

REVIEW ABOUT SWARNA KALPAS IN RAJAYAKSHMA

¹Surya Rani.S,²Anand.S

¹P.G Scholar,²Assistant Professor

^{1,2}Department of Rasasastra and Bhaishajya Kalpana, Government Ayurveda College, Thiruvananthapuram, Kerala.

Abstract

Rasasastra, which is considered as Ayurvedic alchemy, deals with the use of minerals, metals, gemstones, their processing and application of these substances in *Rasa* and *Rasayana karmas*. *Rasa* preparations are more advantageous than other Herbal preparations because of its quick action, smaller dose and with excellent therapeutic properties. In *Rasasastra*, many formulations are used for *Rasayana chikitsa* that contain *Parada* along with other metals. A formulation that contain *Swarna* as one of the prime content is termed as *Swarna Kalpas*. This work mainly aims to review about *Swarna* containing formulations mentioned in *Rasendra Sara Sangraha* and *Bhaishajya Ratnavali, Rajayakshma Prakarana*. This helps in proper selection of dosage form with accurate dose, proper vehicle and adopting it in to clinical practice give a new hope in the treatment of *Rajayakshma*.

Keywords : *Rasasastra, Rasayana, Swarna kalpa, Rajayakshma, Swarna bhasma*

Introduction

Swarna is one of the precious metals used by man till date. In ancient times, the use of Gold as medicine totally unknown to man. Later by the development of Medicinal system, various processing techniques of metals and minerals were evolved. Thus *Swarna* was began to use in different forms like *Ghrishta Swarna, Swarna patra, Swarna churna, Swarna lavana* and *Swarna bhasma*¹. *Swarna* is having *Kashaya Tikta Madhura Rasa*², *Sheetha Veerya*^{1,2}, *Madhura Vipaka*^{1,2,3} and *Tridosha shamana*^{2,3} Property. It shows *Karmas* like *Brimhana* (Nourishing), *Vrishya* (Aphrodisiac), *Medhyam* (promotes intellect), *Rochana* (improves taste) *Deepana* (promotes digestive power), *Swarakara* (improves voice), *Rasayana* (Rejuvenative), *Garbha sthapana*¹ (stabilize pregnancy), *Vishagadhahara* (removes toxins), *Ayushya, Smrithikara* (improves memory), *Balakara* (promotes strength)³.

Rajayakshma, consist of group of diseases otherwise called *Rogarat*, that occurs due to *Dushti* of *Tridosha* and *Sapta dhathus*. According to *Acharya Charaka*⁴, the *Nidanas* like *Sahasa, Vagasandharana, Kshaya, Vishamashana* cause *Vatha dushti* and inturns vitiates *Kapha* and *Pitha*. This leads to derrangement of *Agni* along with Obstruction of *Rasavaha srothas*. It blocks Nourishment to further *dhathus* leads to *Dhatu kshaya*. *Acharya Charaka* included *Rajayakshma* as one of the *Ashtamahagadas*⁵, the diseases which are difficult to cure.

In Ayurveda, the term *Rajayakshma* that covers broad spectrum of Diseases. As we compare with this disease with Modern terms, it can be correlated with Tuberculosis. Tuberculosis is the second most leading cause of death worldwide, killing nearly about two million people every year and it is an infectious disease usually caused by a Bacteria called *Mycobacterium tuberculosis*⁶. It generally affects the lungs, may affect other parts of the body. Tuberculosis patients shows common symptoms like loss of appetite, fatigue, weight loss which was almost similar to *Lakshanas* of *Rajayakshma*. In Modern medicine treatment options include First line antitubercular medications includes Streptomycin, Rifampicin, Pyrazinamide, Second line medications includes Capreomycin, Cycloserine along with Vitamin B supplement. The wide spread use of Antitubercular agents⁷ leads to bacterial mutation, causes bacterial resistance towards the drug. This is the main reason behind introducing multidrug treatment regimen and it is the considered as standard treatment for Tuberculosis. According to WHO⁷, there was about 480,000 cases of Multidrug resistant Tuberculosis were detected in 2013 worldwide. So experts says that with in 50 years multi drug resistant TB will replaced with Non resistant Tuberculosis.

Rajayakshma is a disease in which there is depletion of *dhathus* along with decreased vitality. The *Pureesha* (Faecal matter) itself stands as *Bala* for *Rajayakshma Rogi*. There is no proper *Rasadhatu* formation due to derranged *Dhatwagni* and thus subsequent transformation in to further *dhathus* got interrupted. So *Swarna* is the apt drug suits to this condition. The *Rasayana, Brihmana, Deepana* properties of *Swarna* helps to regain *dhathu* and vitality of *Rajayakshma* Patient.

Aims and Objectives

This study aims to review about *Swarna kalpas* in *Rajayakshma chikitsa*.

Materials and Methods

1. Review of *Swarna kalpas* in *Rajayakshma Chikitsa Prakarana* available in *Rasendra Sara Sangraha* and *Bhaishajya Ratnavali*.

Table No 1 showing Different *Swarna kalpas*, their Ingredients, *Bhavana dravyas*, Dose, *Anupana* and its Indications described in *Rasendra Sara Sangraha*⁸ and *Bhaishajya Ratnavali*⁹.

Sl No	Formulations	Ingredients	Bhavana	Dose	Anupana	Indications
1	Brihat Kshayakesari rasa (R.S.S,B.R) Triturated and placed in a crucible - Laghu puta	Abraka bhasma - 1 part Parada bhasma - 1 part Loha bhasma - 1 part Naga bhasma - 1 part Kamsya bhasma - 1 part Mandura bhasma - 1 part Shudha Vimala - 1 part Vanga bhasma - 1 part Vaikrantha bhasma - 1 part Kharpara bhasma - 1 part Sankha bhasma - 1 part Shudha Tankana - 1 part Makshika bhasma - 1 part Kanthaloha bhasma - 1 part Swarna bhasma - 1 part Pravala bhasma - 1 part Mukta bhasma - 1 part Varata bhasma - 1 part Kanthapashana bhasma - 1 part Shudha Manashila - 1 part Shudha Talaka - 1 part Shudha Hingula - 1 part Shudha Gandhaka - 1 part	Swarasa of chitraka mula Arka ksheera Matulunga Triphala Nimbu Amlavethasa Bhringaraja Karaveera ksh Ardraaka swarasa	-	Sita, Pippali churna, MadhuArdraaka swarasa	Vatha,Pitha,Kapha Sannipatha Jwara Ekadasarupa Rajayakshma Panchavidha kasa Swasa Pramehapliharoga Halimaka
2	Brihath Chandramrutha rasa (R.S.S,B.R)	Sudha Parada - 1 karsha Shudha Gandhaka - 1 karsha Abhaka bhasma - ½ pala Swarna bhasma - 1 karsha Tamra bhasma - 1 karsha Loha bhasma - 1 karsha Churnas of Jeeraka, Vidari, Sathamuli, Kokilaksha, Bala, Kapikachu ,Atibala, Jathikosha, Jathiphala, Lavanga, Sarjarasa, Vridhadaru beeja - 1 shana each	Madhu	4 gunja	Pippali churna with Madhu	Kasa Rajayakshma
3	Kumudeshwara rasa (R.S.S,B.R)	Hema bhasma - 1part Rasa bhasma - 1part Sudha Gandhaka - 1part Mukta bhasma - 1part Sudha Tankana - ¼ part Rajatha bhasma - ¼ part Makshika bhasma - ¼ part	Kanjika	1 Valla	Maricha churna with Ghritha	Rajayakshma
4	Kanchanabra rasa (R.S.S,B.R)	Rasasindura - 1 karsha Swarna bhasma - 1karsha Mukta bhasma - 1 karsha Loha bhasma - 1 karsha Abraka bhasma - 1 karsha Vidruma bhasma - 1 karsha Rajatha bhasma - 1 karsha Harithaki churna - 1 karsha Shudha.Manashila - 1 karsha	Water	2 Gunja	As per dosha	Kshayam Pithakapha kasam Kapha vatha roga

5	Brihath Kanchanabra rasa (R.S.S,B.R)	Swarna bhasma- 1 karsha Rasa sindura - 1 karsha Mukta bhasma - 1 karsha Lauha bhasma - 1 karsha Abraka bhasma - 1 karsha Vidruma bhasma - 1 karsha Vaikrantha bhasma - 1 karsha Rajatha bhasma - 1 karsha Tamra bhasma - 1 karsha Vanga bhasma - 1 karsha Kasthuri - 1 karsha Lavanga churna - 1 karsha Jatikosa churna - 1 karsha Elavaluka churna - 1 karsha	Kumari swarasa Bhringaraja swarasa Ajakshira	4 Gunja	Acc. to roga	Ksaya Kasa Swasa 20types of Prameha
6	Mriganka Pottali (R.S.S,B.R)	Shudha Parada - 1part Hema bhasma - 1part Mukta bhasma - 2part Shudha Gandhaka - 2part Shudha Tankana - 1/4 th part	Kanjika	4 Gunja	Maricha churna with Madhu or 10 Pippali with Madhu	Rajayakshma
7	Ratnagarbha pottali (R.S.S,B.R)	Rasa bhasma - 1 part Vajrabhasma - 1 part Hema bhasma - 1 part Loha bhasma - 1 part Naga bhasma - 1 part Sankha bhasma - 1 part Makshika bhasma - 1 part Vidruma bhasma - 1 part Shudha Tutha - 1 part Mukta bhasma - 1 part Vajra bhasma - 1 part Maricha churna - 1 part	Citraka kwatha (21 times) Nirgundi swarasa Ardra swarasa (7 times in each)	4 Gunja (R.S. S) 1 Gunja (B.R)	Pippali churna with Kshoudra or Maricha churna with Ghritha	Ashta mahagada Kasa Swasa
8	Lokeshwara pottali (R.S.S,B.R)	Rasasindura - 1 part Swarna bhasma - 1/4 part Sudha Gandhaka - 2 part Pathyam Mrigankavat	Chitrakambu	4 Gunja	Pippali with madhu or Maricha with Ghritha (21 days)	Mada Unmada
9	Swalpa mriganka rasa(R.S.S,B.R)	Rasa bhasma, Hema bhasma – equal parts	-	2 Gunja (R.S. S) 1/2 Ratti (B.R)	Acc. to dosha	Yakshma
10	Kanakasundara rasa (R.S.S,B.R)	Sudha Rasa - 1part Hema bhasma - 1/4 th part Sudha Manashila - 1part Sudha Gandhaka -1part Shudha Tutha - 1part Makshika bhasma - 1part Shudha Harathala - 1part Shudha Visha - 1part Shudha Tankana - 1part	Jayanthi swarasa Bhringaraja swarasa Patah kashaya Vasaka,Agasti Langalikhatha Citrak kwatha Ardrak swarasa	2-3 Gunja	Pippali with Madhu or Maricha with Ghritha	Kshaya Sannipatha jwara
11	Hemagarbha pottali rasa (R.S.S,B.R)	Rasa bhasma - 3part Hema bhasma - 1part Tamra bhasma - 1part Shudha Gandhaka - 1part Varati poorayet Bhante gajaputa	Chitraka dravai 2 yama trituration	4 Gunja (R.S. S) 1 Gunja (B.R)	-	Rajayakshma

12	Sarvanga Sundara Rasa (R.S.S,B.R)	Sudha Parada - 1 part Shudha Gandhaka - 1part Shudha Tankana - 2part Hema bhasma - ½ part Tikshna louha bhasma - ½ part Sudha Hingula - ¼part Mukta bhasma - 1part Vidruma bhasma - 1part Sankha bhasma - 1 part	Nimbu swarasa	-	Pippali, madhu, Ghritha or Parna khanda, Sita and Ardraka	Vatha, Pitha, Sannipatha Jwara Arsas Rajayakshma Grahani roga
13	Mahamriganka Pottali (R.S.S)	Swarna bhasma – 1part Rasabhasma – 2part Rajatha bhasma – 4part Tapy a bhasma – 5part Shudha Tankana – 2part Vaikrantha bhasma - 1/16 part Shudha Gandhaka – 4part Mukta bhasma - 3part Pravala bhasma - 7part	Mathulunga swarasa	1 Valla	Maricha Ghritha	Jwaram Gulma Mandagni Murcha Kamala
14	Nityodaya rasa (R.S.S)	Suvarna bhasma - 1 shana Rajatha bhasma - 1 shana Shudha Parada - 1 sukti Shudha Gandhaka -1 sukti Tapy a bhasma - 1 shana Krishna abraha - 1 pala Shudha Silajath - ½ pala Churnas of Ela Jathikosha, Jatiphala, Jatamansi, Lavanga - 1 kola each	Kashaya of Vilwa, Agnimantha, Syonaka, Kasmari,Patal aBala, Mustha, Punarnava, Brihathi etc	2 Gunja	Pippali Madhu	Jirna jwaram Pancha kasa Pandu Kamala Arshas
15	Lakshmi Vilas Rasa (B.R)	Swarna bhasma-1part Rajatha bhasma- 1part Abraka bhasma- 1part Tamra bhasma- 1part Vanga bhasma- 1part Mundaloha bhasma- 1part Tikshna loha bhasma- 1part Kanta loha bhasma- 1part Naga bhasma-1part Mukta bhasma- 1part Shudha Vatsanabha - 1part Rasa bhasma – 1part	Triturate with Madhu Sarava samputa Kukkuda puta	-	-	Kshaya Pandu Kamala Vatharoga Sopha Agnimandhya
16	Chudamani rasa (B.R)	Rasasindura -2 Nishka Swarna bhasma- 1Nishka Sudha Gandhaka – 2 Nishka Mukta bhasma- 1Nishka Pravala bhasma- 1Nishka Vanga bhasma- 1Nishka	Chitraka moola kwatha Kumari swarasa Chagi dugdha	2 Ratti	Madhu Ajaghritha Sarkara	Kshaya Vathapithaja roga
17	Rajamriganka Pottali (R.S.S,B.R)	Rasa bhasma – 3 part Hema bhasma- 1part Rajatha bhasma- 1part Shudha Manashila -2part Shudha Harithala – 2part Shudha Gandhaka – 2part	-	4 Gunja	10 pippali, 21 Maricha, Kshoudra and Ghritha	Tridosha Kshaya
18	Kshayari rasa (R.S.S)	Swarna bhasma -1 p Vaikrantha bhasma – 4p	-	1 Gunja	Pippali churna with Ghritha	Yakshma Jwara Pandu Grahani Kshatha kshaya

Discussion

In *Rasasastra*, there are different Pharmaceutical preparations which includes *Khalweeya Rasayana*, *Parpati kalpana*, *Potali kalpana* and *Kupipakwa Rasayanas*. Each dosage form have different action in different systems of the body based on its dose, *Anupana* etc.

All *Swarna kalpas* described under *Rajayakshma chikitsa* can be broadly included under *Khalweeya Rasayanas* and *Potali kalpanas*. In *Rajayakshma chikitsa*, there are eight *Swarna kalpas*¹⁰ in *Potali form* and ten *Swarna kalpas* are in *Khalweeya Rasayanas*. The description of *Swarna kalpas* under *Potalis* are *Mriganka potali*, *Rajamriganka potali*, *Lokeshwara potali*, *Hema garbha potali*, *Mahamriganka potali*, *Brihat kshayakesari*, *Swalpa mriganka* and *Ratna garbha potali*. The description of *Swarna kalpas* under *Khalweeya Rasayanas* are *Kumudeshwara rasa*, *Brihath Chandramrutha*, *Kanaka sundara*, *Sarvanga sundara*, *Nityodaya Rasa*, *Kanchanabra rasa*, *Brihath kanchanabra*, *Lakshmi Vilasa Rasa*, *Chudamani Rasa* and *Kshayari Rasa*.

Among which *Swarna kalpas* in *Potali form* is one of the Potent dosage form due to its small dose and having maximum effect. The *Khalweeya Rasayanas* are prepared by triturating the medicaments in *Khalwa yantra* and made in to pills. Where in *Potali kalpana*, the scattered medicaments are made in to compact form by various techniques and used as medicine.

Potali kalpana was first mentioned in *Rasaratnakaram* (12th century AD). In earlier times, Keraleeya vaidyas used *Potali* preparations for treating various diseases of Children with Suitable *Anupanas*. The References about *Potali Kalpana* were more available in classics of about 18 – 19th century AD¹⁰.

The Preparation of *Potali* involves different methods which includes *Paka* in *Gandhaka drava*, *Sarava samputa Putapaka*, *Paka in Lavana* or *Valuka yantra*, *Varatika Pooritha Putapaka* and *Paka* made by *Bhavana* process. Generally *Potali* was administered by rubbed or scratched up to desired rotations. But in *Varatika poorana putapaka*, the whole medicine is powdered and given according to appropriate dose^{11,12}.

The *Mriganka potali* and *Maha Mriganka Potali* are prepared by *Paka* in *Lavana yantra*. *Swalpa Mriganka* is prepared by *Bhavana* process. *Brihat kshayakesari rasa* is prepared by *Sarava samputa putapaka* method. The Preparation of *Ratna garbha potali*, *Lokeshwara potali*, *Raja Mriganka Potali* and *Hemagarbha potali* are Prepared in *Varatika poorana putapaka*¹¹ method.

Most of the *Potali kalpana* in *Rajayakshma*, have *Chitraka drava* as *Bhavana dravya*. But in *Mriganka potali*, *Amla drava* is used as *Bhavana dravya*. While assessing the *Anupanas* of *Swarna kalpas* in *Rajayakshma*, most of them having *Maricha*, *Pippali*, *Kshoudra* as *Anupana*. Since *Rajayakshma* is a deeper *dhathu* involved *roga* with *Agni dushti* and *Srothorodha*. The *Swarna kalpas* along with these *Anupanas* helps in removing the *Srothorodha* due to its *Teekshna ushna* property.

The application of *Swarna kalpas* can be extended to various diseases coming under the broad spectrum of *Rajayakshma*. It includes first, second, third stages of Cancers in which cancer cells are limited to an area and metastasis is not happened, Various Neuro muscular degenerative disorders including Motor Neuron diseases, different myopathies, Pheripheral Neuropathies. These Degenerative diseases having common presenting complaints includes abnormal gait, hypotonia, Muscle weakness, cramps, spasticity, fatigue, weight loss, feeding difficulties, Respiratory difficulties and Exercise intolerance¹³. The *Brihmana*, *Rasayana* property of *Swarna* helps in *dhathu poshana* along with Other *bhasmas* of *Mukta*, *Vidruma*, *Sankha*¹⁴, corrects *Agni*, relieves *Srothodushthi*. In *Rajayashma*, most of the *bhasmas* used are calcium rich and it corrects gastro intestinal complaints and helps in proper absorption.

Conclusion

It can be concluded that *Swarna kalpas* can be used in different Disease conditions which are difficult to cure includes some stages of Cancer, Various Neuro Muscular degenerative diseases, Neuropathies, Muscle wasting. Even though *Swarna* is not cost effective, but *Swarna kalpas* are widely practising due to its high therapeutic activity in wide range of Diseases which can be included under broad spectrum of *Rajayakshma*. One of the major highlights of *Swarna kalpas* in *Rajayakshma* is the *Potali kalpana*. In now a days, Pharmacies take hand for Preparations of *Potali kalpas* eventhough they are difficult to prepare. It gives further scope for Practical application of these *Kalpas* in Clinical Practice.

List of Abbreviations

1. R.S.S - Rasendra Sara Sangraha
2. B.R - Bhaishajya Ratnavali

References

1. Sri.Sadananda Sarma.In:Ravindra Angady,Rasa Tarangini.1st ed.Varanasi : Chaukhamba Subharati Prakashan;2015.
2. Acharya Sri.Madhava.In : Gulraj Sharma misra, Ayurveda Prakasha.Varanasi:Chaukhamba Bharati Academy;2007.
3. Acharya Vagbhata.In:Indra Dev Tripathi,Rasaratna Samuchaya.Reprint ed.Varanasi:Chaukhamba publications;2012.
4. Agnivesa.In:Ram Karan Sharma,Charaka Samhitha Nidana Sthana,Vol 2.Varanasi:Chaukhamba Sanskrit Krishnadas Academy;2013.
5. Agnivesa.In:Ram Karan Sharma,Charaka Samhitha Indriya Sthana,Vol 2.Varanasi:Chaukhamba Sanskrit Krishnadas Academy;2013.
6. Bello, AK & Njoku, C & Njoku, Kingson. (2006). Tuberculosis: current trends in diagnosis and treatment. Nigerian journal of clinical practice. 8. 118-24.
7. Sanyaolu, Adekunle & Schwartz, Jessica & Roberts, Kerry & Evora, Jorge & Dhoother, Kiranpreet & Scurto, Francesca & Lamech, Selciya & Rungteranoont, Tasanee & Desai, Vishwa & Dicks, Corey & Dimarco, Chase & Patel, Samarth. (2019). Tuberculosis: A Review of Current Trends. 3. 000123. 10.23880/eij-16000123.
8. Shri Gopal Krishna Bhatt. Rasendra Sara Sangraha.2nd ed.Varanasi : Choukhamba Sanskrit Sansthan;2012.
9. Kaviraj Shri Govinda Das Sen. Bhaishajya Ratnavali.Vol 1. 1st ed.Varanasi : Choukhamba Orientalia;2014.
10. Yadav, Kapil & Gupta, Laxmi & Chaudhary, Anand. (2015). Pharmaceutical Vistas of Swarna Kalpa: An Overview. A Journal of Drug Design and Discovery. 2. 13-18.
11. Prasad, P., Rao, S., & S., V. (2019). A Review on Pottali Kalpana w.s.r to Kaparda poorana putapaka method of preparation. *Journal Of Ayurveda And Integrated Medical Sciences (ISSN 2456-3110)*, 4(5), 196 - 206.
12. Dr. Varsha Sumedhan, Dr. Ratheesh P, Dr. Meghna PP. A Review on Pottali Kalpana. *J Ayurveda Integr Med Sci* 2018;4:96-102. <http://dx.doi.org/10.21760/jajims.v3i4.13290>
13. McDonald CM. Clinical approach to the diagnostic evaluation of hereditary and acquired neuromuscular diseases. *Phys Med Rehabil Clin N Am.* 2012;23(3):495-563. doi:10.1016/j.pmr.2012.06.011
14. Thakur, Vivek & Vashisht, Kiran & Sharma, Khemchand. (2017)Therapeutic indications of Shankha bhasma: a review. *International Research Journal of Pharmacy.* 8. 1-6. 10.7897/2230-8407.0810174.

