

THE ROLE OF DIFFERENT MEDIA FOR THE URDHVA PATANA OF PARADA

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ABSTRACT

In our ancient literature of *Rasashastra*, *Parada* or *Rasa* is considered the supreme *Dravya* out of all *Rasoparasa*'s, *Dhatu*'s etc¹ and described to be of divine origin. The importance of *Parada* is highlighted mainly for *Rasachikitsa*. Mercury always comes with natural impurities i.e., “*Naisargika dosha*”, when mercury is put to trade and commercial use it is adulterated with cheaper metals like *Naga* and *Vanga* for more commercial gains. As a result, mercury in the market is often available with this kind of adulterants, which are considered as “*Yougika Dosha*”. Consumption of impure mercury is considered highly toxic and hazardous. It can be made into medicine by adopting proper *Shodhana* procedures. In *Rasashastra* process of *Shodhana* is having greater importance. Hence a wide range of purification methods is described for each metal and mineral including *Parada*. The literary meaning of *Shodhana* is purification, but in *Rasashastra* *Shodhana* is a *Samskara* which essentially improves the potency along with detoxifying the metal or mineral. In our classics, various methods have been told for *Shodhana* of *Parada*, in which *Patana* plays a very important role². All the different classical references of *Urdhva Patana Samskaras* are compiled and critically analysed to know their role in *Shodhana* of *Parada*. Various media told are *Tamra churna*, *Sarja Kshara*, *Yava Kshara*, *Hingu*, *Panchalavana* and *Kaashtoashadis* such as *Kumari*, *Nisha churna* etc. An attempt is made to analyse the role of various media for the *Urdhva Patana* of *Parada*.

Keywords: Parada, Shodhana, Urdhva Patana, Mercury

INTRODUCTION

Rasashastra deals with *Rasaoushadhi's* i.e. the drug of metallic and mineral origin. *Parada* is considered the supreme *Dravya* and is used in most of the *Rasaoushadhi's*. Mercury is obtained from the earth and hence there will be every chance of impurities, toxicities and heterogeneous qualities. As per Ayurveda, the *Doshas* of *Parada* are 12 and are classified under *Naisargika*, *Yougika* and *Aupadika Doshas*³. Mercury is commonly adulterated with cheaper metals like *Naga* and *Vanga* for more commercial gains, which are considered as "*Yougika Dosh*".⁴

In Ayurveda, *Parada* is never used for medicinal purposes in its crude form. According to Yogaratnakar, consuming impure *Parada* causes *Kusta*, *Agnimandya*, *Krimi*, *Chardi*, *Arochaka*, *Jaadya*, *Daaha* and *Marana*, while processed mercury bestows good health, relief from all diseases and even emancipation. Thus, it must go through certain *Shodhana* procedures before administration. Various *Shodhana* procedures have been explained in our Rasashastra classics to convert mercury's inherent property of toxicity into the medicinal property. Along with *Shodhana*, *Samskaras* have been told for *Parada*. In Rasashastra *Parada Samskara* is of prime importance.

Shodhana concentrates on the removal of *Doshas* while *Samskara* aims in potentiating drugs along with the removal of impurities. *Samskara* is the qualitative alteration done for improvement, enhancement, modifications and for lowering bad effects.⁵ *Shodhana* can be considered as a part of *Samskara* but all *Samskaras* are not *Shodhana*. There is a difference in opinion regarding the number of *Samskaras*, most of them have been considered as eighteen in number. The eighteen special procedure of purification of *Parada* is called *Ashtadasha Parada Samskara*.⁶ First eight procedures will have both *Vyadi Nashaka* property as well as *Rasayana* property. The remaining ten procedures are used in *Dhatu Vada* i.e. technique of converting nonprecious metals into precious

metals.⁷ In order to use *Parada* for the therapeutic purpose all Rasavaidya's must perform *Ashta Samskara Kriya*. Out of these eight *Samskaras*, *Patana Samskara* is mainly done for removing *Naga* and *Vanga* doshas, which forms the main adulterants used in the marketing of mercury for more commercial gains. Hence *Patana Samskara* is considered as one of the main procedures among the *Ashta Samskara's*.

PATANA SAMSKARA

The pharmaceutical process in which the mercury is triturated with specified drugs and subjected for *Patana* (distillation) in *Urdhva*, *Adhah* or *Tiryak Patana Yantra* is called *Patana Samskara*. Here the mercury gets rid of *Naga and Vanga doshas*.⁸

Yantra's used: *Patana Yantra*, *Vidyadhara Yantra*, *Damaru Yantra*

VARIOUS PROCESS INVOLVED IN PATANA SAMSKARA

RATIONALE.

Bhavana -*Bhavana* is an important *Samskara* with the help of which, not only the potency of a drug can be altered but is also capable to bring about changes in characteristics of the drug by addition of new or deletion of undesirable characteristics. *Bhavana* facilitates in mixing of ingredients and may account for several chemical interactions in between them. It augments the properties of medicines. During grinding, the surface area of each minute particle will have contact with *Dravya*. Liquid media acts as a binding agent. All *Bhavana Dravyas* primarily contain carbon which is considered as a best reducing agent. Organic components of liquid media convert the inorganic material into organo-metallic/ organo-mineral compounds, which are favorable to the body.

Mardana- The heat produced due to continuous friction of mortar and pestle along with uniform rising temperature would seize the impurities.

Patana- Impurities like *Naga*, *Vanga* have a high boiling point do not sublime and remain at the bottom. *Parada* becomes devoid of *Yougika Doshas*. Even in modern science, they use a triple distillation

procedure for refining mercury, in which the temperature of mercury is carefully raised until the impurities either evaporate or the mercury itself

evaporates, leaving the impurities behind. This distillation process is performed three times, with the purity increasing each time.

All the methods of *Urdhvapatana* explained in various *Rasagrantha*'s have been illustrated in the table below.

S.L. NO	REFERENCE	INGREDIENTS	QUANTITY	TIMES
1	a) <i>Rasarnav</i>	<i>Parada</i> <i>Tamra Churna</i>	1 part 1 part	1 time
2	b) <i>Rasa Ratna Samuchaya</i>	<i>Parada</i> <i>Tamra Churna</i>	1 part ½ part	3 times
3	c) <i>Ayurveda Prakash</i> d) <i>Rasendra Chintamani</i> e) <i>Rasa Tarangini</i> f) <i>Rasendra saarsangraha</i>	<i>Parada</i> <i>Tamra Churna</i> <i>Nimbu Swarasa</i>	1 part 1/3 part Q. S	12 hrs
4	g) <i>Rasahridya Tantra</i>	<i>Parada</i> <i>Tamra Churna</i> <i>Jambira Nimbu Rasa</i>	1 part ¼ part Q. S	1 time
5	h) <i>Rasa Prakash Sudhakar</i> i) <i>Rasa Tarangini</i>	<i>Sarjikhshara</i> <i>Yavakshara</i> <i>Hinga</i> <i>Pancha lavanas</i> <i>Parada</i> <i>Amla Oushadi's</i>	1/8th part 1/8th part 1/8th part 1/8th part 1 part Q. S	12 hrs
6	j) <i>Ayurveda prakash</i> k) <i>Rasa Tarangini</i>	<i>Parada</i> <i>Tuttha</i> <i>Swarna Makshika</i> <i>Kumari Swarasa</i>	1 part 1 part Q part Q. S	1 time
7	l) <i>Rasa Manjari</i>	<i>Parada</i> <i>Kumari Swarasa</i> <i>Nisha Churna</i>	1 part Q.S- 1 part, <i>mardana</i> done for 1 day	1 time
8	m) <i>Rasa Padhati</i>	<i>Parada</i> <i>Tamra churna</i> <i>Kakamachi, Jaya</i> <i>Brahmi, Changeri,</i> <i>Rakta Chitraka,</i> <i>Ankola, Amlataas</i> <i>Tilaparni, Kumarika</i> <i>Manduki, Chitraka</i> <i>Pata, Kakajanga</i> <i>Shatavari, Bhupaatali</i> <i>Devadali, Nirgundi</i> <i>Vishnukranth,</i> <i>Shankpushpi, Adraka</i> <i>Bhangara, Gojihva</i> <i>Kshirakandhaka, Nili</i>	3 parts 1 part Q.S <i>Mardana</i> did for 1 day	7 times
9	n) <i>Rasa kamadhenu</i>	<i>Parada</i> <i>Devadaru, Kakatundi</i> <i>Jaya, Karkoti,</i> <i>Mushali, Shrikhandam</i> <i>Kumari</i>	1 part Q.S <i>Mardana</i> done for 1 day	1 time

DIFFERENT MEDIA USED CAN BE BROADLY CLASSIFIED AS

- *Tamra* and its Compounds
- *Lavana Varga*
- *Kshara Varga*
- *Amla Varga*
- *Kaastoushadhi's*

DISCUSSION

ROLE OF DIFFERENT MEDIA USED IN SHODHANA

The media's used in the process of *Shodhana* attributes a very important role by breaking down or altering the chemical constituents of the drug. Our *Acharya's* have suggested various techniques along with different media for the *Shodhana* depending on the drug and purpose. Various physicochemical changes occur depending upon the selection of the media, such as variation in the elemental composition of major elements, reduction in particle size, addition as well as deletion of minor elements from the raw material, variation in density and granular size. The liquid media used acts like a solvent to dissolve the material for easy separation from the insoluble impurities to eradicate toxic chemical substances from the drugs and leads to the physical transformation of some metals and minerals. Different liquid media are derived from different sources and possess different physical, chemical and therapeutic properties thereby may influence the nature of the final product. Sometimes liquid media act as a detoxifying agent and sometimes help to enhance the therapeutic efficacy of the drug.

ROLE OF TAMRA AND ITS COMPOUNDS

Tamra forms complex structures with *Doshas* present in *Parada* and settles down thus helping in evaporating pure *Parada* upwards leaving the impurities at the bottom.

Copper due to their high efficiency in removing Hg^{2+} from aqueous solution, the use of copper shavings for the removal of mercury from contaminated water is suggested, employing a sequential system of mercury amalgamation followed

by the removal of mobilized copper by an ion exchanger such as zeolites.⁹

ROLE OF AMLA VARGA

Amla Varga dissolves the acid-soluble impurities. Acidic drugs are rapidly absorbed from the stomach when taken orally as they remain in the acidic medium of the stomach in an unionised form which favours their absorption. The organic acids present in the *Amla Varga* are ascorbic acid, tartaric acid, oxalic acid, citric acid, etc. Studies have proved that these acids possess antibacterial, antifungal, antioxidant and many more properties. These organic acids purify the respective metal/mineral and introduce trace elements in them so that the product formed is completely bio-assimilable and may also introduce more brittle properties while processing so that the *Bhasma* of the metal/mineral forms at a faster rate. *Amla Varga* is a natural chelator, citric acid disaggregates mineral grains and helps in separating undesired elements like *Naga and Vanga* from *Parada*.

ROLE OF KSHARA VARGA

Kshara Varga (*Sarja, Yava, Tankana*) because of its *teeksna guna* induce *shodhana* and attributes to *agnibhuta*. It helps in the dissociation of molecules. In *Rasashastra* the *kshara* plays its role in different pharmaceutical procedures such as *Shodhana, Jarana, Marana* etc. *Kshara* Because of its alkalinity in nature helps in the corrosion of unwanted material from the desired product and because of its cleansing property, are grouped under *Sodhaniya Gana* and is useful in the preparation of metal extracts, etc.

Kshara is used in the *Marana* process especially for the *Puti Louha* group of metals having a low melting point, also helps in the process of *Jarana*.

One of the papers published on borax in experimental and toxicology pathology clearly showed that the tested boron compounds (5-20 ppm) significantly reduced the genotoxic effects induced by low doses of heavy metals. Their results revealed that the protective roles of boron compounds occurred with the effectiveness on their antioxidant capacity.¹⁰

ROLE OF LAVANA VARGA

Lavanas are used widely in various pharmaceutical procedures such as *Shodhana of Tamra, Parada* etc. In *Rasalinga Nirmana Saindhava Jala* is used, in the preparation of *Kupipakva Rasayana* such as *Rasa Pushpa* and in *Vanga Jarana Samudra Lavana* is used. *Lavana* helps in the purification of mercury by forming salts with their impurities. It increases the *Bubukshutha of Parada*, thereby helping in *Jarana of Bheeja*. *Lavanas* induce *Deepana, Pachana* and are *Sroto Shodhaka*. *Lavana* possesses *Ushna, Teekshna* and *Vishada Guna* which might help in eliminating *Parada Doshas*.

ROLE OF KAASTOUSHADHI'S.

Haridra (curcumin, turmerol, zingiberine) forms a bond with Hg, does chemical detoxification and purification. *Kumari Swarasa* constitutes aloe resin A, B, C and Aglyconealoesone. These resinous constituents bind the ingredients and give shape and compactness. Other constituents are Hydroxyanthraquinone, barbaloin γ -hydroxyaloinisomers and emodin-chrysophanol, derivatives of γ -hydroxyaloinisomers and emodin-chrysophanol will aid medicinal attributes.

Kumari and *Haridra* act as chelating agents thereby reducing the bioavailability and GI absorption of heavy metals. Also, they fasten the excretion of toxins through faeces.

Plant products make the mineral action fast, increase the potency of *Dravya*, decrease toxicity and particle size. All *Bhavana dravyas* primarily contain carbon which is considered the best reducing agent. Organic components of liquid media are transformed into the drug & make it organo-metallic/organo-mineral compounds, which are favourable to the body.

One of the papers published showed that plant-mediated detoxification of mercury and lead. They have investigated to find an eco-friendly and recyclable technique for the removal of heavy metal contamination from natural resources. Among these plant wastes seem to be the best candidates and they are suitable for detoxification of heavy metals.¹¹

CONCLUSION

Parada has many impurities and hence cannot be administered in its crude form. It must undergo processing before being used therapeutically. Our *Acharya's* have told various *Shodhana* and *Ash-tadasha Samskaras* for *Parada*. In *Rasashastra Parada Samskara* is of prime importance. Out of these *Ash-tadasha Parada Samskara, Patana Samskara* is done mainly to eradicate *Naga and Vanga Doshas*. The media used in the process of *Shodhana* has an important role in breaking down or altering the chemical constituents that are not required. Various physico-chemical changes occur depending upon the selection of media. Our *Acharya's* have suggested various techniques along with different media's for *Shodhana*, depending on the nature of the drug and purpose. Hence one can find abundant methods of *Shodhana* using different media and techniques in our classics of *Rasashastra*.

REFERENCES

1. Indradev Tripathi(ed). Rasendra Sara Sangraha. Varanasi: Chaukamba Orientalia;2010. Pp.5.
2. Jaya krishnadas Ayurveda Granthamala (Ed). Rasa-prakasha Sudhakara by Acharya Yashodhara; Chowkamba Orientalia; 2004. Pp.151.
3. Dattareya Ananth Kulkarni(ed). Rasa Ratna Samuchaya by Vagbhatacharya, new Delhi: Meharchand Lachmandas publications, 2007,11th chapter, verse 20, Pp.207.
4. Dattareya Ananth Kulkarni(ed). Rasa Ratna Samuchaya by Vagbhatacharya, new Delhi: Meharchand Lachmandas publications, 2007,11th chapter, verse 18, Pp.207.
5. Vidyadhar Shukla and Ravidhat Tripathi(ed). Charaka Samhita by Agnivesha, Varanasi, Chaukhambha Sanskrit Series office, 2000.Vimana sthana 1st chapter, verse 21. Pp.554.
6. Dattareya Ananth Kulkarni(ed). Rasa Ratna Samuchaya by Vagbhatacharya, new Delhi: Meharchand Lachmandas publications, 2007,11th chapter, verse12-13, Pp.206.
7. Dattareya Ananth Kulkarni(ed). Rasa Ratna Samuchaya by Vagbhatacharya, new Delhi: Meharchand Lachmandas publications, 2007,11th chapter, verse13, Pp.206.

8. Dattareya Ananth Kulkarni(ed). Rasa Ratna Samuchaya by Vagbhatacharya, new Delhi: Meharchand Lachmandas publications, 2007,8th chapter, verse64, Pp.156.
9. Petra Huttenloch, Karl Ernst Rohel, Kurt Czurda. Use of copper shavings to remove mercury from contaminated groundwater or wastewater by amalgamation. Environ Sci Technol.2003 Sep 15;37(18):4269-73.
10. Hasan Turkez, Fatime Geyikoglu, Abdulgani Tatar, M Sait Keles, Ibrahim Kaplan. The effects of some boron compounds against heavy metal toxicity in human blood. Experimental and toxicological pathology.2012 Jan;64(1-2):93-101
11. Brajesh Kumar, Kumari Smita, Luis Cumbal Flores. Plant mediated detoxification of mercury and lead. Arabian journal of chemistry, vol 10, supplement 2 2017 May, Pages S2335-S2342.

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