



THE HUMAN IMMUNITY AND THE ROLE OF RASAYANA DRAVYAS FROM RAJ NIGHANTU

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ABSTRACT-

Ayurveda is the most ancient and well documented system of medicine which has two aims-maintenance of positive health and the cure of diseases. In current scenario, we are faced with a host of health problems. The herbs which are used to enhance the resistance of body against infections have been a leading theory of Ayurveda and for this there is an independent group of immunomodulatory drugs called as Rasayana. According to modern science, Rasayana can be compared to anti-oxidant, anti-stress, immunomodulatory drugs etc. Immunomodulatory drugs alter the response of the immune system by promotion of health as well as prevention and extermination of the diseases. Antioxidant drugs are having ability to put a break on the oxidation that damages the cells. Similarly in Ayurveda, Rasayana dravyas are also act at various levels like Rasa, Agni and Srotasa.

Ayurveda is not just science that deals with diseases and their treatment. It is a way of life that describes how to stay healthy and improve longevity. Raj Nighantu is one of the our ancient literature textbook of ayurveda and it has mentioned 37 dravyas as Rasayana. So, screening of Rasayana dravyas from Raj Nighantu can provide useful information to medical practitioners. These Rasayana dravyas can ultimately become useful in healthy individuals and in patients suffering from various infections or diseases in maintaining and enhancing their natural immunity. Here an effort has been carried out to explore the mode of action of Rasayana herbs listed in RajNighantu . Also this paper makes an attempt to study Rasapanchkas of these Rasayana dravyas to assess their probable mode of action as Rasayana.

Key Words: Rasayana, Immunity, Raj Nighantu, Raspanchaka , Immunomodulator.

Introduction

Everyday our body comes in contact with several pathogens, but only a few results into diseases. The reason is, our body has the defence mechanism against these pathogens called immunity.

Ayurveda is a traditional medicine system with a special mention of immunity along with various tips on how to improve it . Ayurveda is not just science that deals with diseases and their treatment. It is a way of life that describes how to stay healthy and improve longevity. For the same reason, most of the classical texts in Ayurveda dedicates itself to the prevention of diseases, ways to stay healthy and improving immunity, before digging into diseases and its treatment. Acharya Charaka says, "Swasthasya SwasthyaRakshanam", that is the primary focus of Ayurveda is preserving the health of healthy persons. Now, this gains more importance during this modern era, when we are encountered with new viruses and pathogens on a daily basis and have to survive such odds. The role of Ayurveda in immune protection cannot

be emphasised enough. The preventive measures described in Ayurveda against diseases indirectly results in boosting up the immunity of the individual.

Rasayana Chikitsa (rejuvenation) is a inimitable branch of Ayurveda. The word “Rasayana” means the way for attaining excellent Rasadi Dhatus. In Ayurveda, one of the major methods of presentation of positive health has been described i.e. Rasayana. The ultimate aim of Rasayan therapy is to correct dosha disturbances and improve Agni and Dhatu function which overall improves strength, immunity. Basically, the application of Rasayan therapy comes in the perspective of premature ageing (Jara) and death. Rasayanas are used as preventive, curative and health promotive purpose. Rasayana Dravyas acts at various levels i.e. Rasadi dhatu , Agni and srotas means at the level of cellular metabolism and improve the metabolic activities of the body and ultimately immunity.

On Screening most of the rasayana dravyas ,we studied their Rasapanchakas- Rasa ,Guna, Veerya , Vipaka and Doshik Karma .It will help in knowing their mode of action as a Rasayana .

Aims and Objectives

- [1] To Review dravyas mentioned as Rasayana in sutras of Raj Nighantu
- [2] To Study action of above selected dravyas as an immunity modulator or immunity booster.
- [3] To classify the dravyas on the basis of Rasadi properties, Doshagnata and also specific pharmacological actions responsible for Rasayana karma.

Material & Methods

Materials

- Raj Nighantu of Pandit Narahari edited with ‘ Dravyagunaprakashika ‘ Hindi commentary by Dr.Indradeva Tripathi
- Pubmed and Google web search regarding Rasayana action.

Methods

- The drugs are collected from different Vargas of Rajanighantu of Pandit Narahari (in 17th Century A.D.) Hindi commentary by Dr.Indradeva Tripathi
- Main focus is made only on the Rasayana dravyas which are described in Shloka form. Dravyas mentioned as Rasayana in sutras from Rajanighantu are enlisted.
- The review of the selected Rasayan dravyas from Rajanighantu for their Rasadi properties, Doshagnata, Sanskrit names, Latin names and its Rasayana related Pharmacological Activity were taken.
- The Pubmed and Google scholar web search of enlisted Rasayana dravyas was done for their Rasayana action as per the modern pharmacology.
- The classification of dravyas on the basis of above review was done. Rasayana on the basis of their Rasadi properties, Doshagnata and modern pharmacology.

RAJ NIGHANTU

The book is known as 'Raj Nighantu', written by Shri. Narhari Pandit of Kashmir was originally named as "Abhidhan Cudamani" or Dravyabhidhan-gana-Sangraha".His date may be placed in 17th century A.D. i.e. after Bhavamishra.

Hindi commentary named 'Rajanighantu' of pandit Narahari written by Dr. Indradeva Tripathi. This Nighantu is divided in to 23 Vargas.

Table 1: Raj Nighantu Vargas

Sr.No.	Name of Vargas	Dravyas Includes in Vargas of Raj Nighantu
1.	Anupadi Varga	Description of Desha , Kshetra
2.	Dharanyadi Varga	Description of Bhumi ,Parvat ,Vana-Upvana
3.	Guduchyadi Varga	52 Dravyas (Climbers)
4.	Shatavhadi Varga	80 Dravyas (large herbs)
5.	Parpatadi Varga	60 Dravyas(Small herbs)
6.	Pippalyadi Varga	66 Dravyas (Description of various spices)
7.	Mulakadi Varga	105 Dravyas (mool, kanda ,phal , patra,shaka)
8.	Shalmalyadi Varga	59 Dravyas (Spinous medicinal plants)
9.	Prabhadradi Varga	47 Dravyas(Big Trees)
10.	Karveeradi Varga	41 Dravyas (Flowering Plants)
11.	Amradi Varga	110 Dravyas(Fruiting trees)
12.	Chandanadi Varga	47 Dravyas (Aromatic Plants)
13.	Suvarnadi Varga	45 Dravyas(Dhatu ,Ratna,Upratna)
14.	Paniyadi Varga	Description of rivers , ocean , ikshu, madhu ,asava-arishta
15.	Kshiradi Varga	Description of Dugdh ,Dadhi ,Ghrita,Navneeta,Takra
16.	Shalyadi Varga	Description of Dhanya , Kodrav etc.
17.	Mamsadi Varga	15 types of Pratud Mamsa
18.	Manushyadi Varga	Description of names of stri , purush , Napunsak, Names of Body Parts
19.	Sinhadi Varga	Description of 171 animals
20.	Rogadi Varga	Description 64 types of roga, Chatushpad, Pathya ,Rasa
21.	Satvadi Varga	Description of Triguna ,Tridosha ,Kaal ,Disha ,Ritu bhed
22.	Mishrakadi Varga	Description of 61 Mishrak ,Sandhan Varga
23.	Athaikarthadi Varga	Description of 1-11 arth Dravya

Table 2: List of Dravyas along with their Latin Name and Family

Sr.No.	Drug	Botanical Name	Family
1.	Gokshura	Tribulus Terrestris	Zygophyllaceae
2.	Shitavari	Blepharis edulis	Acanthaceae
3.	Shatavari	Asparagus racemosus	Liliaceae
4.	Jayantikrushna	Sesbania aegyptica	Leguminosae
5.	Bhrungaraj	Eclipta prostrata	Asteraceae
6.	Mahashravani	Sphaeranthus indicus	Compositae
7.	Gruhakanya	Aloevera indica	Liliaceae
8.	Rudanti	Cressa cretica	Convolvulaceae
9.	Vandak	Dendrophthoe falcata	Loranthaceae
10.	Civilli	Portulaca oleracea	Portulacaceae
11.	Dugdhapheni	Taraxacum officinale	Asteraceae
12.	Hansapadi	Adiantum lunulatum Burm F.	Polypodiaceae
13.	Neel Punarnava	Trianthema portulacastrum	Aizoaceae
14.	Shweta Marich	Piper nigrum	Piperaceae
15.	Rakta Chitrak	Plumbago indica linn.	Plumbaginaceae
16.	Lal Sahijan (Raktashigru)	Moringa concanensis	Moringaceae
17.	Rasona	Allium Sativum	Liliaceae
18.	Varahi kanda	Dioscorea bulbifera	Dioscoreaceae
19.	Krushna Musali	Curculigo orchioides	Amaryllidaceae
20.	Mocharasa	Salmalia malbarica	Bombacaceae
21.	Ingudi	Balanites aegyptiaca	Balanitaceae
22.	Sugandha Truna	Cymbopogon martinii Roxb.	Gramineae
23.	Ketaki	Pandanus odoratissimus	Pandanaceae
24.	Neel kamal	Nelumbo nucifera	Nelumbonaceae
25.	Jala Madhuk	Bassia longifolia	Sapotaceae
26.	Amalaki	Emblica officinalis	Euphorbiaceae
27.	Haritaki	Terminalia chebula	Combretaceae
28.	Guggul	Commiphora mukul	Burseraceae
29.	Rohini	Soymida febrifuga	Meliaceae
30.	Suvarna	Auram	-
31.	Vanga	Stannum	-
32.	Peeta Gandhak	Sulphur	-
33.	Shilajit	Asphaltum punjabinum L.	-
34.	Parad	Mercury	-

35.	Manikya	Ruby	-
36.	Suryakant mani	Sunstone	-
37.	Vajra	Diamond	-

Table 3: List of Dravyas along with their Rasapanchak

Sr. No.	Dravyas	Rasa	Veerya	Vipaka	Guna	Doshik Karma	Varga
1.	Gokshura	Madhur	Sheeta	Madhur	Guru Snigdha	Tridosahar	Shatavhadivarga
2.	Shitavari	Kashay Tikta Madhur	Ushna	Madhur	Guru Snigdha	Tridosahar	Shatavhadivarga
3.	Shatavari	Madhur Tikta	Sheeta	Madhur	Guru Snigdha	Vatapittahara	Shatavhadivarga
4.	Jayanti krushna	Tikta Katu	Ushna	Katu	Laghu Ruksha	Tridosahar	Shatavhadivarga
5.	Bhrungaraj	Katu Tikta	Ushna	Katu	Laghu Ruksha	Kaphavatahar	Shatavhadivarga
6.	Mahashravani	Tikta Katu Madhur	Ushna	Katu	Laghu Ruksha	Tridosahar	Parpatadivarga
7.	Gruhakanya (Ghrutkumari)	Tikta Madhur	Sheeta	Katu	Guru Snigdha	Tridosahar	Parpatadivarga
8.	Rudanti	Katu Tikta	Ushna	Katu	Laghu Ruksha	Vatakaphahar	Parpatadivarga
9.	Vandak	Tikta Kashay Madhur	Sheeta	Katu	Laghu Ruksha	Tridosahar	Parpatadivarga
10.	Civilli	Amla Kashay	Ushna	Katu	Guru Ruksha	Vatakaphahar	Parpatadivarga
11.	Dugdha pheni	Tikta Katu	Ushna	Katu	Laghu Ruksha	kaphapittahar	Parpatadivarga
12.	Hansapadi	Kashay Katu	Ushna	Madhur	Guru	kaphapittahar	Parpatadivarga
13.	Neel Punarnava	Tikta Katu	Ushna	Katu	Laghu Ruksha	Vatakaphahar	Parpatadivarga
14.	Shweta Marich	Katu	Ushna	Katu	Laghu Tikshna	Vatakaphahar	Pippalyadivarga
15.	Rakta Chitrak	Katu	Ushna	Katu	Laghu Ruksha Tikshna	Kaphavatahar	Pippalyadivarga
16.	Lal Sahijan (Raktas higr)	Katu Tikta	Ushna	Katu	Laghu Ruksha Tikshna	Kaphavatahar	Mulakadivarga
17.	Rasona	Madhur Tikta Kashay	Ushna	Katu	Snigdha Tikshna Guru	Vatakaphahar	Mulakadivarga

		Katu Lavan			Picchila Sara		
18.	Varahi kanda	Katu Tikta Madhur	Ushna	Katu	Laghu Snigdha	Vatakaphahar Pittavardhak	Mulakadivarga
19.	Krushna Musali	Madhur Tikta	Ushna	Madhur	Guru Snigdha Picchila	Vatapittahar	Mulakadivarga
20.	Mochar asa	Kashay	Sheeta	Madhur	Laghu Snigdha Picchila	kaphapittahar	Shalmalyadivarga
21.	Ingudi	Katu Tikta	Ushna	Katu	Laghu Snigdha	Kaphavatahar	Shalmalyadivarga
22.	Sugandha Truna	Tikta Katu	Ushna	Katu	Laghu Ruksha Tikshna	Kaphavatahar	Shalmalyadivarga
23.	Ketaki	Katu Madhur Tikta	Ushna	Katu	Laghu Snigdha	Tridosahar	Karveeradivarga
24.	Neel kamal	Madhur Tikta Kashay	Sheeta	Madhur	Laghu Snigdha Picchila	kaphapittahar	Karveeradivarga
25.	Jala Madhuk	Madhur	Sheeta	Madhur	Guru	Vatapittahar	Amradivarga
26.	Amalaki	Madhur Tikta Kashay Katu Amla	Sheeta	Madhur	Guru Ruksha Sheeta	Tridosahar	Amradivarga
27.	Haritaki	Madhur Tikta Kashay Katu Amla	Ushna	Madhur	Laghu Ruksha	Tridosahar	Amradivarga
28.	Guggul	Tikta Kashay Katu	Ushna	Katu	Laghu Ruksha Tikshna Vishad	Vatahar	Chandanadivarga
29.	Rohini	Katu Tikta Kashay	Sheeta	Katu	Laghu Ruksha	Tridosahar	Chandanadivarga
30.	Suvarna	Kashay Tikta Madhur	Sheeta	Madhur	Laghu Snigdha	Tridosahar	Suvarnadivarga
31.	Vanga	Katu Tikta Kashay Lavan	Ushna	Katu	Laghu Ruksha Sara Chala	Pittahar	Suvarnadivarga
32.	Peeta Gandhak	Katu Madhur	Ushna	Katu	Sara Snigdha Laghu	Kaphavatahar	Suvarnadivarga
33.	Shilajit	Madhur Katu	Ushna	Madhur	Snigdha Laghu	Kaphavatahar	Suvarnadivarga
34.	Parad	Shadras	Ushna	Madhur	Sara Snigdha	Tridosahar	Suvarnadivarga

35.	Maniky a	Madhur	Sheeta	Madhur	Snigdha	Vatapittahar	Suvarnadivarga
36.	Suryak anta mani	Madhur	Ushna	Madhur	Snigdha Ushna	Vatakaphahar	Suvarnadivarga
37.	Vajra	Shadras	Ushna	Madhur	Snigdha Kathin	Tridosahar	Suvarnadivarga

Table 4: Rasayana Dravyas as per their rasa

Rasa	Number of Dravyas
Madhur	4
Madhur-Tikta	3
Madhur-Katu	2
Madhur-Tikta-Kashay	4
Madhur-Katu-Tikta	3
Katu	2
Katu-Tikta	8
Katu-Tikta-Kashay	2
Kashay	1
Amla-Kashay	1
Kashay-Katu	1
Katu-Tikta-Kashay- Lavan	1
Shadras	2
Amlarahit pancharas	1
Lavanrahit panchras	2

Table 5: Rasayana Dravyas as per their Veerya

Virya	No. of Dravyas
Ushna	26
Sheeta	11

Table 6: Rasayana Dravyas as per their Vipaka

Vipaka	No. of Dravyas
Madhur	16
Amla	0
Katu	21

Table 7: Rasayana Dravyas as per their Doshghnata

Doshagnata	No. of Dravyas
Tridosahar	13
Kapha-Vatahar	14
Vata-Pittahar	4
Kapha-pittahar	4
Pittahar	1
Vatahar	1

Table 8: Rasayana Dravyas along with their related pharmacological activity responsible for Rasayana Karma

Sr.No.	Dravyas	Related Pharmacological Activity Responsible for Rasayana Karma
1.	Gokshura(13)	Immunomodulatory
2.	Shitavari(14)	Antioxidant , Antimicrobial
3.	Shatavari (2)	Antioxidant, Immunomodulatory Adaptogenic Rejuvenative
4.	Jyantikrushna (36)	Antioxidant
5.	Bhrungaraj (3)	Antioxidant
6.	Mahashravani(15)	Antioxidant, Immunomodulatory
7.	Gruhakanya(16)	Antioxidant, Immunomodulatory
8.	Rudanti (17)	Antioxidant
9.	Vandak(18)	Antioxidant, antimicrobial
10.	Civilli (19)	Antioxidant
11.	Dugdhapeni (20)	Antioxidant, Hepatoprotective
12.	Hansapadi (21)	Antioxidant
13.	Neel Punarnava (22)	Antioxidant ,Anticarcinogenic
14.	Shweta Marich(23)	Antioxidant,Anti-tumour
15.	Rakta Chittrak (24)	Antioxidant
16.	Lal Sahijan (Raktashigru)(25)	Antioxidant
17.	Rasona(4)	Antioxidant, Immunomodulatory Anti-tumour
18.	Varahi kanda(5)	Antioxidant,Antimicrobial
19.	Krushna Musali(26)	Immunomodulatory Aphrodisiac Antistress
20.	Mocharasa(27)	Antioxidant, Antiangiogenic Hepatoprotective
21.	Ingudi (28)	Antioxidant, Hepatoprotective
22.	Sugandha Truna(29)	Antioxidant,Antimicrobial
23.	Ketaki (30)	Antioxidant,Cardiotonic
24.	Neel kamal (31)	Antioxidant,Cytoprotective
25.	Jala Madhuk(37)	Antioxidant
26.	Amalaki (32)	Antioxidant Immunomodulatory
27.	Haritaki(7)	Antioxidant Immunomodulatory Anti-aging,Adaptogenic
28.	Guggul (8)	Antioxidant
29.	Rohini (33)	Antioxidant Aphrodisiac
30.	Suvarna(9)	Immunomodulatory Nootropic
31.	Vanga(34)	Antioxidant
32.	Peeta Gandhak(10)	Immunomodulatory
33.	Shilajit(11)	Antioxidant Immunomodulatory
34.	Parad(12)	Immunomodulatory
35.	Manikya(38)	Antioxidant
36.	Suryakanta Mani(39)	Antioxidant

37.	Vajra (35)	Immunomodulatory Antioxidant Adaptogenic Anti-stress
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Observations

- I. Total 37 Rasayana dravyas are found from Raj Nighantu from which 29 dravyas are from plant origin and 8 are from rasaushadhi.
- II. 5 dravyas are from Shatavhadi Varga and 8 from Parpatadi Varga, 2 from Pippalyadi Varga, 4 from Mulakadi Varga, 3 from Shalmalyadi Varga and 2 from Karveeradi Varga, 3 Dravyas from Amradi Varga ,2 Dravyas from Chandanadi varga , 8 Dravyas from Suvarnadivarga
- III. Out of 37 Rasayana dravyas, 4 dravyas have Madhur rasa, 3 dravyas have Madhur -Tikta rasa , 2 dravyas have Madhur Katu rasa, 4 dravyas has Madhur ,Tikta ,Kashay rasa,3 dravyas has Madhur Katu Tikta rasa, 2 drugs have Katu rasa. 8 dravyas have Katu Tikta rasa, 2 dravyas have Tikta - Katu Kashay rasa, 1 dravyahas Kashay rasa, 1 dravya has Amla Kashay rasa, 1dravya has Katu- Kashay rasa, 1 dravya has Katu - Kashay -Tikta-Lavan rasa, 2 dravyas have Shadrassa, 1 dravya has Amala rahit pancharasa, 2 dravyas have Lavan rahit panchrasa.
- IV. 26 dravyas have Ushna Veerya and 11 dravyas have Sheeta Veerya.
- V. From these 37 dravyas, 16 dravyas have Madhur Vipak and 21 dravyas have Katu Vipak, and not a single dravya has Amla Vipaka
- VI. Out of this 37 Rasayana dravyas, 13 dravyas have Tridoshaghna property, 14 dravyas have Kapha Vata Shamak property, 4 dravyashave Vata- Pitta Shamak property, 4 dravyas have Kapha-Pitta Shamak property ,1 dravya has Vatahar property and 1 Dravya has Pittahar property.
- VII. Out of 37 Rasayana dravyas, 32 dravyas are Antioxidants, 14dravyas have Immunomodulatory action, 2 dravyas are Adaptogenic, 1 dravya is Nootropic, 2 dravyas have Anti-stress action , 2 dravyas have rejuvenative property.

Discussion

In the present study effort has been taken to compile pharmacological action of Dravyas related to immunity modulator, immunity enhancer from the classics Raj Nighantu . Rasayana act at three levels of the bio-system to promote nutrition, at the level of Agni -by promoting digestion and metabolism, at the level of Srotas -by promoting microcirculation & tissue perfusion and at the level of Rasa itself by acting as direct nutrient.The integrity of channels is equally important for the distribution of Ojas to the Dhatus.In Ayurveda it has been cited that more the amount of Oja more the Rasayana action. It nourishes the Saptadhatu and thus helps in increasing Ojas .Rasayana is improve metabolic processes , which results in the best possible biotransformation and produce best quality body tissues,eradicate senility and thus help prevent disease of old age.

According to Raspanchaka of Rasayana dravyas 8 dravyas have Katu tikta rasa and 4 dravyas have Madhur Rasa, 21 dravyas have Katu Vipaka and. 26 dravyas have Ushna Veerya. 11 dravyas have Sheet Veerya.13 dravyas have Tridoshaghna / Tridoshar property, 14 dravyas have Kapha-Vata shamak property.

Maximum dravyas which are screened from Raja Nighantu have Katu and Tikta Rasa; Katu Vipak: Ushna Veerya , Tridoshashamak & Kaphavatahar . Most of the Dravyas are Tridoshashamak that balances Tridoshas and revitalises the body.

Most of the Rasayana dravyas from RajNighantu are Antioxidants, and have Immunomodulatory action, Adaptogenic property.

Conclusion

Out of 37 dravyas screened from RajNighantu, most of the dravyas are from Parpatadi Varga and Suvarnadi varga, they have Madhur, Tikta or Katu Ras as a Pradhan Rasa. Madhur and Katu Vipaka and Ushna Veerya with Laghu - Snigdha or Laghu Ruksha Guna. Tridosahara and Kapha-vatahar Karma are predominant amongst the Rasayana dravyas group. Out of 37 Rasayana dravyas, 32 dravyas are Antioxidants, 14 dravyas have Immunomodulatory action, 2 dravyas are Adaptogenic, 2 dravyas have Anti-stress action, 2 dravyas have rejuvenative property. As per the modern science Antioxidant and immunomodulatory property is responsible for rejuvenation, which validates that Rasayana dravyas explained by Raj Nighantu are supported by modern pharmacology. Rasayana therapy is not a simple drug therapy but is a specialized therapeutic procedure implicating the fundamental concept of ayurveda. Regular use of these promotes life, maintains positive health, and preserves youth and cure morbid disease. It maintains proper balance amongst Vata, Pitta, Kapha. It can be stated that Rasayana Chikitsa is a boon given by Ayurveda to the world.

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