THE ROLE OF TRIPHALA RASAYANA CHURNA IN GERIATRICS

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Abstract

Ageing is a natural biological process brought on by damage to numerous organs and systems both intrinsically and extrinsically. The beginning of old age is unknown, because a person's "biological age" and "chronological age" are two different things. Because of the world's rapidly ageing population, which includes India, geriatrics is becoming increasingly difficult. The difficulties associated with ageing and illnesses that affect the elderly are the only focus of medical study today [1]. In essence, we can called ayurveda as the science of long duration of individual life. It states that ageing (jara), along with kshudha, pipasa, mrityu, nidra, etc., is a result of kala or parinama and is discussed under "Svabhavabalapravritta vyadhi"[2]. In the Ayurvedic system of Indian medicine, the rejuvenating and preventative therapy known as Rasayana therapy which deals with increasing overall physiological immunity in order to prevent, cure and improve the condition of geriatric illnesses by improving overall body immunity, fending off infections and antigens, and avoiding carcinogenic mutations [3]. Ayurvedic Formulary of India specifically mentions a specific polyherbal remedy called Triphala for its beneficial effects in geriatric diseases. Triphala is a type of medicine which obtained from the fruits of three distinct plants i.e. Terminalia chebula, Terminalia bellirica, and Emblica officinalis in same proportions (1:1:1). In addition to its analgesic, anti-inflammatory, immunomodulatory, and antimutagenic properties, it also has tannins, phenols, and glycosides, which are what give it its strong antioxidant activity. Due to these qualities, Triphala is a successful treatment for geriatric degenerative disorders [4].

Keywords: Triphala, geriatrics, antioxidants, free radicals, ageing, illness, medicine

I. INTRODUCTION

The elderly are given top importance in Ayurveda. The initial chapters of Acharya's Samhitagranthas, written by Charaka and Vagabhatta, were titled "Deerghamjvitiyam" and "Ayushkamiyam," respectively, and listed the actions that should be taken in order to live a longer and healthier life.

Shareeraendriya satwa atma samyoga dharee jivitham Nithyagaschanubandhascha paryair Ayur uchyatae..." (Charak Sutra 1/42)

The cycle of birth, death, and sickness cannot affect Atma since it is a superior being. The remaining three elements, Shareer, Indriya, and Satwa, as well as vikritis, are under the purview of Geriatrics [5].

According to Ayurveda, degenerative disease entities may be caused by Kala or Parinama. Parinama, or the ageing process, is the series of events involving Baalya, Tarunya, Youvana, and Vardhikya. The Kala parinama, which is regarded as the Vyadhi Hetu and is Nishpratikriya, is what causes Jara to be Swabhavabala Pravritta roga [6]. Age refers to ageing, maturation, progression, and changes brought on by the passage of time. The name "geriatrics" comes from the Greek words "Geri" for old age and "Iatrics" for care. Geriatrics is the field of medicine that focuses on the issues related to ageing and its treatment [7]. Rasadi dhatu degenerates as a result of the body's persistent structural alterations in the elderly, when Vatadosha is physiologically in a dominating state. In the current environment, the ageing process begins much earlier as a result of poor dietary practises, unhealthy lifestyles, excessive stress, and a lack of exercise. We cannot increase dhatus' capacity as we become older, but we can safeguard and revive it. Only a small percentage of people, nevertheless, live to be old and disease-free. Early adulthood is when the normal, progressive process of ageing begins in our bodies, although it doesn't become apparent until many years later, at which point we start to refer to ourselves as old. Ageing ranges from 60 to 100 years, according to Charak Samhita [8]. Osteoarthritis, hypertension, urine incontinence, atherosclerosis, senile dementia, delirium, confusion, etc. are a few diseases and ailments that are common in old age. Other than the medically limited management of particular old age disorders, the modern medical system does not have much to recommend it for geriatric care. On the other hand, Ayurveda incorporates a number of methods for promoting health and promoting disorders in old age. Thus, there is a need to raise public knowledge of the effects of population ageing and the benefits of ayurveda in geriatric healthcare.

The traditional Churna Kalpana method was used to prepare the Triphala Rasayana. All four herbal medications, Pippali (Piper longum), Amalaki (Emblica officinalis), Haritiki (Terminalia chebula), and Vibhitaki (Terminalia bellirica), were taken in equal weights (1 kg each) in the dry form for the preparation of churna. After being filtered through an 80-mesh screen, the four medicines were combined and ground into a fine, uniform powder. On the other hand, all four herbal medications were created in coarse form for Kwath production. The fresh decoction was produced in eight times as much water until only 1/4 of it remained. After being

filtered, Kwath was cooled, and one bhawana was administered to the drug's fine powder. The final step was to dry the bhawit formulation in a tray dryer and granulate it with the necessary amount of Babbul goond to create a tablet formulation. A tablet compression machine was used to create 500 mg tablets after the formulation had dried completely. The formed tablet was packaged in an aseptic manner.

II. TRIPHALA'S PHYTOCHEMICAL COMPONENT

Phenolic The most frequently occurring polyphenolic chemicals in plant extracts include gallic acid, flavonoids, syringic acid, epicatechin, and tannins. Antioxidants included in amalaki aid in scavenging the free radicals that are generated. According to the Denis technique, triphala contains 35.3% tannins and 38.3% polyphenols. Triphala can be utilised as a marker compound for invivo research since it contains enough gallic acid. According to HPLC research, triphala contains the four phenolics gallic acid (0.026% w/w), tannic acid (0.024% w/w), syringic acid (0.016% w/w), and epicatechin (0.013% w/w) as well as ascorbic acid (0.036% w/w). Ascorbic acid (0.026%), gallic acid (0.081%), tannic acid (0.004% w/w), and ascorbic acid (0.023%) were all present in E. officinalis, while gallic acid (0.024% w/w), tannic acid (0.011%), and syringic acid (0.011%) were all present in T. bellirica[9].

III. THE ROLE OF TRIPHALA RASAYANA AS CHURNA IN GERIATRICS

From ancient times, a rejuvenating and preventive therapy called Rasayana therapy has been employed to promote vital capacity and long life by utilising suitable medications and a healthy diet. Rasayana is a term used to describe substances that promote the emergence of the subtle immune system essence (Ojas) as a result of full meal digestion. Rasayana therapy stops the ageing process and boosts vitality, intelligence, memory, strength, youth, lustre, and voice sweetness. It is intended to nourish the blood, lymph, meat, adipose tissue, and semen, hence preventing disease and degenerative processes. It seeks to rejuvenate body tissues for a young appearance [10]. One of Ashtanga Ayurveda's eight branches, Jara Chikitsa, specialises in treating illnesses and disorders related to getting older. It is known as "Vridhopacharaneeyam" in Ayurveda[11]. Triphala rasayana is one of the various varieties of rasayana that is utilised in geriatrics. In Ayurveda, triphala is a well-known polyherbal rasayana. It is a Rasayana medication that is utilised in Indian medicine. According to the Ayurveda Formulary of India, it is a combination of three fruits made up of dried Emblica officinalis (Euphorbiaceae), Terminalia chebula (Combretaceae), and Terminalia belerica (Combretaceae) fruits in an equal ratio (1:1:1). It is gentle for everyone, including youngsters and the elderly [12]. It is known as tridoshic rasayana and is said to have balancing and revitalising effects on the three constitutional principles that guide human life (Vata, Pitta, Kapha) [13, 14]. To combat free radicals and shield cells from harm from excessive oxidation, it is advised as a potential source of natural antioxidants. Triphala's main polyphenol, gallic acid, has potent antioxidant properties. Significant phenolic components in Terminalia chebula extract, including total phenols, flavonoids, and triterpenoids, demonstrated strong antioxidant activity by scavenging free radicals and preventing plasmid DNA damage[15]. Triphala is also helpful for conditions brought on by free radicals, including paracetamol toxicity, heavy metal toxicity, and radiation. In order to prevent or delay the onset of ageing and age-related oxidative stress-related degenerative diseases, it is crucial[16]. Due to the phenolic chemicals found in Triphala, it possesses strong antioxidant action (radical scavenging activity)[17,18]. The three components of triphala each exhibit slightly distinct behaviours depending on the environment. While Terminalia chebula, one of the Triphala ingredients, has significant radical scavenging activity as well as a potent hyaluronidase and collagenase inhibitor that inhibited cartilage deterioration, Emblica officinalis demonstrates considerable efficiency in liquid peroxidation and plasmid DNA assay [19]. As a result of the combined activity of the different ingredients, triphala is anticipated to be a superior antioxidant. Studies on Triphala's antioxidant and radioprotective properties suggest that it has the capacity to either prevent the generation of free radicals or act as a free radical scavenger. Excessive levels of free radicals, which are known to harm biomolecules, are created during oxidative stress and radiation exposure [20]. The most powerful oxidant among the several free radicals is the hydroxyl radical. The existence of free radicals harms our body cells significantly, according to the free radical theory of ageing[21]. Multiple studies have discovered a connection between low antioxidant status and an increased risk of developing or a worse prognosis from several age-related diseases, including Cardio Vascular disorders, stroke, Alzheimer's disease, cancer, degenerative eye and peripheral arterial disease osteoarthritis and also include osteoporosis. Triphala has potent antioxidant qualities that work in conjunction with its analgesic, antipyretic, chemo preventive, antidiabetic, antimutagenic, and wound healing properties to help prevent, intercept, and repair the impacts of many of these age-related illnesses. Chemicals known as antioxidants contribute an electron to the free radical, turning it into a safe molecule. Antioxidants stop the oxidative damage that causes ageing and disease by snatching up free radicals and shielding cells from it. They protect against DNA damage that can lead to cancer and lessen the risk of cardiovascular disease, dementia, including Alzheimer's disease, as well as aid the heart and brain receive the best possible blood flow. Triphala's antioxidant qualities could be mostly attributed to the presence of a number of recognised antioxidants, including flavonoids, tannins, and glycosides. By lowering platelet aggregation, strengthening vascular membranes, and defending cell membranes, the anti-oxidant and anti-inflammatory bioflavonoids support the health of the circulatory system [22, 23, 24].

IV. DISCUSSION

It is an unwelcome and unavoidable stage of human life, and the ageing process is a difficult human experience. Senescence is a natural process that starts under the influence of time, as explained by Ayurveda's life science (swabhavoparamavada)²⁵. Vatadosha is in its dominant stage as people age, and the body's degenerative processes and degradation are brought on by the deterioration of rasadidhatus, Srotas, and Agni. Agni, Ama, and Oja should therefore be managed at the biological level in geriatric care. mostly rasayanadrugs One such formulation that functions at the dhatu, agni, and srotas levels is triphala rasayana.

Triphala, as previously mentioned, has potent anti-oxidant and anti-inflammatory qualities that may be able to combat the two main drivers of ageing, oxidative stress and inflammation. Hence, triphala may be used as a strategy to postpone the onset of numerous age-related disorders as well as the process of ageing. Triphala may have antioxidant capabilities mostly because to the presence of

several recognized antioxidants like flavonoids, tannins, and glycosides. Because of the pharmacological and therapeutic qualities listed above, several common geriatric illnesses can be treated with triphala for both preventative and therapeutic purposes. In actuality, the Ayurveda medical system has historically employed it for these functions [26, 27].

V. CONCLUSION

In vitro tests show that the popular ayurvedic supplement triphala has antioxidant and radioprotective properties. The triphala's polyphenol concentration demonstrates that its antioxidant and radioprotective properties come from polyphenols, which lessen oxidative stress by converting reactive oxygen free radicals to non-reactive byproducts. The studies are extremely important because there is a rising demand for herbal products as antioxidants and radio protectors.

In India, triphala is a revered medication that has been used for generations to treat a variety of illnesses. Triphala is a polyherbal composition, and unlike synthetic pharmaceuticals or single chemicals, the mechanisms of action of polyherbals, herbal treatments, and their extracts are significantly different.

VI. REFERENCES

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