

ANATOMICAL CHANGES IN GERIATRIC: A REVIEW

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ABSTRACT

Aging in modern science is defined as a Progressive failure of the body haemostatic, adaptive response; *Ayurveda* has considered *Jara* or *vardhakya* as a natural and inevitable process as well as a *swabhavaja vyadhi* as old age sets in, homeostasis between the *Tridosas* are disturbed. *Kapha* decreases resulting in an increased *vata* this result in disturbance in *pitta* too. As age advances, several changes take place in the body, in the external appearance, in the condition of *Dosha*, *Dhatu*, *Mala*, *Agni*, *Oja*, and so on, as well as in the mental and cognitive functions. Elderly people are susceptible to several chronic diseases also. This stage is characterised by decay in the body. *Dhatu*, perception power of *indriya*, potency, strength, speech, various mental and cognitive functions (e.g memory, intellect, reception, retention, analytic ability etc.) During this phase there is predominance of *vaaya dosha*, (one of the three physiological body factors). The major physical changes seen at this time are wrinkling of skin, graying of hair, baldness and diminishing ability to do physical work. These anatomical changes include loss of compactness of the muscles, looseness of joints, vitiation of *Rakta*, excessive production of *meda*, failure of *majja*, accumulation in bone failure of production of *Shukra* and loss of *oja* factor. Aging represents structural and functional changes of an organism over its entire life span. The aim of this conceptual article is to compile the various Anatomical changes in geriatrics.

KEYWORDS: Aging, *Ayurveda*, Geriatrics, *Vriddhavastha*.

INTRODUCTION

Ayurveda has considered *Jara* or *Vradhakya* as a natural and inevitable process as well as a *Swabhdvaja vyadhi*. *Acharya Charaka* mentioned that the normal life span of humans is one hundred years^[1], though life span is plummeting alarming; now a days it is considered as 70 years. Aging can be defined as the normal process of life which is characterized by degeneration of organs of various systems, and consequently losing their anatomical and physiological functions.^[2] Some diseases and conditions that are common in old age are osteoarthritis, hypertension, urinary incontinence, diabetes mellitus, arthritis, atherosclerosis, cardiovascular disease, cerebrovascular accidents, respiratory disease, senile dementia, delirium, confusion etc. Modern system of medicine has nothing much to recommend in geriatric care except the medical management of some diseases of the old age with limited health and prevention of diseases in old age.

MATERIAL AND METHODS

This article is based on a review of *Ayurvedic* texts. Materials related to aging, *Vaya*, and other relevant topics have been collected. The main *Ayurvedic* texts and available commentaries on these. We have also

referred to the modern texts and searched various websites to collect information on the relevant topics.

Concept of *Vriddhavastha* (later stage of life)

Vriddhavastha is the last part of the lifespan and is mainly characterized by degenerative changes. Aging refers to a multidimensional process of physical, psychological, and social change. The changes are always degenerative in nature. According to *Ayurveda* the lifespan of an individual is divided into three parts known as *Vaya*. These are *Balavastha*, which lasts up to the age of 16 years; *Madhyavastha*, which lasts from the age of 16 years to 60–70 years; and *Vriddhavastha*, which refers to the period after 60 or 70 years.^[3-5] Thus, every person will pass through a period when various decaying changes will take place, and this time period is known as *Vriddhavastha*. The major physical changes seen at this time are wrinkling of skin, graying of hair, baldness, and a diminishing ability to do physical work. The diseases that complicate this stage are *Kasa* (cough), *Shwas* (asthma), and so on.^[6-7] *Vriddhavastha* may be of two types: timely (if it manifests after the age of 60 – 70 years) or untimely.^[8] Untimely aging may result due to aggravation of *vata* and *pitta dosha*. Therefore, excessive utilization of all the causes of *vata-pitta* aggravation may lead to untimely aging. Some instances are causes

of *Rajyakshma*, carelessness regarding prescribed regimen of *tryopstambha*, causes of *ojo-kshya*, excessive and single use of *Amla*, *Lavana*, *Katu*, *Tikta*, and *Kashaya rasa* in diet.

CHANGES IN OLD AGE AS PER MODERN SCIENCE

Anatomical changes occur in the body in different system like, Cardiovascular system, Respiratory system, Gastrointestinal system, Urinary system, Nervous System, Sense organs, Endocrine system, Reproductive system, Musculoskeletal System & skin etc.

CHANGES IN OLD AGE AS PER AYURVEDA

Anatomical changes occur in Role of *Tridosha*, *Agni*^[9], *Dhatu*s, *Srotas* etc. in geriatrics.

DISCUSSION

Aging is one of the unavoidable processes occurring in each and every living being and one cannot prevent it. Classics have mentioned it as a *Svabhavika Vyadhi*, because risk of developing various diseases increases in old age. For understanding the process of aging in terms of Ayurveda, needs the analysis of the physiological changes occurring at the level of *Tridoshas*, *Saptadhatu*s, *Malas*, *Srotas*, *Indriyas*, *Agni* and *Ojas*. The main *Dosha* involved is *Vata* and there is *Agnimandya* leading to improper nourishment of various entities of body. There are different patterns of functional deteriorations occurring with aging. There may be gradual and partial functional loss or complete functional loss. The dependent *Dhatu*s also undergo improper nourishment. This process is gradual and leads to irreversible process of aging. *Nidanas* such as *Ati AharaVihara*, *Manasika Vega Adhaarana* leading to *Srotalepa* which in turn causes *Agnimandya* and *Ama*. When the function of *Agni* is vitiated, there is improper nourishment of *Rasa* and successive *Dhatu*s. Finally leads to *Shareera Apachaya* and *Ojo Haani* resulting in *Akaala Jara*.

CONCLUSION

Different anatomical and physiological changes occur by age. These changes often lead to health problems and even death in elderly. In order to ensure health and wellbeing of this growing age group, it is important that health care professionals, the government, the community, their families and the elderly themselves understand the changes that are happening and adapt the preventive measures to avoid the suppression of natural urges, follow the *dincharya* practice of regular *yogic* exercise, *shodhana* according to *ritu* and consumption of *rasayana* drugs at proper time. All these things will help to avoid increased risk related to aging.

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