jara* itself has been derived from root i.e. 'Jru' which means decline stage or old age. 'Jara' is defined as the phenomenon of becoming old by the act of wearing out. It is synonymic as "Vardhakya" means increasing of age². The last stage of human life-*Vridhaavastha* corresponds to the old age of modern ideology. According to *Charakacharya*, *Vridhaavastha* is between 60 -100 years³. *Swabhava* and *Kala* play a pivotal role in the process of ageing. *Jara* is considered as natural phenomenon like hunger, thirst and sleep⁴. Modified improper dietary patterns, sedentary life style, excessive stress and anxiety enhance the process of ageing.

'Vaya' (age) can be defined as the duration of time since birth to the present for a living individual. According to *Charakacharya*, age has been divided into three parts viz. *Balyavastha* (young age), *Madhyamavastha* (middle age) and *Jirnavastha* (old age). After sixty years of age one is called 'old'. In old age there is a progressive diminution of *Dhatu*, strength of sense organs, vigor, masculinity, bravery, power of understanding, retaining and memorizing, speech and analyzing facts. There is gradual diminution in the qualities of *Dhatu* also⁵.

Thus, the *Vridhavastha* or *Jirnavastha* is the last phase of life and is represented by the decay or degeneration of the body. *Sushrutacharya* has mentioned 'Jara' (ageing) under 'Swabhavabalapravritta vyadhi' which is of two types Viz. *Kalaja* (*Parirakshanakrita*), appearing at proper time even after proper protection and *Akalaja* (*Aparirakshanakrita*), appearing before proper time due to improper care and prevention.⁶

Classification of 'Vaya'

Sl. No.	Name of the texts	Balya	Madhya	Vridha
1.	<i>Candogyopanisad</i>	Birth to 24 yrs	24 to 68 yrs	68 to 116 yrs
2.	<i>Caraka Samhita</i> ⁷	Birth to 30 yrs 1. <i>Aparipakvadhatu</i> - Birth to 16 yrs	30 - 60 yrs	60- 100 yrs

		2. <i>Vivardhamana dhatu</i> 16 to 30 yrs		
3.	<i>Susruta Samhita</i> ⁸	Birth to 16 yrs 1. <i>Kseerapa</i> -up to 1yr 2. <i>Kseerannada</i> up to 2 yrs 3. <i>Annada</i> up to 16 yrs	16 - 70 yrs <i>Vridhhi</i> 16 - 20 (yrs) <i>Youvana</i> (20 - 30 yrs) <i>Sampurna</i> (30- 40 yrs) <i>Hani</i> (40 - 70 yrs)	>70 Yrs

Sequential loss in ageing: From birth to death the moment of conception, right into the extreme old age, the human body undergoes considerable changes in shape, size and composition. Sharangadhara Samhita⁹ and Ashtanga Sangraha¹⁰ describe the sequential bio-loss during different decades of life due to process of ageing. Declining of these bio-losses at various decades of life areas are mentioned in Table 1.

Jara and various factors: To substantiate it some of the factors are described as follows:

(A) Swabhavoparamavada (Theory of natural destruction)

Charaka has explained *Swabhavoparamavada* as “there is a causative factor for the manifestation of beings but no causative factor as such exists for their deterioration¹¹. It indicates that the process of deterioration will occur naturally. Thus ‘*Swabhava*’ can be considered as a responsible factor for the causation of *Jara* (ageing) which is invisible and it is a nature’s unique process.

(B) Kala (Time factor)

All the living and non- living things will change along with time. In Ayurveda, this sequence of change is known as “*Parinama*” which take place under the influence of ‘*Kala*’. Ayurvedic seers mentioned that the phase of life will occur by the effect of time “*Kalasyaparinamena Jaramrityunimittajaha*”¹². Thus, it can be stated that ‘*Parinama*’ brings *Jara* which is the last sequential event of life.

(C) Shareera Vriddhikarabhava – abhava (Depletion of growth factor)

Shareera Vriddhikarabhavas are *Kalayoga* (time bounded phenomenon), *Swabhavasamsiddhi* (Natu-

ral phenomenon as a result of invisible process which is responsible for growth), *Aharasaushthava* (dietary factor which is according to *Ashta-aharavidhivisheshayatan*, *Aharavidhividhana*, *Dwadashasanapravicharana*) and *Avighata* (absence of devastating causes)¹³. The lack of above mentioned factors may decrease the growth of an individual. So absence of these factors cause ageing process.

(D) Tridosha and ageing

Tridoshas (*Vata*, *Pitta* and *Kapha*) play an important role in maintenance of good health as well as in production of diseases. These *Doshas* exists in body all the time but their individual dominancy will vary as per age, day or night time and after taking meals. During childhood *Kapha dosha* predominates, in the middle age *Pitta* dosha and in the older age *Vata dosha* is said to be dominant. The properties of *vata dosha* are described as *Ruksha*, *Laghu*, *Sheeta*, *Khara* and *Vishada*. So *Vata* dosha by its nature, decreases luster of skin, reduces body strength, dries and decays the body and hastens ageing proves that the process of ageing can be evaluated in terms of *Tridoshas*.

(E) Agni and ageing

Apart from doshas, *Agni* too plays a pivotal role in ageing process. In old age, the aggravated *Vata dosha* is responsible for *Vishamagni* which affects the process of digestion thereby leads to under nourishment of tissues and also causes low status of *Dhatwagni* which manifests various diseases in elder people.

(F) Dhatus and ageing

The literature of Ayurvedic classics suggests that the strength of *Dhatu* is decreased during old age.

Ojas (the essence of all the *Dhatus*) which is responsible for resistance against diseases or *Vyadhikshamatva* (Immunity) is also decreased and causes different kinds of diseases thereby leads to ageing. So the *Dhatukshaya* and *Ojakshaya* are also responsible for process of ageing.

(G) *Srotasa* and ageing

According to Charaka various pathological conditions arise in the body due to *Srotodusti* of different *Srotases*. The main function of *Srotas* (channels of body) is to transfer the body fluids. There are four

kinds of '*Shrotodushti*' that takes place i.e. *Atipravritti*, *Sanga*, *Siragranthi* and *Vimargagamana*. Vitiation of *Vayu* and *Mandagni* causes *Srotodusti* in the form of *Srotosanga* which leads to improper nourishment of body tissues in aged.

Causes of *Akalaja-jara* (Premature ageing)

The causes of early ageing process according to Ayurveda are clearly described by Charaka and Vagbhata. All the etiological factors for ageing can be differentiated in three categories.^{[14], [15]}

Table 1: Bio-losses at various decades

Loss mentioned		
Decade of life	Sharangadhara Samhita	Ashtanga Samgraha
1 st	<i>Balyam</i> (Childhood)	<i>Balyam</i> (Childhood)
2 nd	<i>Vridhhi</i> (Growth)	<i>Vridhhi</i> (Growth)
3 rd	<i>Chavi</i> (Complexion)	<i>Prabha</i> (lusture)
4 th	<i>Medha</i> (intellect)	<i>Medha</i> (intellect)
5 th	<i>Twaka</i> (Skin)	<i>Twak</i> (Skin)
6 th	<i>Drishti</i> (Vision)	<i>Shukra</i> (Virility)
7 th	<i>Shukra</i> (Virility)	<i>Drishti</i> (Vision)
8 th	<i>Vikram</i> (Strength)	<i>Shrotendriya</i> (Hearing)
9 th	<i>Buddhi</i> (intellect)	<i>Mana</i> (Sprituality)
10 th	<i>Karma</i> (Function of all the <i>Indriya</i>)	<i>Sarvendriya</i> (all the indriyas)

Aharatmaka Hetu

- *Amla*, *Katu*, *Lavana rasa*, *Kshara*, *Guru*, *Ruksha*, *Klinna* (softened), *Abhishyandi* (those which obstruct the channels of circulation) accelerates the process of ageing.
- *Navashukadhanya* (newly harvested class of corns), *Navashamidhanya* (newly harvested class of pulses), *Shuskamansa* (dried meat), *Tila* (sesamum), etc. produces *Ama* by decreasing *Agni* and leads to ageing process.
- Different type of *viruddhaahara* (incompatible diet) i.e. *Rasa viruddha*, *Guna viruddha*, *Virya viruddha* etc. are also responsible for initiation of ageing process.

- *Asatmya ahara* (unwholesome diet), *Vishamashana*, *Adhyasana* etc. leads to *Agnidushti* and senility.

Viharatmaka hetu: *Divaswapna* (day sleep), *Ativyavaya* (excessive indulgence in sexual act), and *Vishama-atimatra vyayama* etc. are the *Viharatmaka hetus* of *Jara*

Manasika hetu: *Bhaya*, *Krodha*, *Shoka*, *Lobha*, *Moha* etc. are the causes for the senility. *Madhava Nidana*¹⁶ and *Rasa Ratna Sammucchaya*¹⁷ have mentioned that excessive walking, *Kada Anna* (food articles which are devoid of *Jeevaniya* properties), sexual indulgence and mental worries cause *Jara*.

Samprapti of Jara There is increase of *Vata* in old age which causes improper nourishment of *Rasa Dhatu* and all the *Dhatus* also undergo improper nourishment. This gradual malnourishment leads to

irreversible process of *Kaalaj Jara* (aging). The *Samprapti* of *Akaalaj Jara* (etiology of premature aging) is as follows: *Nidanas* (causative factors) such as *Ati AharaVihara* (excess food intake and improper lifestyle), *Manasika Vega Adhaarana* (non-suppression of unpleasant emotions) leading *Srotolepa* (blocks the body channels) which in turn causes *Agnimandya* and then forms *Ama*. When the function of *Agni* is vitiated, there is improper nourishment of *Rasa* and successive *Dhatus* causing *Shareera Apachaya* (improper nourishment of body) and *Ojo Hrasa* (depletion of the Ojas) resulting in *Akaalaj Jara* (premature aging).

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*.

Ideal lifestyle Regimen: Ideal lifestyle regimen, *Dinacharya* (daily regimen) and *Rtucharya* (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.

Panchakarma: *Panchakarma* 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 delay the ageing¹⁸. *Vamana* therapy in *Kapha* aggravating season i. e. *Vasant Rtu*, *Virechana* therapy in *Pitta* aggravating *Rtu* i.e. *Sharad Rtu* and *Vasti* therapy in *Vata* aggravating season i.e. *Varsha Rtu* is recommended for the prevention and maintenance of health. 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 musculo-skeletal system in old age. *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.

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)* in Ayurveda. This is the unique modality of Ayurveda which can be extensively utilized for the preservation of health and longevity of the aged. Sushruta has described *Rasayana* as one, which delays ageing, increases the life-span, promotes intellect, memory, and increases resistance to diseases¹⁹. Rejuvenation therapy offers a comprehensive physiological as well as metabolic restoration.

Vayasthapana Drugs (Age stabilizing drugs):

Charaka has explained *Vayasthapana mahakashaya* as 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 viz. *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)*²⁰.

Sadvritta: The path of ethical, social, mental, moral and physical conduct induces a positive influence on the mind and body. The person who behaves as per the principles of code of conduct (*Sadvritta*) becomes more divine and lives a good quality of life and it may help to prevent early ageing²¹.

Medicinal plants for diseases of old age: Numerous single drugs and compound formulations are prescribed by ancient seers which will help in prevention and treatment of diseases in old age. Single drugs like *Arjuna (Terminalia arjuna)*, *Jatamansi (Nordostachys jatamansi)* and compound drugs like *Prabhakar Vati*, *Arjunarishta* are used in the disorders of Cardio-vascular System, single drugs like *Tulsi (Ocimum sanctum)*, *Shunthi (Zingiber*

officinale) and compound drugs like *Sitopaladi Churna*, *Talisadi Churna* are used in the disorders of Respiratory system, single drugs like *Ashwagandha (Withania somnifera)*, *Satavari (Asparagus racemosus)* and compound drugs like *Yograj Guggulu*, *Tryodashang Guggulu*, *Maharasnadi Kwath* and *Maha Narayana Tail* are used in the disorders of Musculoskeletal System, single drugs like *Brahmi (Bacopa monnieri)*, *Shankhpushpi (Convolvulus pluricaulis)* and compound drugs like *Brahmi Vati* and *Sarasvatarishta* are used as memory enhancer and anxiolytic etc.

CONCLUSION

Jara is the stage of an individual when one feels decline in the physical, physiological as well as mental activity. Ayurvedic literature has clearly distinguished the two types of *Jara* viz. *Kalaja* (fixed) and *Akalaja* (early ageing). *Kalaja Jara* is mentioned as *Swabhavika vyadhi*, which cannot be prevented by drugs or any other things whereas *Akalaja jara* i.e. premature ageing process can be prevented by adopting regular *Panchakarma* procedures for body purification and intake of *Rasayana* drugs. Acharyas mentioned a branch called *Rasayana tantra* as one amongst *ashtangas* of Ayurveda to maintain the normal life span of aged people. The present paper brings a clear picture about the process of ageing in ayurvedic perspective and also suggests the importance of *Panchakarma*, *Rasayana* therapy, Ideal life-style regimen, and *Sadvritta* are the main tools to maintain physical, Physiological and psychological restoration.

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