



Review Article

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ROLE OF RASAYANA IN MANAGEMENT OF AGEING: A REVIEW

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ABSTRACT

Persistent and excessive stress of modern life has made us recognize with new class of disease called stress-related diseases. In Ayurveda, rasayanas have been mentioned as a set of rejuvenating measures aimed towards youthful rich life free of diseases. It promotes longevity via optimizing cellular level nourishment (Svasthanya orjaskaram). The term rasayana means transportation of nutritional essence throughout body. Various activities such as antioxidant, immuno-competent, immune-potent, immunomodulator, adaptogen, rejuvenator, anti-stress agent, tissue protector, tissue proliferator etc. are proved rasayana properties. Acharya Sharangdhara has clearly stated rasayana as dravyas having ability to prevent early ageing as well as various opportunistic diseases and Hareetaki (*Terminalia chebula*), Guduchi (*Tinospora cardifolia*), Guggulu (*Commifora mukul*) and Rudanti (*Capparis moonii*) as four rasayana dravyas. According to some research studies free radical scavenging activity of methanolic extract and immunomodulator activity of aqueous extract of Guduchi (*Tinospora cardifolia*) proves its Rasayana property. Hareetaki (*Terminalia chebula*) and Guggulu (*Commifora mukul*) are proved antioxidant as well as cytoprotector. Extracts of Rudanti (*Capparis moonii*) stimulate lysozymal activity and thus act as immunomodulator. These all are capable of maintaining immune system from immune deficiency state to normal functional state. The present review is undertaken for screening these four herbs to evaluate their probable mode of action as anti-ageing agents helpful in graceful ageing.

Keywords: Rasayana, Immunity, Guduchi, Hareetaki, Rudanti, Guggulu.

INTRODUCTION

Rasayana is a unique branch of Ayurveda that promotes the inner healing power of an individual via promoting the immunity. It forms a very important division of Ayurveda which clearly has an important role in wholesome development of a person and also as a resource of preventive medicine. Rasayana is made up of two terms 'Rasa' and 'Ayana' which refers to transportation of nutritional essence of food throughout the body. Acharya Charak gave prime position to it in Chikitsa sthan and explained it as "Swasthanya orjaskaram"¹. According to Acharya Sushruta rasayana acts as a measure to maintain longevity, enhance intelligence and mental health and also increase immunity against various diseases².

Number of herbs has been described having rasayana properties. Acharya Charak has mentioned Guduchi, Sankhpushpi, Mulethi and Mandukparni as chaturvidh rasayana, whereas in Paribhasha prakaran Acharya Sharangdhara stated Guduchi (*Tinospora cardifolia*), Guggulu (*Commifora mukul*), Hareetaki (*Terminalia chebula*) and Rudanti (*Capparis moonii*) as 04 prime rasayana dravyas³.

Pharmaco-therapeutic actions of rasayanas

According to Charaka the rasayana procedures/drugs cause the following effects in human body.

Table 1: The list of actions attributed to Rasayana drugs and their translated terms⁴

Arogya	Promotes health
Deha balam	Optimum Physical strength and Immunity
Dirgha ayu	Provides longevity
Indriya balam	Increases receptivity of sensory organs
Kanti	Promotes glow
Medha	Increases intellect
Prabha	Enhances lustre of skin
Pranati	Tolerance and adaptation
Smriti	Retention of memory
Swara	Increases voice quality
Taruna vaya	Provides Youthfulness
Vaksidhhvarnai	Stability of speech
Varna	Complexion

Table 2: Pharmacological properties

Name	Synonyms suggesting rasayana properties	Rasa panchaka
Guduchi (<i>Tinospora cardifolia</i>)	Jivanti, Rasayani, Vayastha ⁵	R- Tikta, Kashaya G- Laghu V- Ushna W- Madhura
Hareetaki (<i>Terminalia chebula</i>)	Ayushya, Rasayani ⁶ , Jivanti, Jivanika ⁷ , Vaya sthanam param ⁸	R- Panch rasa without lavana G- Laghu, ruksha V- Ushna W- Madhura
Rudanti (<i>Capparis moonii</i>)	Rasayani, Shoshaghni, Jara vinshanam ⁹	R- kashaya, Tikta G- laghu, Ruksha V- ushna W- katu
Guggulu (<i>Commifora mukul</i>)	Rasayana, Arogyakaro paro ¹⁰	R- Katu, tikta, kashaya G- Laghu, sara V- Ushna W- Katu

DISCUSSION

Acharya Sharangdhar stated four examples of rasayanas. To authenticate their position under rasayana dravyas various researches have been conducted to herbs showing rasayana properties to find out the accurate efficacy of them. Sophisticated tools and techniques used in recent era proved the following types of drug actions of rasayanas- Adaptogen, Antioxidant, Bone marrow proliferation, Immunocompetent, Immuno-modulators, Immuno-potentiating, Immuno-stimulant, Mental agility, Nephro-protection, Tissue protection, stress reliever etc.¹¹.

Guduchi (*Tinospora cordifolia*) as rasayana

According to recent studies it is proved that Guduchi (*Tinospora cordifolia*) promotes strength and vitality (Soma). Methanolic extract of stem of *T. cordifolia* has been reported to increase the erythrocytes membrane lipid peroxide and catalase activity and thus shows anti-oxidant activity¹². It also decreases the activity of SOD, GPx in alloxan induced diabetic rats. Extract of *Tinospora cordifolia* shows free radical scavenging properties¹². A large variety of compounds which are responsible for immunomodulatory and cytotoxic effects are 11-hydroxymuskatone, N-methyle-2pyrrolidone, N-formylannonain, cordifolioside A, magnoflorine, tinocordioside and syringin. These natural compounds improve the phagocytic activity of macrophages and enhance nitric acid production by stimulation of splenocyte¹³. In an in vitro study on immunocompetent cells, it was demonstrated that aqueous extracts of the stems of Guduchi (*Tinospora cordifolia*) protect mice against experimental infections via enhancing T as well as B cell responses¹⁴.

Rudanti (*Capparis moonii*) as rasayana

A recent research work has revealed in their in-vitro study that ethanolic and aqueous extract of Rudanti (*Capparis moonii*) have immuno-stimulating properties. Both the extracts showed phagocytic stimulation of lysosomal enzyme, myeloperoxidase activity and nitric oxide in peritoneal mouse macrophages¹⁵.

Hareetaki (*Terminalia chebula*) as rasayana

Recent studies have revealed that it shows antioxidant, free radical scavenging activity. According to a study due to presence of phenolics, the leaves, bark and fruit of Hareetaki (*Terminalia chebula*) show high antioxidant activity. Its aqueous extract exhibits xanthine oxidase inhibition, 2, 2-diphenyl-1-picrylhydrazyl (DPPH) radicals scavenging activity while its methanolic extract found to inhibit lipid peroxide formation and to scavenge hydroxyl and superoxide radicals in vitro. In an in-vitro study its ethanol extract inhibited oxidative stress and the age-dependent shortening of the telomeric DNA length which is probably responsible for the development of duodenal ulcers. The fruit is also documented to showing inhibitory effect on cellular aging as well as anti-carcinogenic and chemopreventive activity¹⁶.

Guggulu (*Commifora mukul*) as rasayana

Guggulu (*Commifora mukul*) is known to have promising multi-purpose medicinal properties. Guggulu (*Commifora mukul*) extract shows anti-oxidant properties possibly by mediating protection against myocardial necrosis¹⁷. Guggulu shows antioxidant effect due to presence of active constituent Guggulsterone, which inhibits generation of oxygen free-radicals.

CONCLUSION

Rasayana therapy have very important role in Ayurveda. Rasayana dravyas influence various aspects of body such as Dhatu, agni, shrotas and Ojas. Various research works have been conducted to explore Rasayana properties of plants. Acharya Sharangdhara mentioned four plants as example of Rasayana. Current research article is made to compile Rasayana properties of these four Rasayanas based on research works. Recent researches have proved their Rasayana properties. Augmented by recent research works it is proved that Rasayana therapy is a wholesome therapy that is used to treat diseased persons as well as to maintain health of individuals. Rasayana is a unique branch of Ayurveda. It promotes the inner healing power of an individual and helps by over taking the pain and disease while promoting the immunity.

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