

Role of Rasayana Therapy in Prevention and Management of Ageing

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ABSTRACT

During the last two decades, the average life expectancy has shown an upward trend due to improved living conditions, better medical diagnosis and care, resulting in the increased population of aged people all over the world. Jara, an inescapable part of life, is of two types namely Kala-jara and Akala-jara. Kala-jara being Sahaja in nature is cherished by everyone but Akala-jara is unnatural and untimely inducing a set of physical and psychological problems. In Jarajanya-vikaras, Vata dosha is predominant, Pitta is irregular while Kapha is in a depleted state. This cascade of events targets the Vyadhikshamatva as well as the Satva of the Vriddha, submerging him in a sea of multiple pathology.

Rasayana therapy is one of the important branch of Ashtanga Ayurveda- especially designed for Vayahsthapana, Ayurmedhabalakara and above all for Rogapaharana samarthyā by replenishing the Rasa and other dhatus. This emphasize its utility in Geriatrics, where in all these vital factors are seen to be quite essential.

Key words: Ageing, rasayana.

INTRODUCTION

Strength of Ayurveda in the context of geriatric care is Rasayana therapy, which is unique because of its ability to promote

longevity and influence all aspects of health in a positive way. Acharya Charaka described Rasayana elaborately in the four padas of the first chapter of Chikitsasthana, while in Sushruta samhita it is described in 27-29 chapters of Chikitsasthana. Acharya Vagbhata places the Rasayana in the last chapter of Uttarasthana and introduced several newer drugs such as Rasona, Palandu etc. Charaka has elaborated the scope of Rasayana therapy thus--

न केवलं दीर्घमायुश्चतुष्पञ्चन जरां न च दौर्बल्यं नातुर्यं
निधनं न च।

The quality of best drug bahugunam is fit for Rasayana and makes it very much suitable for geriatric diseases.

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Defination

- (1) **लाभोपायो हि षस्तानां रसादीनां रसायनम् ।**
(च० चि० १/१/८६६)

That which bestows excellent rasa and other components. Rasayana is explained by Chakrapani in commentary on Cha.Chi.1 as-

**शभेशजाश्रितानां रसवीर्यविपाकप्रभापरमायुर्बलवीर्याणां
वयः स्थैर्यकरणाम् अयनं लाभोपायो रसायनम्”**

That which stabilizes age, deriving the best of Rasa, Virya, Vipaka and Prabhava of a drug and bestows long life, strength and vigour, is called Rasayana.

- (2) **रसायनं तन्त्रं नाम वयः स्थापनं आयुर्मेधाबलकरं
रोगापहरणं सामर्थ्यं च ।** (सु० सू० १/१५)

Rasayana performs the following functions

- (a) Maintaining youth.
(b) Enhancing lifespan, intellect and strength.
(c) Freeing from disease.
(3) **रसायनं च तज्ज्ञेयं यज्जराव्याधिनाशनम् ।**
(षा० पू० ४/१४)

Rasayana is that which cures the old age diseases or old age and diseases.

Rasayana is a specialized procedure practiced in the form of rejuvenative recipes, dietary regimen and special health promoting conduct and behaviour applicable to all ages from pediatrics to geriatrics.

Classification

(A) According to object

1. Kamyas- Rasayana (Promoter of normal health)
(A) Pranakamyas (Promoter of life-vitality and longevity)
(B) Medhakamyas (Promoter of intellect)
(C) Srikamyas Rasayana (Promoter of complexion and lusture)
2. Naimittika Rasayana (Promoter of specific vitality in specific diseases)

(B) According to method of use

1. Vatatapika Rasayana (Outdoor regimen)
2. Kutipravesika Rasayana (Indoor regimen)

(C) According to contents

1. Aushadha Rasayana (Drug Rasayana)
2. Ajasrika Rasayana (Dietary Rasayana)
3. Achara Rasayana (Conduct Rasayana)

Essential conditions for Rasayana therapy

1. Rasayana should be given after mridusamshodhana.

अविषुद्धे षरीरे हि युक्तो रसायनो विधि ।

वाजीकरो वा मलिने वस्त्रे रंग इवाफल ॥

(अ० सं० उ० ४१/४)

2. Rasayana chikitsa should be started at or before 40+ stage to get the desired effect.

क्षपूर्वे वयसि मध्ये वा

(अ० सं० उ० ४१/३) द्व

3. The ideal period for Rasayana chikitsa is “Visargakala” as it is meant to invigorate the body and dhatus.

4. The suitable Rasayana dravya has to be selected duly considering the factors like age, constitution and compatability of the individual.

Preventive aspects of Rasayana

1. Degeneration is an inevitable occurrence is a well known fact for all. In Ayurvedic literature, Vagbhata and Sharngadhara emphasized this progressive deterioration of bodily features decadewise, thereby setting milestones of ageing. To slow this degenerative speed, specific Rasayana for specific age-groups are described which help in restoring the loss of specific biovalues of the respective ages.

2. Immunomodulator effect [1]

In Modern system of medicine, drug research is mainly directed towards the microbes but in view of Ayurveda, it through the immunity of patients, particularly

Age group (in years)	Desired effect	Suitable Rasayana Drugs
1-10	Balya	Vacha, Kashmiri
11-20	Vridhhi	Ashvagandha, Bala
21-30	Chhavi	Amalaki
31-40	Medha	Shankhapushpi, Jyotishmati
41-50	Tvak	Bhringaraj, Somaraji
51-60	Drishti	Chakshushya, Saptamrita Lauha
61-70	Shukra	Atmagupta, Ashvagandha
71-80	Vikrama	Rasayana therapy is not much effective
81-90	Buddhi	
91-100	karmendriya	

T. cordifolia and A. racemosus stimulate the cells of the immune system profoundly. Thus, it was found that the single action of stimulating immune cells could be effected through activation of the PNI axis, leading to a wide variety of effects.

Psycho — — — — — Neuro — — — — —
 — — — — — Endocrine — — — — —
 — — — — — Immune

So, the Rasayana dravya not only recruited more soldiers against the pathogens but also armed them better by activating them.

Curative aspects of Rasayana

A number of Rasayana dravyas are used in the specific diseases to cure them known as Naimittika Rasayana. Those are-

Disease	Suitable rasayana dravya
Eye disease	Jyotishmati, Triphala, Shatavari, Yashtimadhu
Heart disease	Salaparni, Arjuna, Guggulu, Pushkaramula
Skin disease	Tuvaraka, Bhallataka, Vidanga, Somaraji
Yakshma	Rasona, Nagabala, Shilajatu, Pippali
Pandu	Lauha, Makshika, Mandura
Shvasa	Agastya rasayana, Bhallataka, Shirisha, Haridra
Amavata	Bhallataka, Kupilu, Rasona
Vatavyadhi	Rasona, Guggulu, Bala, Nagabala
Madhumeha	Shilajatu, Amalaki, Haridra, Jambu
Medo-roga	Guggulu, Haritaki, Pushkaramula, Vacha

The Ayurvedic texts describe a large number of Rasayana drugs both herbs and minerals to be used singly or as compounds. Certain Rasayana drugs are used in specialized increasing dosage schedule with or without special noncereal dietary regimen popularly called kalpa viz. Pippali - vardhmana - rasayana. Here we are describing some important Herbal Rasayana used by Acharya Charaka.

MEDHYA RASAYANA [2]

Though the promotion of medha is an important attribute of Rasayana, yet there are also some drugs which specially influence the medha. Acharya Charaka describes four drugs under the term Medhya - rasayana which are Mandukaparni, Yashtimadhu, Guduchi and Shankhapushpi.

Mandukaparni

Nervine tonic, Stomachic, Carminative, Cardiotonic Cardiac debility, Asthma, Fever, Bronchitis, Insomnia.

Research studies

Antidepressant effect

(1) Centella asiatica 20 ml. TDS for 3 months in 100 subjects showed significant improvement in mini-mental state test, anxiety level, mental fatigue rate [3].

(2) In male wistar rats, the aqueous extract of Centella asiatica decreased the Pentylentetrazole kindled seizures and improvement in learning deficit at the dose of 300mg/kg orally but showed improvement only in learning deficit at the dose of 100 mg/kg [4].

Yashtimadhu

Tonic, Intellect promoting, Immunomodulator Polydypsia, Cough, Bronchitis, Hoarseness of voice.

Research studies

(1) Antidepressant effect

Glycyrrhizin, dose 3mg/kg, significantly ($P < 0.001$) decreased the immobility periods in swiss albino mice in both forced swim and tail suspension tests [5].

(2) Lipid modulating effect

Significant decrease in BMI ($P < 0.055$) and in lipid hydroperoxides ($P < 0.05$) was observed at the dose of 2g (3.5 % glycyrrhizic acid content) for 12 wks. in peri/post menopausal women [6].

Guduchi

Rejuvenating, Expectorant, Anti-inflammatory, Antipyretic Fever, Diabetes, Anaemia, Jaundice, Diarrhoea, Dysentery, Gout etc.

Research studies

(1) Immunomodulatory action

It stimulates the macrophages (increase in no.) and % phagocytosis of *S. aureus* by peritoneal macrophages in rats [7].

(2) Antidiabetic effect

Daily administration of either alcoholic or aqueous extract of *T. cordifolia* decreases the blood glucose level and increases glucose tolerance in rodents [8].

(3) Effect on Rheumatoid arthritis

In trial of 77 patients, 40 received Shunthi and Guduchi decoction (50 ml TDS) and 37 received Yogaraja - guggulu, Vatagajankusha rasa and Maharasnadi kvatha for 6-8 wks. First was found to be more effective in reducing the pain and swelling than the second [9].

(4) Antioxidant activity

In a study, the combination of Shatavari rasa and Guduchi churna is found to decrease brain cell MAD level and blood SOD level in stress induced albino rats. It indicates that drug possess antioxidant property which destroy free radicals, produced by oxidative stress [10].

Shankhapushpi

मेध्या विषेशेण तु षंखपुष्पी ।

(च० चि० 1/3/31)

Acharya Charaka has quoted Shankhapushpi best among the Medhya rasayanas. It acts as-

Tonic, Intellect promoting Insomnia, Epilepsy, Psychic disorders.

Research studies

(1) Effect on CVS

The expressed juice of the plant caused fall in the arterial blood pressure of anaesthetized dogs. In larger dose it produced transient inhibitory effect on both force and rate of contraction of the heart [11].

(2) Effect on Psychological disorders

In a clinical study, *C. pluricaulis* provided significant relief in symptoms besides a quantitative reduction in anxiety level and neuroticism in the cases of anxiety neurosis.¹²

Triphala Rasayana

Triphala has been described in Charaka samhita as a Tridoshic rasayana (an therapeutic agent with balancing and rejuvenating effects on the Vata, Pitta and Kapha).

Amalaki

आमलकी वयः स्थापनानाम् ।

(च० सू० 25/40)

Acharya Charaka quoted it as the best among the Vayahsthapana drugs. Its other actions are -

Immunomodulator, Improves vision, Aphrodisiac Bleeding disorders, Hyperacidity, Diabetes and Burning sensation etc.

Research studies

(1) Antioxidant activity

An extract of fresh *E.officinalis* fruits was found to inhibit lipid peroxidation induced by gamma radiation in rat liver microsomes [13].

(2) Rasayana activity

Amalaki rasayana (5g BD) is found to reduce weight in obese and weight gain in cachexic subjects. Improvement in anxiety scale and a significant improved lipid profile (Decreased total cholesterol, LDL and increase HDL) was also observed [14].

(3) Antidiabetic property

In an open label, Nisamalaki (combination of *Curcuma longa* and *Emblica officinalis*) 1g. BD with water was administered to 100 patients of Diabetes mellitus for a period of 6 weeks. 45 % of patients showed good response i.e., >50% reduction in random blood sugar (RBS) levels and 38% showed fair response (50% reduction in RBS), where as 15% showed no response (<50% reduction in RBS) [15].

(4) Anticancer activity

- A simple aqueous extract of *E.officinalis* fruit was shown to protect mice against the

chromosome damaging effects of the well known carcinogen 3,4-benzo(a)pyrene [16].

- An aqueous extract of *E.officinalis* significantly reduce induced solid tumours in mice in a manner suggesting interaction with cell cycle regulation [17].

(5) Hepatoprotective activity

An extract of *P.emblica* fruit and the flavonoid constituent quercetin were shown to provide significant protection against liver toxicity caused by Ethanol and Paracetamol in vivo. Quercetin was more potent suggesting that it may be the main hepatoprotective constituent in the fruit [18].

Haritaki

आयुश्यां पौष्टिकीं धन्यां वयसः स्थापनीं पराम् ।

(च० चि० 1/1/30)

Laxative, Stomachic, Digestive, Purgative, Immunomodulator, Cardiotonic, Nervine tonic Constipation, Tastelessness, Indigestion, Haemorrhoides, Anaemia, Skin diseases.

Research studies

(1) Effect on intestine motility

T. chebula has been shown to speed up gastric emptying and to have a significant prokinetic effect on intestinal motility [19].

(2) Cardiotonic activity

Extracts of fruit pericarp have demonstrated cardiotonic activity in isolated frog hearts. The extracts had a positive inotropic action, increasing the force of contraction and cardiac output without increasing heart rate [20].

(3) Effect on gastric mucosa

T. chebula inhibited the development of experimental duodenal ulcers and appeared to exert a cytoprotective effect on the gastric mucosa in vivo [21].

(4) Effect on teeth

An aqueous extract of *T. chebula* has been investigated as a potential anticaries and antiplaque agent. The growth of *Streptococcus mutans*, directly involved in the development of dental caries through the production of enamel degrading acids, was strongly inhibited by the extract [22].

(5) Effect on cholesterol

All the 3 drugs of Triphala separately show to reduce hypercholesterolaemia and atherosclerotic changes in rabbits fed a diet high in cholesterol for 16 weeks. *T.chebula* demonstrated the most potent effects [23].

Bibhitaka

Astringent, Laxative, Germicidal, Antipyretic Cough, Tuberculosis, Eye diseases, Dyspepsia, Diarrhea, Dysentery, Liver diseases

Research studies

(1) Hepatoprotective activity

- Oral administration of a water soluble fraction of the fruit demonstrated significant hepatoprotective activity in vivo against experimental liver injury induced by CCl_4 , suggesting that plant extract may prevent the development of fatty liver [24].

- An alcoholic extract of the fruit was found to have a marked stimulant effect on the secretion of bile in vivo. The total solid content of bile was also increased [25].

(2) Effect on Respiratory system - An open clinical study in 93 patients suffering from respiratory conditions found that Bibhitaki had anti-asthmatic, anti-spasmodic, expectorant and anti-tussive effects [26].

(3) Antibacterial activity

Fruit extracts have anti-bacterial activity against *Micrococcus pyogenes* and *E.coli* [27].

CONCLUSION

In above study it was found that Dravyas of different rasa etc. are used for Rasayana karma. Their use are based on the different conditions of the body. Many researches have been done about the mode of action of Rasayana dravyas but it needs more and more deep study on different angles, so that it may be beneficial for human being as its indications are described in both healthy and diseased persons.

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