



Review Article

AMALAKI AS PREVENTING PREMATURE AGEING DRUG-A REVIEW

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ABSTRACT

Ageing is the natural process of decaying continuously and this manifest in the form of various degenerative changes. Ayurveda has two aims i.e. prevention and maintenance of health from diseases and cure from disease. Everyone wants to give the impressing of being young forever and increase life span by staying healthy. As various cells and tissues of the body undergo changes as age advances *Rasayana* claims that it retards the process of ageing. The word *Rasayana* connotes a specific meaning *Rasayana* means by which body get excellence of *Rasa* which nourishes the body. It basically boosts the *Oja* and the immune system. It helps the person to maintain good health and longevity. *Rasayana* drugs acts as antioxidants and neuroendocrine immunomodulators and *Amalaki* is one of them. Oxidative damage to cells is important phenomenon in ageing process. *Charak* and *Vagbhat* has admired *Amalaki* as the drug of choice for *Vayasthapana karma* (to stop ageing). *Charak* has also mentioned it as *Ayushya*, *Deepaniya* (appetizer) and *Pachniya* (digestive). *Amalaki* is the great *Rasayana* that helps to protect from disease and reduced the possibilities of pre mature ageing. It acts on *Rakta Dhatu* Main constituents of *Amalaki* are Vit. C, carotene and riboflavin. It is having a role in cellular oxidation reduction. They also play a role in collagen fibrin formation, helps in production of fibrin, and iron absorption.

KEYWORDS: Ageing, Premature Ageing, *Rasayana*, *Amalaki*, Antioxidants, Free radicals.

INTRODUCTION

Ageing is the accumulation of changes in a person over time. It can be defined as a process of unfavorable timely progressive changes, becoming apparent after maturity, and terminating invariable in death of the person. The ageing process is of course a biological reality which has its own dynamic, largely beyond human control. In Ayurveda, ageing has been mentioned in two ways viz. *Kalajajara* (physiological ageing) which is a natural process of ageing and *Akalajajara* (premature ageing).^[1]

There is Biological ageing, which is more intense irrespective of chronological ageing. However, the rate of ageing is predetermined genetically but some factors may influence the process of ageing & their unfavourable effects cause premature ageing. These factors include dietary habits, lifestyle, addictions, mental setup, stressful life, family responsibilities, social formalities medications, pollution and many other environmental factors. Among the theories of ageing discovered so far, free radical theory is most acceptable as it gives many realistic explanations for the ageing process. Free radicals produced continuously in our body which induce changes that are supposed to be the major cause of ageing, disease & death. For neutralization of three radicals and to protect our cells it is essential to have healthy diet, active and stress free living which ultimately retard ageing and age related disease as well. Ayurved opposes the ageing and its allied ill effects with three pronged strategies. First, it suggests the countering of *Jara* and its adverse effects by use of *Vayasthapak*

drugs (age stabilizer) and the second strategy is to rejuvenate the aged body by *Jeevaneeya* drugs (vitalizes) and the third strategy is *Jarachikitsa* i.e. *Rasayanachikitsa* (rejuvenating process and formulations).^[2] Therefore, Ayurveda, the ancient wisdom and treatment modality, bears the responsibility to combat the problem to help ailing society through the nectar on earth- *Rasayana*.

AMALAKI - A NATURAL WONDER

Amalaki is one of the precious gifts of nature to mankind. *Amalaki* is a rich source of vitamin C and requisite for the synthesis of collagen, which is liable for keeping the cells of the body together. Vitamin C present in *Amalaki* is one of the main factors that can help to retrieve or refill the energy lost by body. So, the replenishment of new energy causing by *Amalaki* is considered as a natural refresher. Numerous experimental evidences has shown that *Amalaki* fruit posses Antioxidants^[3], Hepatoprotective^[4], Hypocholesterolemic^[5] and Anti-inflammatory activities^[6]. *Amalaki* is a good absorption agent of iron. Ascorbic acid is highly present in *Amalaki*, which helps to reduce Iron deficiency^[7]. It is reported that haemoglobin percentage is significantly increased with the treatment by *Amalaki Churna*.^[8]

MORPHOLOGY OF THE PLANT

It is a small medium sized tree grown up to 8 to 18 meters in height, and having asymmetrical shape with spreading branches. The leaves are oval shaped and very short in size up to 7-10 cm long. Greenish yellow colour

flowers and fruits are appears. The fruits are shown fleshy with sour, astringent taste with spherical in shape and six vertical bands.

AMALAKI THE RASAYANA

Amalaki is the best rejuvenative herb^[9], and specifically observed that *Amalaki* is a great *Rasayana* that helps to protect from disease and reduce the possibilities of premature ageing. *Acharya Charak*^[10] and *Vagbhat* has admired *Amalaki* as the drug of choice for *Vayasthapana karma* (mentioned is *Agryadravya*). *Charak* has also mentioned it as *Ayushya*, *Deepaniya* an appetizer and *Pachniya*, a digestant. It is also well known for its *Keshya* and *Chakshushya* properties. *Bhavprakash* and *Dhanwantri nighantu* mentioned the *Rasayana* properties of *Amalaki*^[11]. *Rasayana* drugs acts as antioxidants. oxidative damage to cells is important phenomenon in ageing process. *Amalaki* has low molecular weight hydrolysable tannins (*Emblicanin A* and *Emblicanin B*, *punigluconin*) thereby it is considered as one of the more strong antioxidant herb in *Ayurveda*.^[12] Antioxidants are the substances that reduce oxidative damage such as that caused by free radicals. well known antioxidants includes a number of enzyme and other substances such as *Vit C*, *Vit E*, and *Beta carotene* are capable of counteracting the damaging effect of oxidant. Main constitute of *Amalaki* are *Vit C*, *Carotene* and *Riboflavin*. They also play a role in collagen fibrin formation, helps in production of fibrin, and iron absorption. *Amalaki* the *Rasayan* is designed beautifully by nature and discovered by our *Acharyas* as it can be used in almost every disease which are found on the earth. *Amalaki* helps to maintain the balance in all the three *Doshas* that is important for proper functioning of body. *Kahalekar et al* reported in his study of effect of *Amalaki* as *Rasayana* was observed on *Prabha* (glow on skin), *Varna* (complexion), *Dehbal* (physical capacity), *Swara* (voice), *Indriyabal* sense organ), general health, old age related change (wrinkles on skin), psychological improvement and visual improvement and found significantly effective.^[13]

In a study carried out by scientists at the faculty of pharmaceutical sciences, Nagasaki university, in Japan, *Amalaki* extracts were found to be able to prevent the growth of cancerous cells in the stomach, skin and womb.^[14]

Scientists from the Biochemistry Division, National Institute of Nutrition, Hyderabad in India, found that *Amalaki* is able to block a chemical called aldose reductase which has been heavily implicated in causing cataracts in Diabetic patients.^[15]

EFFECT OF SYNTHETIC MEDICINE

In spite of synthetic medicines like Antibiotics, steroids, and advanced surgical practices gives faster action and bring quick relief, it causes some life threatening side effects including death. Furthermore, regular ingestion of Antibiotics and some pain killer tablets may produce toxic substances in liver. The synthetic drugs may be effective on one sickness and cause another trouble. Thus, men gradually start living

against nature and lost his life. Ancient people had been live long when compared to nowadays. Because of their lifestyle, which is completely depends on nature.

MECHANISM OF ACTION OF RASAYANA

Possible mechanism of *Rasayana* may be by immunostimulation, suppressing free radicals, by enhancing detoxification on cellular level, repairing of damage of cells, inducing cell proliferation and auto renewal of destructed proliferating tissues and recovering them by elimination of old with new.^[16] *Rasayana* promotes nutrition by direct enrichment of the nutritional quality of *Rasa* means nutritional blood, by promoting nutrition through improving *Agni* means digestion metabolism and by promoting the competence of *Srotas* means microcirculatory channels in body. It has been reported that the *Rasayanas* are rejuvenators, nutritional supplements and possess strong antioxidant activity. They also have antagonistic actions on the oxidative stressors, which give rise to the formation of different free radicals. They are used mainly in ageing, atherosclerosis, cancer, diabetes, rheumatoid arthritis, autoimmune and parkinson's disease. Their antistress actions have made them therapeutically more important. Some *Rasayana* activate mononuclear cells to produce cytokines like *GM-CSF* and *IL-1* in a dose dependent manner. This indicate it is possible that the *Rasayana* (particularly those with *Madhurvipaka* that are advocated as adaptogens in *Ayurveda*) Primarily activate immune cells, leading to secretion of cytokines, which is turn act on multiple target organs to produce the myriad effects ascribed to these treatment. Administration of herbal preparation, *Rasayana* has been found to be enhance the natural killer cell activity in normal as well as in tumor bearing animals. *Rasayana* are also found to stimulate antibody dependent complement mediate tumor cell lysis. The *Rasayana herbs* seems to exert their effect through immunosuppressant, immunostimulant and immunoadjuvant activities or by affecting the effector arm of the immune response. It has been found that the nervous endocrine and immune systems are all interrelated. Immune products like various cytokines have been found to stimulate the hypothalamus pituitary adrenal axis and corticotrophin release factor (*CRF*), which ultimately enhances the production of Adrenal corticotrophic hormone (*ACTH*) resulting into increased secretion of glucocorticoids which have an overall suppressive effect of immune system. Stress also acts on the same axis and brings about changes in the immune status of the body. These *Rasayana* drugs probably reduce the stress levels by affecting antioxidant levels. So, these *Rasayana* drugs act as potent antioxidant and neuroendocrine immunomodulators. *B Kalsariya et al* studied the anti-ulcer effect of *Amalaki rasayan* explained in *Charaka samhita* in albino rats and observed Freeze Dried *Amalaki Churna* (*F.D.A.C.*) (100mg/kg body weight, 7 consecutive days) had moderate anti-ulcer activity.^[17]

CONCLUSION

In this paper, We have attempted to congregate morphological, phytochemical, and health assets of

Amalaki, a medicinal herb widely used in many traditional systems and also to highlight the *Rasayana* properties of *Amalaki* in preventing Premature Ageing.

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