

ROLE OF RASAYANA HERBS AS IMMUNOMODULATOR

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ABSTRACT

Primary objective of health care is prevention of disease & promotion of health. Mainly there are two type of disease *Sharirak* and *Mansik* which can be better cured by the holistic approach. Thus preventive medicines are needed more as comparable to curative. In today's scenario life style has become very hectic which leads to exertion and as a result body is not able to cope up the essential nutrients. Life style related disease such as HTN, Diabetes, mental illness, addictions have emerged as challenge. To maintain health *Rasayana* as described by *Acharya Sharangdar* should be administered. *Rasayana* plants having immunomodulatory effect are described as specific anti-aging, improving quality of life with enhanced intelligence and memory, hence increase resistance towards various diseases. *Rasayana* plants possess immunomodulatory and immunostimulatory activities and there are abundant examples of such plants. To maintain a disease free state, modulation of immune response by either its stimulation or suppression, can be a helpful therapy.

Keywords: *Rasayana*, Immuno –modulator herbs, *Ayurveda*.

INTRODUCTION

Ayurvedic system of medicine describes the concept called *Rasayana* which is composed of two words *Rasa* & *Aayan*. *Rasa* is the *Dhatu* and *Aayan* means the path through which one can get the delaying ageing process, maintenance of youth, improvement of mental health and also removal of diseased conditions caused due to infectious organisms and also mental or physical stress. The precise meaning

of *Rasayana* is the therapeutics which promotes *Dhatus* –tissues of body and increase strength and immunity against disease. *Ayurvedic* herbs have medicinal quality providing rational means for treating disease and leads to healthy, peaceful and disease free life. The medicinal plants mentioned under *Rasayana* promote the quality of body tissues through *Poshak rasa*, *Agni* & *Strotas*. In many

of the diseased conditions, immune response is impaired. Immunity is the state of being immune from or insusceptible to a disease. Hence to maintain a disease free state, modulation of immune response either by its stimulation or suppression, can be a helpful therapy. The non –specific immune stimulation or immunopotiation can be caused with the use of some medicinal herbs. *Ayurvedic* concepts of preventive health care have shown certain links with non –specific immunostimulation by such medicinal plants. *Shtavari*, milk, ghee cause the enrichment of nutritional quality of nutrient plasma i.e. *Poshaka rasa*. Plants like *Bhallataka* and *Pippali* promote the nutrition by improving the digestive processes and metabolic activities i.e. *Agni*. Increasing the efficiency of micro-circulatory channels is caused by *Strotas*. They cause better availability of nutrient to the tissues. *Guggulu* is a typical example of such a drug which acts on *Strotas*.

NEED OF THESE DRUGS:

Life style in today scenario is very hectic. Every person is suffering from over exertion which can be either physical, mental or both. People are not taking appropriate diet which leads to poor nutrition of body. Tendency of lethargy is increasing day by day. All these factors as a result lead to depression, insomnia, recurrent illness etc. Proper *Rasayana* drugs according each decade as mentioned by *Acharya Sharangdhar* should be taken .So there will be better quality of life and im-

provement of all the body tissues and their nourishment.

MATERIAL AND METHOD

Different *Ayurvedic* classical books, research papers and journals were referred. Various concepts of *Rasayana* and role of herbal immunomodulator drugs in prevention and treatment of various diseases have been described.

WHAT IS RASAYANA?

It is composed of two words: RASA +AYAAN

RASA =*Rasa, Rakt Aadi Dhatu*

AYAAN = Means to achieve te excellent *Rasa, Raktaadi Dhatus*

Hence *Rasayana* means to achieve the excellent *Rasa, Rakdaati Dhatus*

- The science of *Rasayana* deals with anti-aging, cognitive strength ,longevity and gaining the strength to get rid of diseases⁽¹⁾
- *Rasayana* is that which results in proper nourishment of all the tissues⁽²⁾.

RASAYANA HERBS:

Rasayana herbs are described as specific anti-aging, improving life quality by enhancing intelligence and memory⁽³⁾, hence increases resistance towards various diseases suggesting that plant possessing the properties of immunomodulation and immunostimulation. Numerous single and compound *Rasayana* medicines possess diversified action. *Rasayana* drugs induce immune-stimulation and improve defense mechanisms against free radical damage⁽⁴⁾

Table 1: Rasayana Drugs with Immunomodulator Activity

Andrographis paniculata	Mangifera indica
Allium sativum	Picrorrhiza kurroa
Curcuma longa	Piper longum
Gmelina arborea	Randia dumatorum
Glycyrrhiza glabra	Silajatu
Hemidesmus indicus	Sphaeranthus indicus
Withania somnifera	Tinospora cordifolia

Table 2: Rasayana Drugs With Anti-Oxidant Activity

Asparagus racemosus	Piper longum
Bacopa monniera	Tinospora cordifolia
Boerhavia diffusa	Picrorrhiza kurroa
Centella asiatica	Curcuma longa
Convolvulus pluricaulis	Shilajit
Withania somnifera	Emblica officinalis

HERBAL PLANTS AS IMMUNOMODULATOR:

Herbal drugs exert their effect by modulating both humoral and cellular immune functions. They also have the capacity to control the production of proinflammatory mediators, thereby managing many inflammatory processes ⁽⁵⁾. Herbal immunomodulator is substances which stimulate or suppress the components of immune system including both innate and adaptive response. Various medicinal plants and various “Rasayana” have been claimed to possess immune-modulatory activity e.g. *Ashvagandha*, *Arjuna*, *Kutki*, *Guduchi* etc.

IMMUNOMODULATOR

Immunomodulator are the substances which weaken or modulate the activity of the immune system ⁽⁶⁾. Immunomodulation is a process which can alter the immune system of an organism by interfering with its functions and results in an enhancement of immune reactions

that in turn decrease the inflammatory response. Natural immunomodulator act to strength the weak immune system. Sterols and Sterolins are natural immunomodulator found in raw plants. They can either function as;

1. Immunosuppresants
2. Immunostimulants

MODE OF ACTION OF RASAYANA DRUGS ⁽⁷⁾

1. At the level of Rasa (*Poshak Rasa*)

They improve the nutrition as a result improving the nutrional value of Plasma

2. At the level of Agni

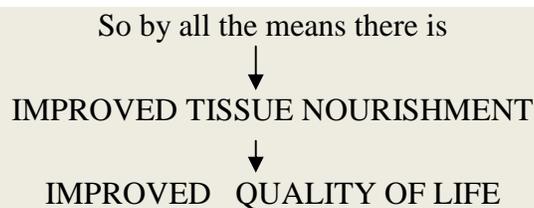
They improve digestion and metabolism thus improved nutrition is provided to the tissue.

3. *Strotas* improvement

By improving micro circulation thus cleaning the *strotas*.

4. *Dravya Prabhava*

Drugs produce specific type of *Rasayana* action by virtue of their specific potency.

**Table 3:** Rasayana Herbs for Specific Purposes ⁽⁸⁾

RESPIRATORY SYSTEM	<i>SIRISHA, AGASTYA, HARIDRA, HARITAKI</i>
CIRCULATORY SYSTEM	<i>SALAPARNI, ARJUNA, GUGGULU, PUSHKARAMULA</i>
ARTHRITIS	<i>RASONA, GUGGULU, ASWAGANDHA,</i>
NEUROPATHIES	<i>RASONA, GUGGULU, ASWAGANDHA</i>
EYE	<i>JYOTISHMATI, TRIPHALA, SATAVARI, AMALAKI, YASHTIMADHU</i>
DIABETES	<i>SILAJITU, AMALAKI, HARITAKI, TEJPATRA, METHIKA</i>
LIPID DISORDERS	<i>GUGGULU, HARITAKI, PUSHKARAMOOLA, VACA</i>
MEMORY DISORDERS	<i>BRAHMI, MANDOOKPARNI, JYOTISHMATI, KAPIKACHU, TAGARA</i>
SKIN DISEASES	<i>BHALLATAKA, VIDANGA, BAKUCHI</i>
HYPERTENSION	<i>RASONA, SARPAGANDA, ASWAGANDA, JATAMANSI</i>

- *Bala, Kashmari & Varahi* act as dietary adjuvants & are good for increasing the strength of tissues and organs
- *Pippali* acts as “Respiratory Rasayana”.
- *Lahsun* increases the tissue enzymes.
- *Haritaki* act as “Digestive Rasayana” by eliminating the waste products from the tissue, particularly from GIT.
- *Brahmi, Vach, Shankhpuspi, Mandukaparni* helps to increase intellect and memory.
- *Guggul* helps further digestion of waste products.
- *Amlaki* and *Guduchi* decrease the catabolic process and thus postponed ageing. Therefore, they are “Vayasthapak Rasayana” (Adaptogenic tonic).
- *Bhallataka* has a powerful immune promoting substance which overcomes many conditions like RA & some sages of malignancy.
- *Punarnava* promotes the kidney functions and improves the regenerating capacity of nephrons.

- *Shtavari* is best known as a female rejuvenative.

RASAYANA AS IMMUNOMODULATOR

One of the major uses of *Rasayana* drug is modulation of the immune response. Chronic stress has an immunosuppressive action which adversely affects the defence mechanism of the body. *Rasayana* drugs have wide spread clinical use, including diseases postulated to be induced by Oxidative Free Radicals. It is possible that, at least part of their therapeutic effects, are due to reduction of oxidative stress. Likewise, their anti-aging may be due to a similar mechanism. *Rasayana* are reported to have anti-oxidant action.

Mode of action of *Rasayana* as immunomodulator: One of the major uses of *rasayana* drugs is the modulation of the immune response, since chronic stress has an immunosuppressive action which adversely affects the defence mechanism of the body.

DISCUSSION

Rasayana drugs have *Madhur Vipak* mostly and retard the process of ageing probably by acting as free radical scavenger. These are rich in Vitamin C, Vitamin E, Beta carotene, riboflavin. So these substances are capable of counteracting the damaging effect of oxidation. So they work as anti-oxidants. In *Amalaki* main constituents are Vitamin C, carotene, riboflavin. So it has role in cellular oxidation reduction. Withanolide in *Ashwagandha* increase levels of three natural anti-oxidants like super oxide, dismutase, Catalase, Glutathione peroxidase & helps to prevent damage of cells. So work to prevent aging process. Experimental studies have proved *Rasayanas* to be anti-toxic and anti-infective drugs. *Ashwagandha* (*withania Somnifera*), *Vacha* (*Acorus Calamus*), *Brahmi* (*Centella asiatica*) improves antioxidant levels & reduced oxidative damage of nervous system⁽⁹⁻¹²⁾ *Amalaki* (*Embelica Officinalis*), *Shatavari* (*Asparagus racemosus*), all improves GIT functions & have very good hepatotoxic activity⁽¹³⁻¹⁶⁾. *Rasayana* as immunomodulator herbs are perhaps the only ‘wonder’ drugs that can be taken safely for long stretches of time, even in a healthy state, without any specific contradictions. Several plants find mention in *Ayurveda* which are used in *Rasayana* therapy and found to have significant stress –attenuating effects. *Charaka* has described *Cyavanprasa* which rejuvenated *Cyavana Risi* whereas *Susruta* described many *Rasayana* formulations that increase the life span and refers to them as *Ayuskara*.

CONCLUSION

The term *Rasayana* does not only refer to a drug or a therapy but to a comprehensive dis-

cipline which may of course include a therapy. It is a multi-angled approach taking care of the body, mind and spirit, thus affecting total wellbeing of an individual. A *Rasayana* herb nourishes body, boosts immunity, strength, resistance, quality and quantity of *Ojas*, which is the *Saar* of all *Dhatus* restore spirit, vitality and thereby attain the longevity. *Rasayana* as immunomodulator are now considered as one of the most potent tools in the management of health and disease as objective of immune enhancement is achieved through the use of *Rasayana* drugs.

REFERENCES

1. Sushruta Samhita with Nibandh Sangraha by Dalhan, Chaukhambha Orientalia.S.Su.1/15
2. Charaka Samhita with Ayurveda Dipika by Chakrapani, Chaukhambha Sanskrit Samsthana, Varanasi C.Ci.1/7-8
3. Charaka Samhita with Ayurveda Dipika by Chakrapani, Chaukhambha Sanskrit Samsthana, Varanasi C.Ci.1/7-8
4. Rege NN, Thatte UM, Dahanukar SA. Adaptogenic properties of six Rasayana herbs used in Ayurvedic medicine. *Phytother Res* 1999Jun; 13(4):275-91
5. Spelman K, Burns J, Nichols D, Winters N, Ottersberg S, Tenborg M. Modulation of cytokine expression by traditional medicines: a review of herbal immunomodulators. *Altern Med Rev* 2006; 11:128-50.
6. [http://medical/dictionary.thefreedictionary.com/immunomodulator.](http://medical/dictionary.thefreedictionary.com/immunomodulator)
7. Joshi YG, Rasayana Chikitsa. Kayachikitsa; Pune, PuneSahitya Vitaran; Edition 4th2001;3560
8. Journal of research in Ayurvedic Sciences, Published by CCRAS ,p.56-55
9. Bhattacharya SK, Muruganandam AV, Adaptogenic activity of *Withania somnif-*

era: an experimental study using a rat model of chronic stress. *Pharmacol Biochem Behav*, 2003; 75: 547-555

10. Shukla PK, Khanna VK, Ali MM, Maurya RR, Handa SS, et al. Protective effect of acorus calamus against acrylamide induced neurotoxicity. *PhytotherRes*, 2002; 16: 256-260.
11. Prasad L, Khan TH, Jahangir T, Sultana S, Acorus calamus extracts and nickel chloride: prevention of oxidative damage and hyperproliferation response in rat kidney. *Biol Trace Elem Res*, 2006; 113: 77-92.
12. Sairam K, Rao CV, Goel RK, Effect of *Centella asiatica* Linn on physical and chemical factors induced gastric ulceration and secretion in rats. *Indian J Exp Biol*, 2010; 39: 137-142.
13. Lee CY, Peng WH, Cheng HY, Chen FN, Lai MT, et al. Hepatoprotective effect of *Phyllanthus* in Taiwan on acute liver damage induced by carbon tetrachloride. *Am J Chin Med*, 2006; 34: 471-482.
14. Chen TS, Liou SY, Chang YL Supplementation of *Emblica officinalis* (Amla) extract reduces oxidative stress in uremic patients. *Am J Chin Med*, 2009; 37: 19-25.
15. Al-Rehaily AJ, Al-Howiriny TA, Al-Sohaibani MO, Rafatullah, Gastroprotective effects of 'Amla' *Emblica officinalis* on in vivo test models in rats. *S Phytomedicine*, 2002; 9: 515-522.
16. Thorat SP, Rege NN, Naik AS, Thatte UM, Joshi A, et al. *Emblica officinalis*: a novel therapy for acute pancreatitis--an experimental study. *HPB Surg*, 1995; 9: 25-30.

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