

Effects of Ayurveda on Ageing: A Study

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ABSTRACT: *The Indian traditional medicine form “Ayurveda” provides effective solutions to almost every Health problem in very convincing ways. Ayurveda practices provide solutions for not only mental distress, or physical illness but it can be very effective in graceful ageing. Ageing is natural phenomena and everyone has to go through it but every individual wishes for delayed aging or at least achieving ageing gracefully. This paper studies the Ancient Ayurvedic dietaries and the treatment measures developed by elders to halt or delay this phenomena and revive the whole functional dynamics of the human body. An analysis is performed by a person adopted Rasayana Chikitsa, a rejuvenation therapeutic measure that grants longevity, better memory, and improves the immense strength of the sense organs of the body. A wide variety of therapies there managements and preventions with proper formulations are being discussed. In the futuristic sense another concept of food or Ahara’s which plays a vital role in maintenance of health and longevity.*

KEYWORDS: *Ageing, Ayurveda, Healthspan, Jara, Rasayana, Medicine, Therapeutic, Well Being.*

INTRODUCTION

“Ayurveda” is such a concept or traditional therapeutic medicine that emerged in India and has a history of more than thousand years old is also not a novel concept worldwide as well. According to researchers and evidential proofs its effects have been accepted by the people and now governments as well. Ayurveda is so famous because it considers the whole human body, the mind and also the spirit overall as an interrelated concept. It considers three of them along and heals the body parts while proceeding with the maintenance of the overall health. Ayurveda also includes promotion of health and the treatment of the ailments in a holistic way and also finds the continuous increase in the acceptability among many regions around the world. It also plays a pivotal role in preventions and the management of the human Ageing. So the natural phenomena ageing which everyone wants to stop or at least delay it. Although there are many artificial surgeries, chemical methods and therapies are available in the market they involve complexations and high health risks [1].

Then here comes the role of Ayurveda which can be proven as an advancement of all these techniques it not only helps delay the ageing but also promotes the concept of positive graceful ageing among the people. Ageing is a normal natural phenomena that involves oxidation at the cellular levels which begins at the conception of an individual and ends at the last stage of life i.e. death. In Ayurveda ageing is considered as a Swabhavaja or more elleboratingly saying the degeneration of the human body physiologically at mental level and also at the physical level. The degradation of human entities with the passage of the time, these effects are visible in the body in Ayurveda it is known as Shareera. Ageing is anyway seen as a problem in society. People perform various measures to control the ageing as much as they can. But is there any therapeutic measure available in the great science of traditional medicines of India more specifically saying Ayurveda? Currently India has an almost population of 75 million people over the age of 65 years i.e. approximately 6.7 percent of the whole population [2].



Figure 1: Shows the healing power of Ayurveda in the arresting of aging symptoms in the human body.

In Ayurveda Rasayana or Rejuvenation therapy is one of the most special methods. Rasayana is basically a therapeutic process performed to achieve the high immunity promoters, increases the anti-degenerative which rejuvenates the complete health care and helps for the prevention of the symptoms of the Ageing. Hence one can say it has the capability to improve the quality of human life in the sense of both kinds of people being healthy and also for the ill individuals suffering some kind of health problem. Refer the Figure 1 for visual description of the concept [3]. Rasayana incorporates two words Rasa and the Ayana, where the rasa word refers to the Dhathu i.e. Tissues and Ayana refers to the marga i.e. movement. Hence, Rasayana basically nourishes the Rasadi Dhatus i.e. plasma. The Jara means Ageing is known as Vardhakya in Ayurveda. In Ayurveda the Kalajajara i.e. the mature Ageing is not considered for cure or say it is not curable, but still for graceful ageing the vitality in the cellular homeostasis can be maintained through the Rasayana and the practices of Kalajajara i.e. Premature Ageing that can be managed and controlled with the help of Rasayana as being defended by the Acharya's (Sages) in Ayurveda [4].

Research Question

1. How can Ayurveda arrest or delay the ageing process in human beings?
2. What are the most appropriate drugs and therapies available in Ayurveda for delaying the ageing? And how do these mechanisms are carried out? What are their effects on a human body?

LITERATURE REVIEW

Ayurveda and ageing both concepts are a wide subject to be analysed and there is many research appears and studies are available on the web. Keeping the legacy of Ayurveda in the restriction of human ageing a research paper titled "Ayurveda and the science of aging". It is a review article written by Mr. Ram Mohan V. Rao. This paper highlights the Ayurvedic traditional medicine system along with the respective therapies for the healthy and graceful aging. It discusses how Ayurveda is helpful to achieve an optimal health and also one can lengthen their individual health span period by simply living in harmony with the Ayurveda and nature. This review paper explores numerous aspects related to human aging and longevity just by comparing the involved science of aging. As accordance with the modern medicines with the Ayurvedic therapeutic therapies of Vridhavastha and the Jara.

Another research paper entitled "Trends in aging and skin care: Ayurvedic concepts" written by Hema Sharma and Rangesh Paramesh. This paper discusses the concepts and the association between aging and Ayurveda. How Ayurveda can help in anti-aging treatments and how it is different and significant than the artificial cosmetics that are gaining more importance in the beauty industry, also the health and the wellness

sectors. Ayurvedic therapeutic cosmeceuticals and treatments are associated with the Indus Valley and its great Civilizations [5]. The third paper that has been referred for doing this study is “Role of Ayurveda in Graceful Ageing: A Review” written by Vaishnava, Anagha, and Ajantha. This paper discusses the Rasayana effects of Ayurveda including the immune modulators, the longevity enhancing in the body or the cognition enhancing. It discusses the main purposes of the Ayurveda's Rasayana therapy in detail. Extended to it for the general understanding about its effects and mechanisms for the delay of the Aging process and how it minimizes the natural degenerative processes in the human body. The one being discussed that is more specific towards the functionality of the brain is known as Medhya Rasayana. It concludes that such Ayurvedic Rasayana retards the brain Aging and helps in the regeneration of the neural tissues in the body besides the betterment effects towards the anti-stress practices, and also the memory enhancing effects shown by it.

METHODOLOGY

1. Design:

1.1. The factors that are enhancing the aging effects in human:

1.1.1. Environmental factors

Environmental chemicals and pollutants have a huge effect on human health as well on the aging process of the human body. These harmful pollutants are capable enough to alter the gene and hormonal expressions of the human body and also can influence brain development by disrupting the variety of the biological mechanisms, so also enhances the risk of neurodegenerative illnesses maybe later in life span. Environmental pollution and its effects like Climate change, global warming, waste chemicals, urban and industrial air pollution, increase in deforestation, polluted water and loss of major biodiversity are few reasons among the main and major environmental issues that influence the factors which increase the aging process [6]. Epidemiological studies and clinical trials have collaboratively recognized that the excessive amount of sun rays exposure is among the main contributing reasons that causes the several and seven kinds of skin disorders which also includes the effects like premature Ageing at early age, the increased inflammatory conditions also get increased etc.

1.1.2. Sleep:

A proper sleep is very important to be considered according to Ayurveda a person needs to maintain the sleeping hours and should obtain proper sleep every day. It's not like attaining it once a week in compensating for the whole week it must be avoided. The poor sleep and interrupted naps just not only disrupts the whole circadian rhythms of the body but it also triggers the illnesses related to metabolic processes such as diabetes, fattening, and also the chances for the cardiovascular diseases gets increased. Considering the results of well conducted Meta researchers the sleep durations directly affect the human Genes as well.

1.1.3. Aahar:

The Aahar, food intake is another significant factor that influences the human body and the functionality of the organisms with great impacts. According to Ayurveda the sun as source of energy represents the fire factor and in the human body or any physical part this is represented as the method for transformation of the Aahar by the heat of the digestive juices i.e. Jatharagni. Hence when the sun is above the sky at peak, the digestion mechanism is stronger and more optimal than at night. So Ayurveda recommends having breakfast as the largest meal, lunch the moderate during the noon hours and comparatively smaller meal in the evening of dinner to maintain the proper metabolism. Researchers and Nutritionists recognize this fact and also realized the significant relationship between the timings of lunch time, the metabolism, weight

regulation in the body and of all aging. Since metabolism is an important mechanism for the delay aging Aahar becomes significant itself [1].

1.1.4. Routine:

A proper routine factor also influences the body and the aging factors in the human body. Any disturbances in processing of the circadian rhythms trigger the notions of fatigue, a feeling of disorientation, sleep disorders or insomnia and also can increase the susceptibility towards diseases like cancer.

1.1.5. Stress and Depression:

The unmanaged daily life stress, anxiety and depression is one of the greatest factors for speedy ageing. Anger makes the whole processing and functionality of the human body work in a bad direction and disrupts these complete cycles.

2. Data Analysis:

2.1. Rasayana:

This is one of the most famous concepts of Ayurveda. The Ayurvedic science and its pharmacology has classified the herbs or medicinal Indian plants into numerous different categories according to the reactions of the plants on different actions of the body. One of these categories, the Rasayana category is considered most suitable to treat the symptoms of aging. The literal meaning of the word 'Rasayana' is combined of two words 'Rasa' that stands for plasma and the Ayana that means path. Considering the beliefs of the Ayurveda, according to these beliefs the positive influences and qualities of the great 'Rasadhatu' improves the health and the response of other present Dhatus i.e. tissues in the body as well. Therefore any kind of medication which improves the value and quality of the Rasayana will be capable of strengthening or promoting the health and regeneration of all tissues present in the human body. The Rasayana medicine acts inside the human body by manipulating the combination of the biochemical of neuro, endocrine gland and the immune system of the body. These Ayurvedic Rasayana are rich sources of the anti-inflammatory and antioxidant chemicals.



Figure 2: Some of the India spices and herbs that are considered in the Rasayana therapeutic treatment method [7].

Figure 2 illustrate some Indian spices and herbs which is considered in the rasayana therapeutic treatment method. These Ayurvedic Rasayana plants are said to provide the following positive effects like they prevent ageing, strengthen the healthy life, better memory brain or memory power and prevent severe illnesses all of these implies that it enhances the resistance power of the human body against any unhealthy or critical problems. For learning more about the effects of it refer to Figure 3 [8]. The 'Rasayana Chikitsa' in Ayurveda is another specialized section of traditional medicine system Ayurveda that majorly handles the health issues for preservations and also for the promotion of a healthy life by revitalizing and enhancing the metabolism and enhanced immunity in the body. This method of 'Rasayana' therapy is executed for a certain time period with strict imposing regimens on the diet and the conduct of the person. Since 'Rasayana' medicines are highly rich in sense of the powerful antioxidants and are also very good as a hepatoprotective agent as well as an immunomodulation agent. 'Rasayana treatment is not like a typical

drug therapeutic therapy, but it is kind of a specialized methodologies that are normally practiced with the help of rejuvenate that promotes healthy behaviors, i.e. 'Acharya Rasayana'. According to the Sushruta Ayurveda legend the Rasayana arrests the symptoms of ageing, increases the health and life span, memory intelligence and the strength and thereby enables the body to prevent illnesses. Moreover Rasayana increases the functioning of the complete human body system.

The powerful antioxidant activities Rasayana includes the Adoptogenic effect. Reduction in the lipid peroxidation level, immune manipulation and free radical scavenging. There is plenty of research on these Ayurvedic plants that are used as Rasayana medications in order to reason them for use in the modern medication treatment context. The herbs utilized in the various preparations of 'Rasayana' and there the effects of these medicines on the psychosomatic stress problems. The 'Rasayana' medication has proven to treat problems like epilepsy, the convulsive disorders and also to reduce anxiety, apprehensions and it's very effective in keeping the mind calm and cool as well. 'Rasayana' medication preparations, which act as both the herbal immunostimulants and the adaptogens to regulate the functioning of the immunological and the endocrine in very low doses, without even damaging the auto regulative functioning of the body organisms [9].

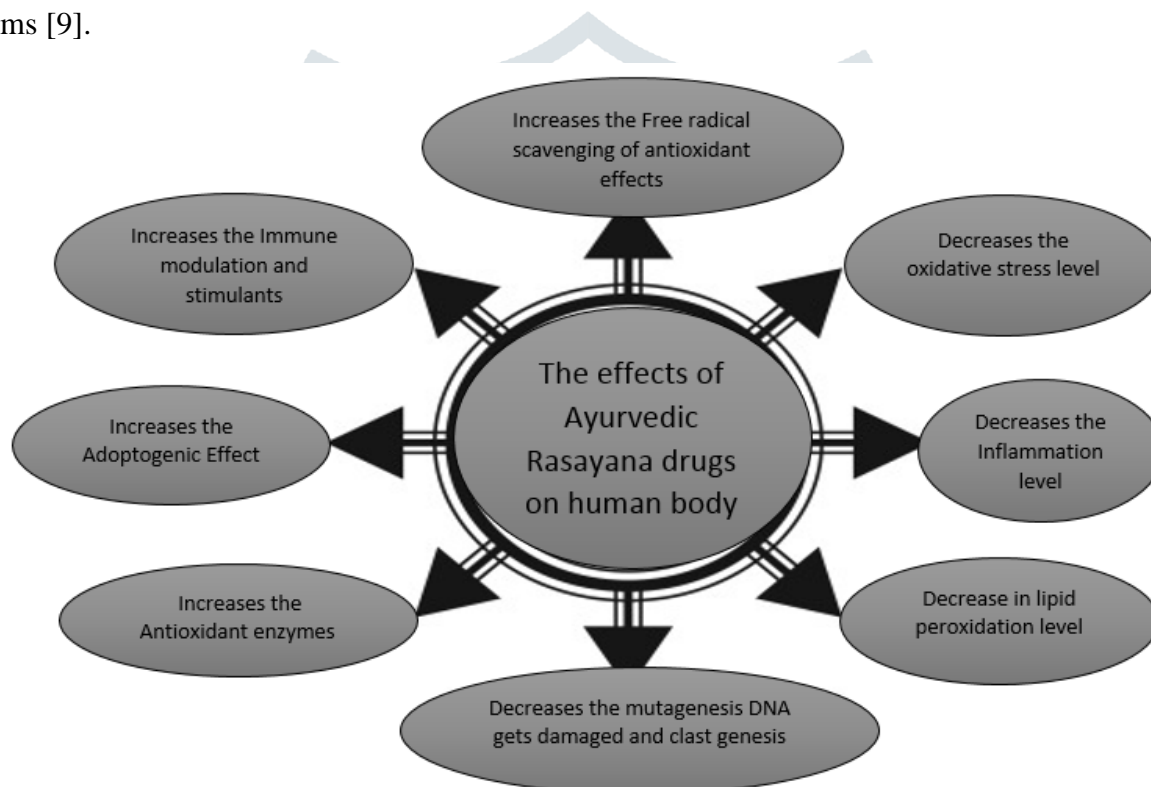


Figure 3: Demonstrates the different effects of Ayurveda's Rasayana drugs into the human body. Like the Adoptogenic effect, improvement in inflammation in the body etc.

RESULTS & DISCUSSIONS

While various methods, steps and mechanisms are presented and discussed to maintain the graceful aging process, the trendy modern medicine system approach is very differ from the traditional approach of Ayurveda. While neither of both approaches are inferior or superior but, the only way difference lies is how both of the sciences address and tackle the process of aging. According to the findings of researchers, aging is considered to be a kind of disease because, 1) aging phenomena is also associated with the reactions and accumulation of different cellular bodies, biochemical and the molecular reactions changes that impairs the normal functionality and physiology of the whole human body. The second point is the impairment of the human's normal physiology, the disturbance in the functioning of organs, tissue, muscles, cells and other bodily systems, these changes triggers the age-associated issues and even diseases and the third is aging phenomena that is itself is a greater risk factor for the occurrence of other diseases. So the Anti-Aging processes and approaches therefore require an ideal i.e. free of diseases, a physiological human state at a particular age and a list of "to-do" works, and a drug intervention is involved to keep the person

significantly close to that ideal state as much as possible. If an individual is seeing aging as a chemical disease then the person can consider the most logical therapeutic approach to overcome the symptoms of the aging process with the help of drugs like rapamycin, resveratrol, misoprostol, metformin and many others as per the doctor prescribes.

However, a medication approach is artificial and also de-emphasizes and demotivates the enormous potential of nature that can be utilized for disease prevention just by some changes in the routine lifestyle changes without any concern of side effects. This method views the entire aging phenomena in mechanistic and reductionist terms hence it involves the manipulation of a certain pathway related to the cause or makes changes in the molecules with the influence of powerful drugs and medication. In contrast the Indian traditional medicine system Ayurveda approach is designed to address the multiple unhealthy and pathogenic procedures mechanisms and optimizing the therapeutics for each of those targets. In last few decades numerous numbers of genetic and the biochemical researches have been conducted and it gives evident results that it involves an extensive networking of the molecular interactions which are involved and results the aging procedure in human, so it is suggesting adoption of a modern medication systems approach or maybe a network-based treatment approach, instead of a traditional which is a particular target based medication approach, it may prove as a feasible, faster and potentially highly effective for the delaying and the reversing the whole aging procedures but it is still not better and recommended then the Ayurvedic treatments as Ayurveda considers the aging as a normal natural phenomena which is an inevitable process so instead of avoiding it with drugs Ayurveda provides the time-tested and highly affecting natural therapies for the healthy and graceful aging. Another therapy called Kutipraveshika is also utilized sometimes, the word is made by combining two words the kuti which means a hut or home and the second word Praveshika that means entering. In this methodology, the person is made to stay in the hut which is specially designed to undergo various kinds of Rasayana therapies. The Person taking this treatment should undergo the Panchakarma therapy first before undergoing the rejuvenation treatments.

CONCLUSION

Many factors have been discussed which enhances the aging factor in a person this includes the environmental chemicals i.e. pollution micro pollutants promotes the more oxidative stress among people and also the inflammation in the body. These effects are sometimes so severe that it may contribute to the health risks like neuro-inflammation and also leads to neurodegeneration as well as increases the other cellular degenerations in the body. The sleep factor is very important to be considered according to Ayurveda a person needs to maintain the sleeping hours and should obtain proper sleep every day. It's not like attaining it once a week compensating for the whole week it must be avoided. A proper routine factor also influences the body and the aging factors of the human body. The unmanaged daily life stress, anxiety and depression is one of the greatest factors for speedy ageing. Anger makes the whole processing and functionality of the human bodywork in a bad direction and disrupts these complete cycles. The Aahar, food intake is another significant factor that influences the human body and the functionality greatly. Since metabolism is an important mechanism for the delay aging Aahar becomes significant itself. Ageing and reserves related to it will always be an interest for the researchers as in today's time ageing becomes a hot topic for researchers, people and even governances are interested in studies and new findings related to it. This paper can help the scholars want to have basic knowledge regarding this huge topic of Ayurveda and ageing.

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