

## AN AGING – ASSOCIATED DISEASE AND ITS PREVENTIVE MEASURES IN AYURVEDA

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### ABSTRACT

Ageing is an inevitable *svabhava* of living being. Ageing represents the accumulation of changes in a human being over time encompassing physical, psychological & social changes. Ageing is a natural process whereby the molecules, cells & tissues in a body damage, leading to loss of function & increased risk of death. Acharya sushruta has mentioned a group of *svabhavaja* (natural occurring) disease in which *jara* comes under. Aging is continuous process which begins with conception and ends with death. Charaka has mentioned the growth period that is up to 30 yrs after that the growth of individual stops and aging start to continue. According to ayurveda point of view, *kala* (time factor) play an important role in the production of aging *Kala*

causes daily changes, which are responsible for the *kshaya*. Thus these are the etiological factors which may be responsible for initiating aging process. Vata dosha is most important factor for pathophysiology of ageing because of its natural predominance at this stage. In this stage *dhatu*, *virya*, *indriya*, *bala* and *utsaha* decrease day by day. Alopecia, wrinkling of whole body, cough and breathlessness are general symptoms and ultimately with the failure of all activities. Ayurveda has many preventing measures for combating the ageing process.

**KEYWORDS:** *Jara*, *Kshaya*, *kala*, *virya*, *indriya*.

## INTRODUCTION

“An aging – associated disease is a disease that is seen with increasing frequency with increasing senescence. Essentially aging associated disease are complications arising from senescence. In devi bhagavad mentioned about “*Jara*” as slow process of degeneration of *rasadi dhatu* is called Jara.<sup>[1]</sup> In shrimad bhagvad also said that due to effect of kala slow degeneration of *rasadi dhatu* is called Jara. Aging associated disease do not refer to age – specific disease such as the childhood disease- example of aging associated disease are cardiovascular disease, cancer, arthritis, cataracts, osteoporosis, type -2 diabetes hypertension and Alzheimer disease. The incidence of all these diseases increases rapidly with aging. The term geriatrics is derived from greek word –Geri means – old age, latrics means – care. It is a branch of medicine concerned with the care and treatment of elderly. In ayurveda this is called “*vridhopacharaneeyam*“. Aging is continuous process which begins with conception and ends with death. Charaka has mentioned the growth period that is up to 30 yrs after that the growth of individual stops and aging start to continue.<sup>[2]</sup> Sushruta mentions jara in group of naturally occurring disease named *svabhava bala roga*, which included *kshudha*, *pipasa*, *nidra*, *jara* and *mrityu*.<sup>[3]</sup> In this stage *dhatu*, *virya*, *indriya*, *bala* and *utsaha* decrease day by day. Alopecia, wrinkling of whole body, cough and breathlessness are general symptoms and ultimately with the failure of all activities.<sup>[4]</sup> Ayurveda describe much about the science of gerontology and *rasayana* therapy. *Rasayana tantra* is one of the 8 major clinical disciplines of *astang ayurveda*, which exclusively devoted to study of aging and its prevention. Stress is most common factor that creates premature aging. Medications may boost levels of melatonin a hormone that helps regulate sleep and reduce hormones which create premature aging. According to ayurveda point of view, *kala* (time factor) play an important role in the production of aging.<sup>[5]</sup> *Kala* causes daily changes, which are responsible for the *kshaya*.<sup>[6]</sup> Thus these are the etiological factors which may be responsible for initiating aging process. Time is an important cause of aging and after obtaining a specific age, the process of aging start which may be slow or fast depending upon environmental habits and other dietary factor of individuals.

## MATERIAL AND METHODS

The basic & conceptual materials were collected from the Ayurvedic classics viz. *brhatrayai* & *laghutrayi*. The main ayurvedic texts used in this study are *Devi bhagavat*, *Charak samhita*, *Sushruta samhita*, *Astang hridaya*, *madhava nidana* & *bhavprakash nighantu*.

### Classification of vaya

*Acharya charak* has divided vaya in three major parts.

- 1) **Balyawastha** 1 to 30yrs.
- 2) **Madhyamawastha** 31 to 60yrs.
- 3) **Jirnawastha** 61 to 100yrs.

*Acharya sushruta* has classified the vaya in three parts.

- 1) **Bala** 1 to 16yrs.
- 2) **Madhya** 17 to 70yrs.
- 3) **Vruddha** 70 to 100yrs.

### Ethymology

The word jara is derived from *jrush dhatu*, which means for diminution of age. In shabda kalpadruma it denotes the flaccidity of body tissue occurring due to age is called jara.

### Age associated disease

Aging increases vulnerability to age associated disease, whereas genetics determines vulnerability or resistance between species and individuals within species. Some consequences of aging are age related changes in vision, hearing muscular strength, bone strength, immunity and nerve function. Glaucoma and cataract are ocular problem associated with aging that can be treated to restore falling vision in older people, hearing loss is often noticeable by age 50 and the range of the sounds heard decreases. Muscle mass and nervous system efficiency decreases, causing slower reflex times and less physical strength and immune system weakness making older people more susceptible to infection.

**PATHOPHYSIOLOGY OF AGING -:** Telomeres present on the end of our chromosomes, the stands of DNA stored in nucleus of cells. The telomeres shorten each times a cell divide to make new cell until they reach a critical short length and the cell enter an inactive state and die. Therefore telomeres shorten as an individual's get older, but individuals are born with different telomeres length and the rate which they subsequently shorten can also vary. The speed with which telomeres shorten down is called biological aging.<sup>[7]</sup>

As DNA cannot be change by lifestyle or environmental factors an associated with these genetic variants, which affect telomere length with a disease would suggest a causal link between telomeres length and that disease.

**Anti aging agents<sup>[8]</sup>**

- Statins are useful in heart disease and also appear to have an anti cancer effect.
- Aspirin appears to beneficially affect several symptoms of aging of aging.
- Caloric restriction.
- Exercise apparently delays incidence of many aging symptoms.
- RESVERATROL, a constituent of red wine and grape skins has been found to extend life span and many beneficial in heart disease, cancer and diabetes.

**MANAGEMENT**

Ayurveda has got the potential for prevention of diseases by promotion of health & management of diseases occurring in old age. Prevention & management of health problems could help the elderly to improve quality of life & remain self dependent for their daily activities to maximum possible extent. Ayurveda has many preventing measures for combating the aging process. Aging is a progressive, universal & thus for irreversible. In ayurveda following preventive measures are said to be taken.

**Dincharya<sup>[9]</sup>**

- To prevent jara & aging associated disease, one should follow the dincharya (daily regimen strictly).
- Time to wake up in brahm muhurta.
- Achamana – means to wash which will be done after cleansing the extra tears & sneezing.
- Dant dhawana & jivha nirlepana – (cleansing of mouth) – it should be practiced after every meal in addition to be early morning & before going to bed.
- Usnapana – drinking ushna (hot water) In morning according to one's capacity, it reduced cough which increases in old age & increases digestion power. Cleanness the body by enhancing the elimination of toxic wastes.<sup>[10]</sup>
- Bowels – elimination of urine & faeces cleanness the body & cheers the mind.
- Eye care – eyes should be clean with fresh water to prevent eye diseases & promote vision. Use amalaki ghrita orally it promotes vision & triphala ghrita for tarpan.
- Abhyanga – it beneficial to massage whole body including scalp with oil every day to prevent dryness of body & stiffness of joint.
- Yogasana<sup>[11]</sup>
- Trikonashana – helps strengthen & stretch the hip joint. It helps regulates blood pressure a common complaint amongst elderly.

- Katichakrashana – helps to keep the spine straight, preventing slouching. Helps strengthen the arm & leg muscles, ensuring that seniors are firm on their feet.
- Badhakonasana- helps clear bowel movements, thus regulating digestion. Stretches the thighs & knees, reducing joint stiffness & pain.
- Shishuasana – calm the nervous system. Relaxes the back helping to relieve back aches.
- Marjariasana – makes the spine flexible, reducing the stiffness that comes with age. Releases back pain. Massages the digestive organs & improves digestion, tones the abdomen, improves blood circulation.

**To prevent Akalaja jara** uses medhya rasayan for rejuvenation therapy.<sup>[12]</sup>

**Ashwagandha (*Withania somnifera*):** The active constituents withaferin A and several other several other steroidal lactones withanolides and saponines are responsible for effect on central nervous system. SHTIA receptors reduce degenerative changes on brain. It is mood elevator agent. It has been shown beneficial effect as an anti stress agent.

**Brahmi (*Bacopa monnieri*):** it is indicated that neuro degeneration caused by neuro toxin free radicals is supposed to be the causative factor in Alzheimer disease, Parkinson's disease and aging. This damage results due to decreased function of free radical scavenging enzyme primarily SOD, CAT, GPX. *Bacopa monnieri* found to increase SOD, CAT and GPX activities significantly throughout all the brain regions. It possible anti aging benefits owing to its ability to alleviate oxidative stress in the striated area of brain, which has good benefits in Alzheimer and Parkinson's disease.

Acetylcholine is chemical messenger in brain is important for function of brain cells involved in memory, thoughts and judgment. *Bacopa monnieri* break down acetyl cholinesterase to acetylcholine. It can be used for treating Alzheimer's disease.

**Guduchi (*Tinospora cardifolia*):** Significant anti stress activity marked action in brain necrosis.

**Mandukparni (*Centella asiatica*):** Mandukaparni have anti convulsive activity, so it is used in Alzheimer disease when epilepsy occurs. The exact dose of 100mg/kg reduces the degenerative changes in cortex region in brain. The alcoholic extract of *c – asiatica* reduce acetylcholine content and increase histamine catecolamines in the brain, which suggest the psychotropic and anti anxiety effect.

**Paras pipal**(*Thespesia populnea*)-: was administered orally in 3 doses [100, 200 and 400mg/kg] for 7 suggestive day. 200 and 400 mg/kg showed significant in memory in Alzheimer disease [in middle age person] anticholinesterase and anti inflammatory action.

**Panchakarma** – Is a specialty of ayurveda having preventing, promotive & curative actions & indicates in wide range of disease conditions or health problems. It is bio- cleansing regimen, which facilitates the body system for better availability of therapies.

## DISCUSSION AND CONCLUSION

In human being ageing represents the accumulation of changes in a human over time encompassing physical, psychological & social changes. Acharya sushruta has mentioned a group of svabhavaja (natural occurring) disease in which *jara* comes under. To prevent Akalaj jara, one should follow the *dincharya* (daily regimen) & *ritucharya*. Seasonal changes bring about diseases & they may be prevented by adopting certain seasonal regimen. Ritucharya means routine is that to be followed in different seasons. It maintains dosa samya (equilibrium) in different seasons. *Rasayan* stands as an preventing premature ageing & to solve the problems due to ageing, it also ensures helpful longevity including mental health & resistance against various geriatric diseases condition. These measures for prevention of diseases in old age as well as for promoting health. Proper execution of these measures leads to perfect physical, mental & spiritual wellbeing.

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