GERIATRICS: A RAY OF HOPE THROUGH AYURVEDA

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ABSTRACT

As the incidence of elderly people is rising in the population world over including India, it is now felt necessary to develop newer strategies for Geriatric health care. Accordingly Geriatrics is emerging as a major medical specialty globally. Conventional system of medicine has nothing much to offer in the core area of geriatric care except the medical management of the diseases of old age. Ayurveda, the Indian traditional holistic health science has broad spectrum of preventive measures for combating the ageing process. It has a focused branch called Rasayana which deals primarily with geriatric problems. Prevention and management of health problems could help the elderly to improve quality of life and remain self-dependent for their daily activities to maximum possible extent. Hence what all is needed is to retard the rate of aging to a limited extent and to promote healthy aging. There is considerable scope to develop a safe and cost-effective protocol for geriatric care on the basis of Ayurvedic life-style management, Rasayana therapy and practice of yoga.

KEYWORDS: Geriatrics, Ageing, Rasayana, Geriatrics in Ayurveda, Geriatric care.

INTRODUCTION

Ageing is a complex multifactorial and inevitable process, which begins before birth and continues throughout the entire life span. It is essentially a physiological phenomenon which results because of the involutionary changes occurring in the mind-body system. Twenty-first century is witnessing a gradual decline in fertility, and with increase in life expectancy, the society will need to grapple with issues of longevity. The World population of the elderly is increasing and by the year 2050, adults older than 65 years will comprise 1/5th of the global population. In India 3.8% of the population are older than 65 years of age. According to an
estimate the likely number of elderly people in India by 2016 will be around 113 million and that by the year 2050, this would rise to about 324 million.\(^1\)\(^2\) Significant causes of morbidity among the elderly are Degenerative arthritis, Osteoporosis, Alzheimer’s disease, Depression, Parkinsonism, Hypertension, Diabetes Mellitus, Benign Prostate Hypertrophy, Cataract, Macular degeneration etc. and at the same time, they are vulnerable to infections involving respiratory (including TB), urinary and digestive tract. According to the Government of India statistics, cardiovascular disorders account for one third of elderly mortality. Respiratory disorders account for 10% mortality while infections including TB account for another 10%. Neoplasm accounts for 6% and accidents, poisoning and violence constitute less than 4% of elderly mortality with more or less similar rates for nutritional, metabolic, gastrointestinal and genitourinary infections etc.\(^3\)

With the rise in elderly population world over including India, it is now felt necessary to develop newer strategies for Geriatric health care. Geriatric care has to address two-fold problems, firstly the basic anti-aging care to retard the rate of physiological ageing and secondly the medical management of diseases specifically occurring in old age. The conventional modern medicine is apparently strong in terms of the second aspect, although the final outcome may not be as significant. Ayurveda, on the other hand has got the potential for prevention of diseases by promotion of health and management of diseases occurring in old age. It has a focused branch called Rasayana which deals with the problems related to ageing and methods to counter the same. It’s unique therapeutic methodology delays ageing and minimizes the intensity of problems occurring in this degenerative phase of life by restoring physiological processes that influence metabolic and immunological status. Such interventions are significant in the context of geriatric care.

**Physiological Changes of Ageing Described In Ayurveda**

Acharya Sushruta gives an elaborate and systemic classification of age, where he described old age as above 70 years.\(^4\) Acharya Charaka on the other hand mentioned old age above 60 years.\(^5\) As per fundamental principles of Tridosha, Vata is the predominant dosha during old age.\(^6\) It precipitates atrophy and involution of tissues and is responsible for most of the manifestation of ageing. With the advancing age, the depleted agni leads to decrease in the vigor and vitality with decay and atrophy due to defective metabolism. During this period, there is gradual decline of all the dhatu, virya, indriya, ojas, bala and utsaha along with loss of hair, wrinkling of skin, chronic and recurrent cough, shortness of breath, inability to
perform routine activities etc. \cite{7} Ayurveda considers ageing as the Swabhavaja vyadhi i.e. it is inherent nature of the living being to get old. \cite{8} Sarangadhara Samhita presents an interesting scheme of loss of different biological factors during different decades of life as a function of ageing (see table below). \cite{9} This is especially significant because it can provide a guideline for selection of age-specific organ-protective Rasayana to retard aging.

<table>
<thead>
<tr>
<th>DECADES</th>
<th>AGE RELATED LOSS OF BIOLOGICAL FACTORS</th>
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<tr>
<td>0-10</td>
<td>Loss of Childhood</td>
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<td>11-20</td>
<td>Loss of Growth</td>
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<td>21-30</td>
<td>Loss of Complexion</td>
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<td>31-40</td>
<td>Loss of Intellect</td>
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<td>Loss of Skin texture</td>
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<td>51-60</td>
<td>Loss of Vision</td>
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<td>Loss of Virility</td>
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<td>71-80</td>
<td>Loss of Strength</td>
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<td>81-90</td>
<td>Loss of Cognitive power</td>
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<tr>
<td>91-100</td>
<td>Loss of Locomotive ability</td>
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Screening For Health Issues in Geriatrics \cite{10}

1. Bone mineral density (BMD) at least once after the age of 65 years, followed by once in every 2–3 years.
2. Blood pressure at least once a year, regular monitoring in patients with hypertension.
3. Serum glucose and hemoglobin A1C every 3 years, more often in patients who are obese or hypertensive.
4. Lipid profile every 5 years, more often in patients who are diabetics or any cardiovascular disease.
5. Stool occult blood test, sigmoidoscopy or colonoscopy, regularly up to age of 75 years.
6. Mammography every 2 years between ages 50 and 74 years.
7. Pap smear every 3 years up to age of 65 years.

Rasayana: Boon for Geriatric Care

Rasayana especially deals with the science of nutrition, geriatric care and rejuvenation. It stands as an answer to problem of healthful longevity. It refers to a specialized regimen which includes rejuvenative remedies or drugs, dietetics, overall healthy life-style and positive psychosocial conduct. It influences the fundamental aspects of the body viz. dhatu, agni and srotas thereby enriches the nutritional value of the circulating plasma, improves the digestion, absorption and metabolism and enhances the micro-circulation and tissue perfusion.\cite{11} As a result, rich, good and healthy tissues develop in the body and a person gets
longevity, immunity, vitality, happiness and improved intellect etc. Rasayana drugs are likely to be nutrient tonics, antioxidants, anti-stress, adaptogenic and immuno-modulators. The net effect of all these attributes is the anti-aging effect. Certain recent studies on popular rasayana remedies like Aamalki, Aswagandha, Guduchi, Brahmi and Chyavanprasha have shown evidence to suggest their efficacy as anti-aging remedies.\(^1\) Some Rasayana are also disease-specific as they induce specific immune and bio-strength to combat a particular disease. Such Rasayana are called Naimittika rasayana like Shilajatu for diabetes mellitus and Tuvaraka for skin diseases and leprosy.\(^2\) Some Rasayana are also age-specific and can be prescribed for particular age group. During the process of ageing an individual loses the age-related bio-qualities and if this loss is compensated by age specific rasayana in specific age group, the rate of aging can be retarded to some extent and one can promote longevity. Special rasayana measure namely Achara rasayana\(^3\) is a non-pharmacological approach to acquire the rasayana effect by rejuvenating life-style. It broadly includes improved personal and social behaviour and sattvika aahara leading in turn to positive health and longevity. Another entity, Ajasrika rasayana\(^4\) refers to continued consumption of nutritious diet such as milk, ghrita etc. in order to maintain optimum nutrition by way of direct nourishment. Rasayana therapy becomes more fruitful and effective if it is preceded with suitable panchakarma (bio-purificatory therapy). Emphasis has been put on the use of rasayana in early age to have maximum of anti-ageing effect.\(^5\) Ayurvedic texts describe a large number of rasayana drugs both herbs and minerals to be used singly or as compounds. Popular single rasayana herbs are Ashwagandha, Shatavari, Brahmi, Mandukaparni, Shankhpushpi, Madhuyasti, Guduchi, Aamalki, Pippali, Haritaki, Bhallataka while popular compound formulations are Chyavanprasha, Brahma rasayana, Aamaki rasayana, Vasantkusumakar rasa, Purnachandrodaya rasa, Siddha makardhwaja, Makardhwaja, Navjeevan rasa, Brihat vangeshwara rasa, Shilajitvadi vati, Ashwagandhadi lehya, Saraswatarista, Ashwagandharista. Thus, Rasayana therapy of Ayurveda is a comprehensive discipline having a multidimensional approach to provide physical, social and psychological support. It promotes preventive strategies and maintenance of good quality of life. The age related disabilities can be delayed or treated with this therapy and thus can make elderly healthier and happier.

**Panchakarma Therapy: A Rehabilitative Geriatric Care**

Panchkarma is a radical approach of Ayurveda designed to cleanse the micro-channels of the body, thus enabling better nutritional status with rejuvenative activity. It is beneficial for
preventive, promotive and rehabilitative health purposes and management of various systemic diseases. In geriatric care, selective panchkarma therapy like Abhyanga (medicated massage), Sarvanga dhara (Kayaseka), Nadi Sweda, Pinda sweda, Shirodhara, Bringlyhna vasti, Matra vasti etc. may be advised to counter the degenerative processes, thereby improving the quality of life. Besides the rejuvenative approaches of Rasayana and Panchakarma therapies, Ayurveda has notable potential to afford significant complementary therapeutic care in a range of diseases of the elderly through various Ayurvedic formulations along with dietary and life style guidelines.

**Ayurvedic Management of Predominant Geriatric Ailments**

**Indigestion**
Lack of proper digestion (dyspepsia) in elderly people occurs due to diminished secretion of digestive enzymes, decrease in saliva production, slowing of gastric emptying and impaired chewing due to loss of teeth. It presents as belching or flatulence, nausea, regurgitation, pain in upper abdomen and heaviness in body. For proper digestion, elderly should consume light and easily digestible food, practice vajrasana after meals regularly and avoid excess tea, coffee, smoking, heavy, oily and spicy food items. Deepana and Pachana by various herbal formulations like Hingwastak churna, Ajmodadi churna, Lavanbhaskar churna, Shivakshara pachana churna, Hingwadi vati, Shankha vati, Gandhak vati, Chitrakadi vati, Agnitundi vati, Kumaryasava, Jeerakadyarista are highly effective in treating indigestion.

**Acid Peptic Disease**
It is one of the common diseases of GIT in elderly. It is described in Ayurveda in terms of Amlapitta and Parinamashula. Acid peptic disease show high degree of response with herbal medicines like Sutashekhara rasa, Kamdudha rasa, Lilavilas rasa, Swarna sutashekhara rasa, Shankha bhasma, Kapardika bhasma, Mukta pisti, Praval panchamrita, Madhuyasti churna, Aamalki churna, Shatavari churna, Avipattikar churna, Dhatri louha and Drakshavleha. Most of these drugs possess anti-secretory, mucoprotective or antacid activity. Medhya drugs may also be used to take care of anxiety associated with this disease. Milk is considered a good therapeutic diet for these patients.

**Constipation**
Constipation is a general term used to indicate fewer bowel movements, hard stools, painful defaecation and feeling of bloating, abdominal discomfort or incomplete evacuation. Constipation is similar to Vibandha described in Ayurveda. Elderly people are more likely to
suffer from constipation due to changes in diet with insufficient fibre and fluid intake, medication and/ or decreased mobility and intestinal motility. Few simple measures like consumption of light and easily digestible high fibre diet that emphasise fruits, green leafy and other vegetables, drinking plenty of fluids, water and regular exercise helps in preventing constipation. Isabgol, Triphala churna, Haritaki churna, Avipattikar churna, Panchsakar churna, Abhyarista, Kumaryasava, Eranda taila, Eranda paka are the medicines used to relieve constipation.

Respiratory Disorders
The common changes in the physiology of lungs and bronchi in elderly include reduction in lungs volume, fall in static elastic recoil of lungs, increase in functional residual capacity, reduced ventilatory responses to hypoxia and hyperpnea, decreased lung defences, progressive impairment in cough reflex, reduced mucociliary clearance. These changes facilitate various respiratory diseases like recurrent respiratory infections, chronic obstructive airway disease (COAD) viz. chronic bronchitis, emphysema, bronchial asthma and pulmonary tuberculosis. Swarnavasantmalti rasa, Shringa bhasma, Sitopladi churna and Chyavanprasha are some of the medicines frequently used to improve lung defence mechanisms, thereby providing resistance against respiratory infections and tuberculosis. Other important medicines used to treat COAD and other respiratory illness are Swasakuthara rasa, Swasakasachintamani rasa, Shringrabhra rasa, Chandramrita rasa, Kaphaketu rasa, Abhraka bhasma, Talisadi churna, Shringyadi churna, Pushkarmula churna, Chaushata prahari pippali, Gojihwadi kwatha, Bharangyadi kwatha, Somlata phanta, Kankasava, Somasava, Vasarista, Vasavleha, Kantkaryavleha, Vyaghri haritaki, Vasa ghrita, Kantakari ghrita, Lavangadi vati, Eladi gutika, Marichyadi vati. These formulations may act as mucolytic, expectorant, bronchodilator and immunomodulator. In respiratory illness of allergic origin, Shirishadi kwatha and Haridra khanda are found to be effective. Avipatikara churna or Haritaki churna may also be prescribed to prevent constipation. Home remedies like Tulasi, Ardraka, Haridra, Maricha, Shunthi, Lavanga, Madhuyasti are also effective in respiratory problems. External snehana with Sarsapa taila (mixed with saindhava lavana) on chest followed by hot fomentation act as expectorant and relieves breathlessness. Studies have shown reduction in both intensity and number of attacks after Samsodhana (Vamana and Virechana), so they may be advised in well-built elderly with kapha predominance. Smoking, exposure of dust, cold and humid atmosphere, fumes, pollutants, chilled water, curd and curd preparations etc. should be avoided. Practice of pranayama and drinking lukewarm water are also beneficial.
Hypertension

Hypertension is a medical condition in which systolic blood pressure is consistently 140 mm Hg or higher, and/or their diastolic blood pressure is consistently 90 mm Hg or higher. In the elderly, systolic blood pressure becomes a stronger predictor of risk of developing cardiovascular events. Hypertension is dangerous because it makes the heart work harder to pump blood to the body and it contributes to hardening of the arteries or atherosclerosis. Hypertension should be properly managed otherwise it may lead to cerebrovascular accidents, myocardial infarction, cardiomyopathy (heart failure), retinopathy and nephropathy. Shirodhara (Brahmi taila, medicated milk) and Takradhara are found to be effective in hypertension in various research studies.[22] Medicines like Sarpagandha churna, Arjuna churna, Sarpagandhaghan vati, Brahmi vati, Punarnava mandoora, Mansyadi kwatha, Arjuna ksheerapaka, Arjunarista are frequently prescribed in hypertension. Lifestyles changes like avoidance of excess salt and fat in diet, practice regular physical exercise or brisk walking, yogasana, pranayama and meditation will also help in reducing high blood pressure.

Ischemic Heart Disease

With the increasing age, due to atherosclerosis of coronary arteries, there is reduced blood supply to myocardium leading to ischemic heart disease. It is now proven that lowering blood pressure and serum cholesterol along with certain lifestyle changes like cessation of smoking, regular exercise will reduce the risk of IHD. Pushkarbrahmi guggulu, Prabhakar vati, Nagarjunabhra rasa, Hridayarnava rasa, Arjuna ksheerapaka, Arjunarista are clinically important drugs in managing IHD. Yogendra rasa, Mrigshringa bhasma will help in alleviating chest pain (angina). Rasona ksheerapaka should also be given to inhibit platelet aggregation.[23] Sarpagandha ghan vati may be prescribed if hypertension is associated. Brahmi, Ashwagandha, Jatamansi are used to combat emotional stress and anxiety.

Cerebro-Vascular Accident/ Hemiplegia

Hemiplegia is the commonest manifestation of CVA (stroke) with neurological deficit affecting the face, limbs and trunk on one side or either side of the body. Damage to the pyramidal tracts due to any lesion, trauma, ischemia or haemorrhage produces paralysis. According to Ayurveda, when vata gets aggravated, it dries up the srotas and snayu (tendons) of one side of the body, makes the organ/ parts of that side incapable of functioning and loss of sensation.[24] Panchkarma therapy is highly beneficial in hemiplegic patients which include Snehana (Narayan taila, Mahamas taila, Dhanwantar taila, Ksheerabala taila), Swedana
(Shastik shali pinda/ Patra pottali pinda), Virechana (Eranda taila, Abhyadi modaka), Niruha vasti (Dashmula kwatha), Anuvasana/ Matra vasti (Narayan taila, Bala taila), Nasya (Mahamasa taila, Ksheerabala taila), Shirovasti/ Shirodhara (Ksheerabala taila, Narayan Taila). All therapeutic measures may be started after acute phase of attack is over. Among neurotropic agents, Rasraj rasa, Brihatvatchintamani rasa, Yogendra rasa, Ekangveer rasa, Swarna Sameerpunnaga rasa, Vatavidhwansan rasa, Vatakulantaka rasa, Ashwagandha churna, Bala churna, Brahmi vati, Vatari guggulu, Mahayograj guggulu, Dashmula kwatha, Mashabaladi kwatha, Ashwagandharista, Balarista, Rasona ksheerapaka, Ashwagandha ksheerapaka are clinically useful. Physiotherapy of the affected part should also be done along with anuloma-viloma pranayama, yoga nidra and meditation. Also limit salt intake and fat in diet.

**Parkinsonism**

It is a common extra-pyramidal disorder affecting the older people. Its classical features include resting tremor, bradykinesia, rigidity, shuffling gait, flexed posture, monotonous speech. The disease has insidious onset and is slowly progressive leading to severe morbidity. It is caused by vitiated vata as per ayurvedic principles, so pacification of vata will be the ideal treatment along with bringhana chikitsa. Vata pacifying measures like Abyanga (Mahamasha taila, Dhanwantar taila, Sahcharadi taila, Narayan taila) Swedana (patra pottli pinda), Matra basti (Narayan taila, Dhanwantar taila), Nasya (Mahamasha taila, Ksheerabala taial), Shirodhara and Shirobasti (Ksheerabala taila, Brahmi taila) are effective in the management of Parkinsonism. Medicines include Kapikacchu churna, Ashwagandha churna, Brahmi vati, Krauncha paka, Vanari kalpa, Chaturbhuja rasa, Purnachandra rasa, Siddha makardhwaj, Dashmula kwatha, Ashwagandharista, Balarista, Brahma Rasayana, Brahmi ghrita. Kapikacchu seeds are rich in levodopa and have potent anti-parkinsonism effect. Yoga and Meditation also improves the overall condition.

**Senile Dementia & Alzheimer’s Disease**

Dementia is characterized by progressive impaired cognitive function affecting an individual's ability to maintain normal social or occupational function. In dementia, higher mental functions are affected first in the process. In later stages, affected persons may be disoriented in time, place and person. Alzheimer’s disease is the leading cause of dementia. Certain recent scientific studies have revealed that Medhya Rasayana like Brahmi (B. monniera), Mandukaparni (C. asiatica) and Ashwagandha (W.somnifera) could prove to be a
potential source for developing a new class of neuronutrients with cognition and memory enhancing and neuro-regenerative effect.\textsuperscript{[26]} Brahmi is now established as a memory enhancer and has therapeutic role in the management of senile dementia.\textsuperscript{[26]} Snehapana (Brahmi ghrita, Kalyanaka ghrita), Nasya (Purana ghrita), Shiroabhyanga/ Shirobasti/ Shirodharana (Brahmi taila) and medicines like Brahmi churna, Mandukaparni Swarasa, Shankhpuspi kalka or syrup, Brahmi vati, Manasmitra vataka, Smritisagar rasa, Krishna chaturmukha rasa, Saraswatarista, Ashwagandharista will help in improving the cognitive impairment in elderly. Trataka, Shavasana, Anuloma-viloma and Kapalbhati pranayama will also be helpful.

**Depression**

Depression is a common psychological disorder characterized by sadness, loss of interest, pleasure, feeling of guilt or low self-worth, disturbed sleep, poor appetite, low energy and poor concentration. It is a common mood disorder in elderly. Difficult situations like death of spouse or chronic medical problems can lead to depression. As per WHO, Depression is expected to be the second frequent cause of morbidity world over by 2020.\textsuperscript{[27]} Vajikarana medicines like Ashwagandha help in elevating the mood of depressed patients and are very effective in the management of depressive illness.\textsuperscript{[28]} Snehapana (Kalyanaka ghrita, Brahmi ghrita), Shirodharana (Narayana taila, Brahmi taila), Takradhara (with vacha, jatamansi, mustaka, aamalki) along with medicines like Ashwagandha churna, Kapikacchu churna, Vacha churna, Manasmitra vataka, Brahmi vati, Smritisagar rasa, Vatakulantaka rasa, Krauncha paka, Mansyadi kwatha, Tagaradi kwatha, Ashwagandharista, Saraswatarista are found to be beneficial in treating depression. Bowel should be made clear by Eranda taila or Haritaki churna. Surya namaskara, Anuloma-viloma and Kapalbhati pranayama along with meditation should also be practiced to elevate depressive mood.

**Insomnia**

Insomnia is inadequate or poor quality of sleep because of difficulty in falling asleep or maintaining sleep or waking too early in the morning. It is the most common sleep disorder in elderly. Chronic Insomnia can lead to severe fatigue, anxiety, depression and lack of concentration. Ayurveda classified it under Vatananatmaja vikara as Nidranasha.\textsuperscript{[29]} Lifestyle changes like use of madhura rasa aahara, warm bath and brisk walking in evening, warm buffalo milk before bed time,\textsuperscript{[30]} meditation, shavasana, yoga nidra, shiroabhyanga and padabhyanga (massage of scalp and plantar region) are beneficial in inducing normal sleep. Shirodharana/ Shiropicchu (Brahmi taila, Himsagar taila, Ksheerabala taila) and Takradhara...
along with medicines like Smritisagar rasa, Brahmi churna, Ashwagandha churna, Sarpagandha churna, Brahmi vati, Sarpagandha vati, Manasmitra vataka, Mansyadi kwatha, Tagaradi kwatha, Brahmi ghrita, Panchgavya ghrita, Syrup Shankhpushpi, Saraswatarista have profound effect in improving the quality of sleep.

**Osteoarthritis and Osteoporosis**

Degenerative changes of joints and bones are most common in elderly. It leads to various clinical ailments like osteoarthritis of various joints, cervical and lumbar spondylosis and osteoporosis. Osteoarthritis is the single most important cause of locomotor disability in elderly. It is a degenerative disease of synovial joints characterized by localized loss of cartilage, subchondral bone thickening (sclerosis), osteophyte formation and synovial thickening. It commonly affects the weight bearing joints. It closely resembles with Sandhigata vata in Ayurveda in which vitiated vata afflicts the joints, leading to painful swelling and destruction of the joints.[31] Abhyanga (Mahanarayana taila, Panchguna taila, Prasarini taila, Visagarbha taila), and Swedana (Nadi sweda, Patra pottali pinda sweda, upanaha sweda) reduce the joint pain and inflammation and provide strength to the joints. Janu, Greeva and Kati basti are also used as per the involved joints with encouraging response. Shallaki[32] (Boswellia serrata) and Guggulu[33] (Commiphora mukul) have shown improvement in the patients of osteoarthritis. Guggulu is a proven anti-inflammatory agent[34] and its preparations like Trayodashang guggulu, Yograj guggulu, Panchamrit lauha guggulu, Mahayograj guggulu are extensively used with good clinical response along with various herbo-mineral formulations like Vatavidhwansan rasa, Vatagajankusa rasa, Brihat vatachintamani rasa. Other herbal preparations like Dashmula kwatha, Maharasna kwatha, Nirgundi patra kwatha, Ashwagandha churna, Madhuyasti churna, Shunthi churna reduce the disabling effects of the disease. Regular gentle massage with medicated oils, adequate rest to joints, weight reduction, avoiding prolonged walking, standing, kneeling and squatting and crossed leg sitting and providing local support by crepe bandage, knee caps or anklets while walking will prevent the aggravation of pain and stiffness of joints.

Osteoporosis is a systemic skeletal disease characterized by low bone mass and micro architectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture. It is often under-diagnosed and responsible for substantial morbidity. It is most common in women after menopause. Fractures of bone in hip, spine, wrist joints and ribs are the most common complications of osteoporosis. Osteoporosis can be
correlated with asthi dhatu kshaya in Ayurveda. Life style modifications like use of tila (sesame seeds), milk, milk products, banana and other dietary items rich in calcium, walking, swimming, weight reduction, slow and gentle exercises, regular massage of joints with medicated oils and exposure to sunlight will help in preventing osteoporosis. Snehana (Mahanarayana taila, Bala taila, Mahamasha taila), Swedana(Shastik shali pinda sweda, upanaha sweda) and Tiktadi ksheera vasti (panchtkta sidha milk, guggulutikta ghrita, madhu, saindhava lavana, shatpushpa kalka) along with medicines like Laxadi guggulu, Aabha guggulu, Mahayograj guggulu, Trayodashang guggulu, Praval panchamrita, Mukta pisti, Praval pisti, Muktashukti bhasma, Asthishrankhla churna, Shatavari churna, Ashwagandha churna, Aamalki churna, Guggulutikta ghrita, Panchatikta ghrita increase the strength of bones and improve the joint functions.

Diabetes Mellitus

It is a clinical syndrome characterised by hyperglycaemia due to relative or absolute deficiency of insulin secretion or action. All ayurvedic texts describe the aetiopathogenesis, symptomatology, complications, prognosis and management of Diabetes Mellitus vis-à-vis Madhumeha in detail. Chronic hyperglycaemia is associated with significant long term sequelae particularly damage or dysfunction of various organs especially the kidneys, eyes, nerves, heart and blood vessels. It is the single most important metabolic disease that affects nearly every organ/ system in the body. In India, about 10% elderly people aged 65 or more have diabetes mellitus. The presentation of symptoms in elderly patients with diabetes may be significantly different from the classical triad and may present with fatigue, anorexia, failure to thrive, difficulty in concentration and urinary incontinence. Ayurveda considers diabetes as incurable condition and prescribe remedies to control the metabolic state. In Ayurveda most of the drugs indicated in diabetes mellitus may act on beta cell of pancreas thus improve insulin production/ increase the insulin sensitivity. The common single drugs (in churna form) prescribed are vijayasara, meshashringi, mammajak, tejapatra, methika, karela, nimba, haridra, jambubija, aamalki, bilvapatra, bimbi. Shilajatu is the best Naimittika rasayana to be used regularly to restore ojas. Formulations include Chandraprabha vati, Shiva gutika, Mammajaka ghan vati, Triphala churna, Nyagrodhadi churna, Phalatrikadi kwatha, Vijaysaar kwatha, Vasantkusumakar rasa, Trivanga bhasma. Dashmula kwatha or ghan vati, Shilajitvadi vati and Ksheerabala taila (for abhyanga) are effective in diabetic neuropathy. Saptamrita lauha and Mahatriphala ghrita are found to be effective in retinopathy cases. As per Ayurveda, Yava (barley) is considered the best cereal for diabetics along with wheat,
mudga (green gram) and roasted black gram. Low calorie diet with exercise, yogasana and active lifestyle is beneficial.

**Benign Prostatic Hypertrophy**

Benign prostatic enlargement occurs most often in men over the age of 60 years. Enlargement of the gland stretches and distorts the urethra, obstructing bladder outflow. Frequency of urination, usually first noted as nocturia, is a common early symptom. Difficulty or delay in initiating urination, and reduced forcefulness of the urinary stream and post-void dribbling, are often present. Acute retention of urine may occur. BPH resembles with the clinical features of Asthila described in Ayurveda. As vitiated vata dosha leads to prostatic enlargement as per ayurveda, so vata pacifying measures like Avagaha sweda (Dashmula kwatha, Panchvallaka kwatha) and Vasti viz. Niroha vasti (Dashmula kwatha), Anuvasana vasti (Narayan taila), Uttar vasti (Varunadi ghrita) show good response in relieving the symptoms of BPH. Important medicines used clinically for BPH are Gokshuradi guggulu, Kanchnar guggulu, Shilajitvadi vati, Chandraprabha vati, Vridhdhavdhika vati, Varuna shigru kwatha, Punarnavasava, Haritaki churna. These drugs are claimed to decongest the prostate, promote bladder tone, act as urinary antiseptic and improve the urodynamics. So, these drugs should be used in mild to moderate BPH where post-voidal residual urine volume and uroflowmetry do not demand surgical intervention. Practice kegel exercise (simply tighten and relax the pubo-coccygeus muscles for 3 seconds about 20-30 times a day for strengthening the pelvic floor) and avoid drinking large amounts of fluid at one time and especially at night.

**Menopausal Syndrome**

Menopause is a natural female hormone deficient state that occurs at the age of 45-55 years. It is a normal phenomenon of ageing. Post-menopausal women mostly present with clinical manifestation of oestrogen deprivation such as irregular periods, hot flushes, night sweats, vaginal dryness and itching, mood swings, stress incontinence, loss of sexual desire with increased risk of osteoporosis and cardiovascular diseases. Life-style measures like consumption of soya, sprouts, nuts, fresh seasonal fruits, milk, diet rich in calcium and antioxidants, regular medicated oil massage and exposure to mild sun light, regular exercises, yoga and meditation will help to cope up with these physiological changes. Herbs containing phytoestrogens like Shatavari, Ashoka, Madhuyasthi, Ashwagandha, Ghritakumari, Vidari, Soya, Tila, Flaxseeds, Methika, Rasona are used for symptomatic improvement. These
phytoestrogens bind to estrogen receptors, thus producing estrogenic effects and help in alleviating symptoms of menopausal syndrome.\(^{[40]}\) Ayurvedic formulations like Shatavari churna, Aamalki churna, Kukkutanetwak bhasma, Trivanga bhasma, Mukta pisti, Praval panchamrita, Dashmula kwatha, Ashokarista, Ashwagandharista, Shatavari guda, Chandraprabha vati, Brahmi vati are also used as per the condition. Uttara vasti may be used in cases who do not respond to medical treatment alone.

**Urinary Incontinence**

Urine stress incontinence is one of the most prevalent conditions in elderly women. It is a condition where urine leaks with rise in intra-abdominal pressure in the absence of detrusor activity. Increased intra-abdominal pressure due to obesity, chronic cough, constipation, vaginal injury during child birth, loss of muscle tone due to ageing, estrogen deficiency may lead to incontinence. Pelvic floor exercise (tighten and relax the pubo-cocygeus muscles for 3 seconds about 20-30 times a day) should be advised for strengthening the pelvic floor. Also, advise to practice and stop urinating mid stream for a couple of moments and then resume urinating again to strengthen the sphincter muscles. Medicines like Chandraprabha vati, Shilajitvadi vati, Vishtinduka vati, Brihat vangeswara rasa, Nagkesar churna, Aamaki swarasa are also used to improve incontinence.

**Dietetics for Geriatric Care**

Elderly people have different nutritional requirements compared to normal adults. With increasing age, people become more vulnerable to malnutrition for many reasons. So, diet containing cereals, legumes, vegetables and fruits should be preferably given to the elderly. Liquid intake should be more frequent and in small amount. Calcium intake is necessary to prevent bone mineral loss in elderly, so diet containing dairy products, fish, legumes, nuts, eggs, etc. should be given. Avoid too much salt, fat and heavy protein in diet. Meals should be light, freshly prepared, easily digestible and nourishing. Along with nutritious diet, regular exercise, yoga, meditation, prayer, motivational reading etc. should also be included in daily routine. Thus, Ayurveda presents with a comprehensive and holistic approach towards management of most of the problems prevalent in the elderly through its pharmacological and non-pharmacological measures.

**CONCLUSION**

Increased life expectancy, rapid urbanization and lifestyle changes have led to an emergence of varied problems for the elderly in India. So, Geriatric health care must be made a part of
the primary health care services. It must be remembered that complete health care to the elderly is possible only by comprehensive and multidisciplinary approach. It is obvious that the process of ageing was elaborately described in Ayurvedic texts and a separate medical discipline called Rasayana Tantra was developed which described a variety of methods and measures to promote healthy longevity. Undoubtedly, it is the strength of Ayurveda in the context of Geriatric care. Government of India has also launched a national campaign to popularize the strength of Ayurveda and Yoga in geriatric health care. Thus, there is a need to create awareness among the masses about the strength of Ayurveda in Geriatric health care. It is the demand of the hour to develop an effective holistic protocol for geriatric care by combining Rasayana, Panchkarma, dietetics, Ayurvedic medicines and lifestyle and Yoga.

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