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Holistic approach to Geriatric Care

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ABSTRACT

Old age is an integral part of human life. The branch of medicine or social science dealing with the health and care of old people is called Geriatrics. Diseases prevention and health maintenance is more important in old age because sickness related morbidity is more frequent, serious, chronic and more expensive to treat in this age group. Geriatric problems are best confronted by preventive measures than curative ones. Clinical consequences in various system of the body due to changes with ageing are described in text books. Various Ayurveda classics gives detailed classification of *Vaya* based on the degenerative changes in the body. The *Nidana*, *Poorvaroop* and *Lakshanas* of *Jara* is clearly mentioned in *Madhava Nidana*. Importance of *Dinacharya* and *Ritucharya* in preventing *Jara* is mentioned by *Acharyas*. Ayurveda has the abeyantto avert disease by health promotion and noncommunicable disease prevention. *Jara* is considered as one among the eight branches of Ayurveda. *Rasayana* (Rejuvenation) and *Jarachikitsa* promote healthy longevity. *Jarachikitsa* and *Rasayana* helps to delay *Vruddhavastha* (ageing) and control geriatric degenerative changes in body.

Key words: Geriatrics, Jara, Rasayana, Vruddhavasta.

INTRODUCTION

Life is often about being taken care of in childhood, or being a caretaker of others. The lessons are sometimes about nurturing love and compassion. The most important part of caring for the elderly is to love them and keep them active. Old people are in dire need of attention and affection. Definitions of aging indicate that it is a progressive process associated with declines in structure and function, impaired maintenance and repair systems, increased susceptibility to disease and death, and reduced

reproductive capacity.^[1] Getting old is an inevitable process. It is inherent to human being. Geriatric health care approach has two aspects: (a) measures for the promotion of health and longevity and (b) management of diseases of old age. Ayurveda prevents diseases by promoting health and preventing noncommunicable diseases. *Rasayana* (Rejuvenation) or *Jarachikitsa* promote healthy longevity.

GERIATRICS

It is the branch of medicine or social science dealing with the health and care of old people.

Geriatric Medicine^[2]

It is the specialised branch of medicine that deals with medical problems of older people.

Definition of Jara

'*Vayah Kruta Shlatha Mamsadyavastha Vishesha*' Meaning loosening of muscles and other tissues under the influence of aging.

Classification of Jara

Acharya Sushruta has categorised the *Swabhava Balapravrutta Vyadhi's* into 2 types i.e. *Kalaja* (timely occurring) and *Akalaja* (untimely occurring) *Jara*.

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Swabhavikastu Kshud Pipasa Jara Mrtyu Nidra Prakrutayaha]^[3]

Kalaja means the one which occurs timely. *Charaka* opines that the person who strictly follows *Dinacharya* (daily regimes), *Ritucharya* (seasonal regimes) and *Hitavastusevana* (good nutritional practice) etc. will attain the *Kalamrtyu* followed by death at a particular scheduled time in his life span. Such type of aging is considered as *Niyatayu* (scheduled aging). *Akalajajara* (Premature Aging) means 'Asamayejata' i.e. one which occurs untimely. According to *Charaka*, individuals following improper health care measures age fast and they are prone to *Akalamrtyu*.

Causes of Jara (Akalaja) according to Ayurveda^[4]

Madhava Nidana explains the causes of *Jara* as

1. *Ati Pada Gamana* - Excess Walking
2. *Ati Sita Sevana* - Excessive cold intake
3. *Kadanna Bhojana* - Improper food consumption
4. Continuous *Maithuna Karma* with *Vridhdha Stree* - Excessive indulgence in sex with elderly women.
5. *Manasika Dukha* - Mental Stress

Jara Purvaroopo

Acharya Madhavakara has mentioned *Purvaroopo* of *Jara* as;

- *Shakti Ksheenata* - Diminution of strength
- *Smriti Nasha* - Diminution of memory
- *Glani* - lethargy
- *Vali* - Wrinkling of skin
- *Palitya* - Grey hair
- *Danthashaithilya* - Flabbiness of body tissues
- *Svabhava Parivarthana* – Change in mood

Objectives of Geriatric care

1. Maintenance of health function
2. Detection of diseases at early stages
3. Sympathetic care and support during terminal illness.

Characteristics of Geriatric patients^[5]

- Often have chronic, progressive and multiple disorders few of which may be occult.
- Need long term multiple drug treatment and are vulnerable to adverse drug reactions.
- Are slower to recover and are vulnerable to residual impairments and disabilities.
- They may need long term physical and rehabilitative therapy to restore function.
- May show atypical clinical variations, diagnostic / therapeutic problems.
- Their socioeconomic deprivation also influence disease in them.
- Compared to young, geriatric patients have higher morbidity and mortality.

Common Geriatric Disorders

Increasing number of people surviving longer into old age may suffer from type 2 diabetes, coronary heart disease, hypertension, stroke, airway obstruction, Alzheimer's disease, osteoarthritis, osteoporosis, prostatic hypertrophy, cataracts, macular degeneration and cancers and at the same time they are vulnerable to infections involving respiratory (including TB), urinary and digestive tract. The group of disorders which are almost exclusively to or of special clinical relevance to elderly are osteoporosis, frailty syndrome, falls, hormone deficiency disorders, dementia, age-related macular degeneration (AMD), urinary incontinence and pressure sore.

Ayurveda tie-up the event of aging with *Tridosha Siddhantha*. As per Ayurveda principles, dominant *Dosha* in the body during *Balyavastha* (childhood) is *Kapha*, *Yuvavastha* (youth) is *Pitta* and *Vridhdhavasatha* (old age) is *Vata*. The natural effect of the predominant *Vata* in old age is *Dhatu Kshaya*, characterised by the degeneration and decay of the *Dhatu*s. Thus the phenomenon of aging can be assessed on the basis of the *Tridosha Physiology*. Other features of aging includes loss of integrity of *Srotases* and *Ojo Bala* and weakening of *Agni*. As they age, some people are prone to malnutrition due to

some of the following reasons - *Arochaka* (Anorexia), *Smritinasha* (Dementia), *Manoavasada* (Depression), *Stroke*, *Kampavata* (Parkinson disease) and other neurological disorders, delayed gastric emptying.^[6]

Systemic effects of aging^[7]

It can be clustered into 4 main domains or processes

1. Body composition
2. Balance between energy availability and energy demand
3. Signaling networks that maintain homeostasis
4. Neurodegeneration

Clinical consequences due to changes with ageing^[8]

- **CNS** - increased risk of delirium, presbycusis, presbyopia, cataract, muscle weakness and wasting, reduced position and vibration sense, increased risk of falls.
- **Respiratory system** - reduced vital capacity and peak expiratory flow, increased residual volume, reduced inspiratory reserve volume, reduced arterial oxygen saturation, increased risk of infection.
- **CVS** - reduced exercise tolerance, widened aortic arch on X-ray, widened pulse pressure, increased risk of postural hypotension, increased risk of atrial fibrillation.
- **Endocrine system** - increased risk of impaired glucose tolerance.
- **Renal system** - impaired fluid balance, increased risk of dehydration / overload, impaired drug metabolism and excretion.
- **Gastrointestinal system** - constipation
- **Bones** - increased risk of osteoporosis

Acharya Sharangadhara has narrated decade wise decline conditions, In the 1st decade, *Baalyaavastha* (infancy) will be diminished, in the 2nd decade *Vridhhi* (growth), in the 3rd decade *Chhavi* (complexion), in the 4th decade *Medha* (intellect), in the 5th decade *Twak* (skin), in the 6th decade *Dristi* (vision) and so on.^[9] The effect of ageing is clearly noticeable in the 5th decade

of life when the properties of skin escape. Various Ayurveda classics give detailed classification of *Vaya* based on the degenerative changes in the body.

Vayascheti Kaala Pramana Visheshapekshini Hi | Sareeravastha Vayoabhidhiyate ||^[10]

Classification of Vaya

<i>Charaka</i> ^[11]	<i>Susrutha</i> ^[12]	<i>Vagbhata</i> ^[13]
<i>Bala</i>	<i>Bala</i> upto 16 yrs a) <i>Ksirapa</i> - upto 1 yr b) <i>Kshirannada</i> - 2 yrs c) <i>Annada</i> -2 to 16 yrs	<i>Bala</i> upto 16 yrs a) <i>Stanya</i> b) <i>Ahara</i> c) <i>Ubhaya</i>
<i>Madhyama</i>	<i>Madhya Vaya</i> - 16 to 70 yrs a) <i>Vridhhi</i> b) <i>Yavana</i> c) <i>Sampurna</i> d) <i>Hani</i>	<i>Madhya</i> - 16 to 70 yrs a) <i>Yauvanavastha</i> b) <i>Sampurnatha</i> c) <i>Parihani</i> d) <i>Vridha</i>
<i>Jeerna</i>	<i>Vridhha</i> - 71 to 100 yrs	<i>Vridhha</i> -70 yrs onwards

Health problems of the aged

Classified on the basis of;

- Problems due to the ageing process. Eg. Senile cataract, glaucoma, osteoporosis, failure of special senses.
- Problems associated with long-term illness, Eg. Cancer, diabetes, diseases of locomotor system, genitourinary system etc.
- Psychological problems, Eg. mental changes (impaired memory), sexual adjustment, emotional disorders.

Preventive and Curative Measures for Geriatrics^[14]

"You do not heal old age. You protect it, you promote it, you extend it". These are infact the basic principles

of preventive medicine. Diseases prevention and health maintenance is more important in old age because sickness related morbidity is more frequent, serious, chronic and more expensive to treat in this age group. Geriatric problems are best confronted by preventive measures than curative ones. Therefore geriatrics has to be treated much before the commencement of old age. By adopting a healthier lifestyle in young age, the risk of a whole range of diseases can be reduced. Preventive geriatrics include;

- 1) Periodic assessment of person's vision, hearing, locomotion, cognition, nutrition, psychological status, activities of daily living, instrumental activities of daily living, home environment, living arrangements, social and family support and financial dependence.
- 2) Disseminating messages and practicing positive health practices Eg: physical exercise, healthy diet, no-smoking, vaccinations, periodic checkups and stress management.
- 3) Joint family system, informal support network, social and spiritual enrichment also contributes to healthy happy old age.

Strategies that increase health span and delay aging.^[15]

Different dietary restriction regimes and exercise interventions may improve healthy aging. Many substances and interventions have been claimed to be antiaging. These interventions include (1) caloric restriction and fasting regimens, (2) Some pharmacotherapies (resveratrol, rapamycin, spermidine, metformin) and (3) exercise

Caloric Restriction - One of the most important interventions that delays aging is caloric restriction. Calorie restriction is defined as a reduction in the total caloric intake, usually of about 30% and without malnutrition. Caloric restriction increases healthspan by reducing the risk for diabetes, cardiovascular disease and cancer.

Periodic Fasting

Periodic fasting is psychologically more viable, lacks some of the negative side effects, and is only accompanied by minimal weight loss. Fasting exerts

beneficial effects on healthspan by minimizing the risk of developing age-related diseases including hypertension, neuro degeneration, cancer and cardiovascular diseases. The most effective and rapid repercussion of fasting is reduction in hypertension. Periodic fasting dampens the consequences of many age-related neurodegenerative diseases. Fasting cycles are as effective as chemotherapy against certain tumors.

Exercise and Physical Activity

- Regular exercise reduces the risk of morbidity and mortality.
- Exercise training protects against aging disorders such as cardiovascular diseases, diabetes mellitus and osteoporosis.
- Exercise is the only treatment that can prevent or even reverse sarcopenia (age-related muscle wasting).
- In older people, regular physical activity has been found to increase the duration of independent living.
- Increased physical activity has clear benefits in older adults, improving physical function, muscle strength, mood, sleep and metabolic risk profile.
- Alternate day fasting with exercise is more beneficial for the muscle mass than single treatments alone.

Diet

- Encourage the consumption of fruits and vegetables as they are rich in micronutrients, minerals and fibres.
- Good hydration is essential. Fluid intake should be atleast 1000ml daily.
- Encourage use of fat free and lowfat dairy products, legumes, poultry and lean meats. Encourage consumption of fish atleast once a week.
- Limit consumption of food with high caloric density, high sugar content and high salt content.

- Limit the intake of foods with a high content of saturated fatty acids and cholesterol.
- Limit alcohol consumption.
- Introduce Vit-D fortified foods or Vit-D supplements into the diet.
- Diet should include adequate food related intake of magnesium, Vit-A, Vit-B12.
- Monitor daily protein intake which should be in the range of 1.0-1.2 g/kg of body weight in healthy older person.
- For constipation increase dietary fibre intake to 10-25 g/d and fluid intake to 1500 ml/d

Preventive aspects in Ayurveda

- **Dinacharya** - *Dinacharya* makes one to lead a healthy and disciplined life. *Dinacharya* reduces the stress level to a great extent. It detoxifies and purifies the person's body.
- **Sadvritta** - The growth of a person depends on the right balance between one's mind and body. *Sadvritta* aims at maintaining this balance. Mental health is as important as physical health in elderly persons.
- **Dhyana and Yoga** - These are tactics to consolidate physical, mental, intellectual and spiritual aspects of human personality.
- **Pranayama** - *Pranayama* helps to carry oxygenated blood to various organs and body tissues and to eliminate waste products in form of carbon dioxide.
- **Ritucharya** - Ayurveda admits that seasonal changes have a profound effect on our health. Ayurveda recommends various lifestyles which can be adopted in each season. Adopting proper *Ritucharya* helps to delay the *Jaravastha*.
- **Trayopastambha** - In Ayurveda, *Ahara* (food), *Nidra* (sleep) and *Brahmacarya* (controlled sex) are regarded as the three pillars of healthy living. Timely intake of good quality and hygienic food, regular sleeping habits and controlled indulgence

in sex is very important to establish a long and healthy life.

- **Panchakarma** - The modalities in the elderly should comprise medicated massage, sudation, *Kayaseka*, *Pindasweda*, *Sirodhara* and *Brimhana Basti* suitably planned for each individual.
- **Rasayana** - The main aim of *Rasayana* is to bestow a longer life with renewed strength of all *Dhatus* and *Ojas*. It ensures healthy longevity including mental and physical health and resistance to various geriatric disease conditions. Eg: *Guduchi* act as an immunomodulatory and antioxidant agent. *Ashvagandha* and *Shiljatu* counter act the sequel of stress, *Guggulu* clears the channels. *Brahmi* and *Sankhapuspi* for intellect.
- **Achara Rasayana** - It describes the mode of living, behaviour and conduct like *Sadvritta*. This kind of behaviour and conduct should be followed by everyone who wishes for longevity. So this conduct is imperative to a person who is undergoing *Rasayana Chikitsa*.

Rehabilitation and Physical Therapy^[16]

Rehabilitation refers to a combination of physiatrist, i.e. physical, occupational and speech therapy, psychiatric counselling, social and economic rehabilitation. Rehabilitation is often needed after prolonged bed rest to help regain functional independence and carry out ADL. Rehabilitation includes various exercises, training in ADL (bathing, feeding, toileting and transferring) and IADL (cooking, cleaning, shopping etc.), treatment of pain and inflammation etc.

Palliative/Terminal Care

Palliative care is defined as the active total care of patients whose disease is not responsive to curative treatment. The goal of palliative care is achievement of the best possible quality of life for patients and mental and psychological comfort for the families.^[17] An important component of terminal care is the care of the dying patient. Patient's preferences should

dictate the type of care to be provided in bringing about a satisfying end from patient's point of view.^[18]

Basic principles for palliative care^[19]

1. Affirmation of life.
2. Dying is regarded as a normal process.
3. Hastening or postponing death does not occur.
4. Pain and other symptoms are relieved.
5. Medical, psychological and spiritual aspects of care are integrated.
6. A support system to patients and families is offered.

Medical management at the end of life

It means the treatment intended to sustain, restore or replace vital functions which would serve only to prolong the process of dying and it includes;

1. Life sustaining treatment by surgical operation, or administration of medicine or carrying out any other medical procedure.
2. Use mechanical or artificial means such as ventilation, artificial nutrition and hydration and cardio pulmonary resuscitation.

Aushadi Sevana Kala in Jara^[20]

Sabhaktham (along with food) - for the protection of *Bala* and *Agni* in old age.

Jara Chikitsa

As *Jara* is a *Swabhavika Vyadhi*, the *Chikitsa* mentioned in our classics is most related with *Akalajajara*. "Yada Tu Swabhava Tat Sadaa Nishpratikaara||"^[21] In *Jara*, *Nidana Parivarjana* and *Rasayana Prayoga* are helpful. "Jeerna Apakva Sareeraanam Varthameva Rasayanam||" By this reference it is clear that there is no cure for timely ageing and death. Degenerative process can be slowed down to some extent. So *Rasayana* therapy comes in the ambience of premature ageing and death. *Rasayana* therapy is primarily a promotive and preventive health care modality. *Rasayana* not only prolongs the life but also improve the strength of all the seven *Dhatus* which is followed by the enhanced

function of *Sukra* and *Ojas*. As per *Arunadatta*, even if this treatment do not prolong the life to a staggering length, they certainly modify and strengthen the qualities and functions of the *Dhatus*. The management of *Agni*, *Oja* and *Dosha* is also important in aged people. The drugs which enhances *Bala* is of vital importance during aging. Certain drugs which can be used in old age are,

Amrita and *Amalaki* in immunodeficiency.

Arjuna, *Guggulu* and *Puskarmula* as cardioprotective.

Brahmi, *Vacha* and other *Medhya* drugs in treatment of senile dementias.

Triphala in senile visual disorders.

Kapikacchu in treatment of Parkinsons disease.

Charaka gives a code of action for these conditions by saying "Akriyayat Dhruvo Mrityu Kriyayat Sanshayo Bhavet" (if you don't intervene, one is certain to die, if you intervene however, it may be otherwise).

CONCLUSION

Oldage is a time when people need help in things they effortlessly do by themselves before. It is a time when they need attention and affection. The lessons are often about nurturing, care and compassion. Giving the best possible care and understanding their changing needs should be the goal of caring for the elderly. To look after the elderly requires a lot of patience, empathy and understanding. Taking care of elderly should be considered as a mark of honour to them. Therefore, the better choice is to look after our elderly parents ourselves. One positive effect of this approach is that we can understand their thoughts and views; then our parents will trust and confide in us. This will add to their mental health and strength to have longer life expectancy. Population - Aging and the increasing number of elders in the population is a matter of great concern because of its likely impact on public health and the socioeconomic growth of a nation. The cause of all *Jarajanya Vyadhi* is *Dhatu Kshaya*. So the main line of management is to reduce the *Dhatu Kshaya*. Various therapies i.e. *Rasayana*, *Panchakarma*, lifestyle changes, diet modification etc.

are mentioned in Ayurveda for the promotion of health of elderly. The main focus of Ayurveda in geriatric care dangle around the concept of *Rasayana* therapy which compensates the age-related biological losses in the mind-body system.

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