

Role of *Ayurveda Basthi Karma* (Enema) As A Geriatric Health Promotive Treatment (A Preliminary Review)

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ROLE OF *AYURVEDA BASTHI KARMA* (ENEMA) AS A GERIATRIC HEALTH PROMOTIVE TREATMENT (A PRELIMINARY REVIEW)

Abstract: Aging is a physiological phenomenon associated with the gradual decline of multisystem function at the cellular level. Musculoskeletal and neurological disorders are the most common conditions among the geriatric age group due to degenerative changes. According to *Ayurveda*, *Vata dosha* is the most prominent dosha in old age, and vitiation of *Vata* is the main causative factor for most disorders in the geriatric age. *Ayurveda* emphasizes a set of five therapies, probably for detoxification, purification, and rejuvenation purposes, known as *Panchakarma*. Among all five unique therapies, *Basti karma* (enema) is the most effective treatment for pacifying the vitiated *Vata dosha* (principle of movements). *Basti karma* means the medicated oil or herbal decoction is administered through the anal route. According to world statistics, by the year 2030, one in six people in the world will be aged 60 years or older; thereby, most people in old age should have access to better health care to maintain their physical, mental, and spiritual well-being. Hence, this study aimed to find the effect of *Basti karma* (enema) on managing common geriatric disorders through literature sources. According to the conclusions of the review, it is emphasized that *Basti* treatment acts more effectively in the management of a range of geriatric disorders through a balancing of specific *doshas*, and further, due to the broader therapeutic actions of *Basti* treatment, it acts as a rejuvenative, curative, and preventive therapy to improve the quality of life of the geriatric population.

Keywords: *Basti karma*, Geriatrics, *Ayurveda*, *Panchakarma*, *Vata dosha*

Introduction

Aging is a natural phenomenon and results from the impact of the accumulation of a wide variety of molecular and cellular damage over time at the biological level. This leads to a gradual decrease in physical and mental capacity, an increased risk of diseases, and ultimately death. Aging has two main components, Chronological Aging, and Physiological/Biological aging. Chronological aging which refers to the actual age of the person in terms of years, months, and days. This component of aging is unstoppable, unchangeable, and irreversible. Physiological/Biological aging is the second component and refers to an individual's development and changes based on certain cellular or molecular parameters (Rao, 2018).

WHO defines healthy aging as the process of developing and maintaining the functional ability that enables well-being in the geriatric population. The aging of the world's population has profound implications for medical care and healthcare systems (WHO). Aging is a complex phenomenon generally defined by gerontologists as a process that results in an age-related increase in death rate or failure rate. Biologists define aging as the sum total of all changes that occur in a living organism with the passage of time and lead to a decreasing ability to survive stress, functional impairment, and death (Datta *et al.*, 2011).

There are more structural and functional changes at the cellular level, tissue level, and organ level in geriatric age. The biochemical composition of cells and tissues undergoes changes with age, physiological capacity and the ability to maintain homeostasis may reduce with age, thereby person becomes more susceptible to diseases (Shruthi & Rajashekhar, 2018). Aging is the major factor for various age-related diseases, and it causes a significant burden on social, economic, and health stability. The most common aging-related diseases include neurodegenerative diseases, cancers, cardiovascular diseases, and metabolic diseases. Alzheimer's disease is the most common neurodegenerative disease in the world. The immune

system also undergoes noticeable aging-related changes, which could cause an increase in the risk of infections and autoimmune diseases. Also, the elderly population is more prone to injuries and musculoskeletal disorders due to degenerative changes. Osteoarthritis is the most common aging-related musculoskeletal disorder among the geriatric population (Grote *et al.*, 2019). According to world statistics, the number and proportion of people aged 60 years and older in the population is increasing. In 2019, the number of people aged 60 years and older was 1 billion. This number will increase to 1.4 billion by 2030 and 2.1 billion by 2050 (WHO, 2018). The 2012 "Sri Lanka Population and Housing Census" shows that among the total population of 20,359,439, the elderly (60 years and older) accounted for 12.4% (population aging rate) (Ministry of Health, 2021). This increase is occurring at an unprecedented pace and will accelerate in the coming decades, particularly in developing countries. All sectors should have a proper adaptation to face this significant change in society. For example, health and social care, transportation, housing, and urban planning. Working to make the world more age-friendly is an essential and important part (WHO).

Ayurveda means Science of Life and is one of the oldest medicinal systems with a holistic approach. *Ayurveda* emphasizes various concepts of the aging process. This system of medicine includes various theories and therapies for maintaining proper health in the elderly age. (Sharma, 1977). According to *Ayurveda Vata dosha* is the most prominent dosha in old age and vitiation of *Vata* is the main causative factor for most disorders in the geriatric age. *Ayurveda* emphasizes a set of five therapies probably for detoxification, purification, and rejuvenation purposes, known as *Panchakarma*. Including *Vamana* (Emesis), *Virechana* (Purgation), *Nasya* (instillation of medicine through nostrils), *Basti* (enema), and *Rakta mokshana* (Bloodletting). Among all five unique therapies, Basti karma (enema) is the most effective treatment for pacifying the vitiated *Vata dosha* (Principle of movements). *Basti karma* means the medicated oil or herbal decoction is administered through the anal route. According to the World Health Organization, by the year 2030, one in six people in the world will be aged 60 years or over, thereby most people in old age should have access to better health care to maintain their physical, mental, and spiritual well-being. Hence this study aimed to find the effect of *Basti karma* (enema) on managing common geriatric disorders and to maintain the quality of life of geriatric individuals.

Methodology

Data for the study were gathered through relevant authentic texts as well as scientific journal articles. Authentic texts that were used for the study were prominent texts used in *Ayurveda* medicine and Sri Lankan indigenous medicine including *Charaka Samhita Bhavaprakasha Nighantu* and *Ayurveda pharmacopeia*.

A comprehensive search of the literature was conducted through PubMed, Science Direct, Google Scholar, and Scopus databases. The medical headings and keywords used for the search include "*Basti karma*," "Geriatric disorders," and "Panchakarma therapy. From a total of 165 results, 27 were excluded because of duplication and irrelevant Results. Finally, 138 articles were included in the present review, and data assessment was guided by the PRISMA checklist.

Findings

Ayurveda perspective of aging

Ayurveda is the science of enhancing the quality and longevity of life. *Ayurveda* emphasize that the human body consists of *Tridosha* (*Vata*, *pitta* and *kapha*), *Saptadhatu* (*Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja* and *Sukra*), and *Trimala* (*Purisha Mutra*, *Sweda*). According to *Ayurveda* classics lifespan was classified into three stages as *Baala avastha*(Childhood)), *Madhyaavastha*(Adult age) and *Vridhdha avastha* (old age). *Vridhdha* which means increasing age *Ayurveda* literature considers *Vridhdha avastha* of life as the stage in which *Dhatus* (*Body tissues*) get degenerated (Kanungo *et al.*, 2020). According to *Ayurveda*, aging is known as *Jara*, which means becoming old by the act of degeneration of body tissues and organs. There are many important theories described in *Ayurveda* and *Tridosha* theory is known as one of the special theories. *Tridosha* defines the three fundamental energies or principles which govern the function of human bodies on the physical and emotional levels. The three energies are known as *Vata*, *Pitta*, and *Kapha*. Each individual has a unique balance of all three of these energies (Halpern, 2010).

In *Ayurveda*, the phenomenon of ageing is also related to principle of *Tridosha*. The *Tridosha* (*Vata*, *Pitta* and *Kapha*) is the most important factor in maintenance of proper health and causation of diseases. Predominance of *doshas* varies as per age, day or night period and after taking meals. Among *Tridosha*, *Vata* is the most important factor to be considered in old age, (Singh and Saroj, 2020).

Importance of Basthi karma on geriatric age

Ayurveda emphasizes a unique set of five therapies probably for detoxification, purification, and rejuvenation purposes, known as *Panchakarma*. Including *Vamana* (Emesis), *Virechana* (Purgation), *Nasya* (instillation of medicine through nostrils), *Basti* (enema) and *Rakta mokshana* (Bloodletting) (Sharma, 2014). Any one of the five therapies can be used as a single therapy or in combination to prevent or cure a disease. One such therapy is *Basti Karma* (Medicated Enema), is advocated to be administered in diseases of *Vata Dosha* predominance. *Basti* is defined by Acharya Charaka as, the treatment where the drugs administered through the anal canal reach up to the *Pakvashaya* (rectum and Colon) its active ingredients spread throughout the body, and give an effective outcome. The major seat of *Vata dosha* in the *Pakvashya* (colon).

In the stages of *Samprapti* (pathogenesis of disease), *Vata* first accumulates in the colon and then it starts to spread throughout the body. The result of this vitiated *Vata* can affect almost all systems in the body, as *Vata* is a necessary presence throughout the body (Verma *et al.*, 2020). The term *Basti* means an organ that is a receptacle or reservoir of urine. As it is basically a receptacle having a soft and elastic nature, it was used as an instrument for drug administration with constant pressure (Khairnar,2020). In *Ayurveda*, there are many varieties of *Basti* which are dependent on the amount of the drug, the quality of the substance, and the expected action. Rectal *Basti* is usually two types known as *Niruhabasti*, which is done with herbal decoctions and is purifying and cleansing in nature, and *Anuvasana basti*, usually done with herbal oils, which is nourishing, strengthening and oleating in nature. *Acharya Charaka* has compared the action of *Basti* with the watering of plants at their roots. When the roots are watered, then the whole plant, from the roots to the leaves, flowers and fruits receives the water. In the same way, *Basti* (Medicated enema) when administered through the anus in the rectum and colon, reaches the entire body and eliminates the diseases

of *Vata Dosh*a. Basti Karma has the prime function of *Srotoshodhana* (Cleansing of the channels) of the whole body ((Narine & Mangal, 2020).

Administered of *Taila* or *Sneha* (medicated oil or lipids) as *Basthi* ingredients, ideal for pacifying *Vata dosha* in geriatric individuals. Because the properties of oil are totally antagonistic to the qualities of *Vata*. The *Snigdhat*a (unctuousness), *Gurut*a (heaviness), and *Ushnata* (heat) qualities of *Sneha* are antagonistic to the *Ruksha* (dry), *Laghu* (lightness) and *Sheet*a (cold) qualities of *Vata*. *Sneha* helps in lubricating the intestinal parts and helps in easy evacuation(Rao, 2022).

According to modern medicine, the rectum has a rich blood and lymph supply, and drugs can cross the rectal mucosa like any other lipid membrane in the trans-rectal route. As a result of entering general circulation, the *Basti* medicines can act on different parts of the body and give effective results. *Basti* may have an effect on the neurological system or on gastrointestinal receptors. It may increase local enzyme or neurotransmitter secretion. *Basti* affects the usual bacterial flora, increasing endogenous vitamin B12, vitamin K, and other nutrients(Patidar *et al.*, 2022).

Discussion

Ayurveda, the traditional system of medicine in India and one of the oldest medical systems in the world, encompasses various therapeutic approaches aimed at promoting health and well-being. One such approach is *Basti Karma* (Medicated enema), which involves the administration of herbal decoctions or oils through the rectal passage as an enema. In the context of geriatric health promotion, *Basti Karma* holds several potential benefits. Majority of geriatric individuals experience reduced metabolic efficiency and accumulation of toxins in the body. *Basti Karma* is believed to facilitate detoxification by eliminating accumulated waste materials and toxins from the colon. This cleansing effect can help improve overall health and vitality in the elderly(Sharma, 2019). Aging often leads to diminished digestive function, resulting in issues such as constipation, bloating, and abdominal discomfort. *Basti* treatment can help regulate bowel movements, relieve constipation, and promote healthy digestion. It works by lubricating the intestines, facilitating the removal of stool, and reducing gastrointestinal discomfort. With age, the body's ability to absorb nutrients from food may decline. *Basti Karma*, by enhancing digestive function and promoting better assimilation of nutrients, can support optimal nutrient absorption. This is particularly important for geriatric individuals who may be at a higher risk of malnutrition and nutrient deficiencies. *Basti* is not just work on gastro intestinal tract it works on the whole system of body. When Gut- Brain Axis (GBA) theory is well established, mechanisms underlying GBA communications involve neuroimmuno-endocrine mediators. Gut micro flora also contributes in gut Brain axis. There is a possibility of some neuro-immuno-endocrine process induced by administration of *Basti* and thus shows systemic therapeutic effect.(Moharana, 2017).The elderly often experience joint stiffness, joint pains, arthritis, muscle weakness and muscular pains. *Basti Karma* employs specific herbal oils to nourish the joints and muscles, potentially alleviating pain, reducing inflammation, and improving mobility. These benefits can contribute to enhanced quality of life of geriatric individuals(Panigrahi & Sahoo, 2020).As people age, the nervous system may undergo degenerative changes, leading to cognitive decline, memory loss, and neurological disorders. Basti Karma employs certain medicated oils and herbs that have a calming and rejuvenating effect on the nervous system. This therapy may help promote mental clarity, cognitive function, and overall neurological well-being(Article *et al.*, 2015).

Conclusion

According to the conclusions of the review it emphasizes that, *Basti* treatment acts more effectively in the management of a range of geriatric disorders through a balancing of specific *doshas* and further due to broader therapeutic actions of *Basti* treatment, it acts as a rejuvenate, curative and preventive therapy to improve the quality of life of the geriatric population. Further research is needed to validate the specific mechanisms of action and effectiveness of *Basti Karma* in promoting geriatric health.

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