



CRITICAL ASPECTS OF RASASHASTRA WSR TO FORMULATIONS, CONTRAINDICATIONS AND PRECAUTIONS

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ABSTRACT

Rasashastra is the branch of *Ashtanga Ayurveda* which deals with the herbo-metallic preparations to provide the faster treatment in comparison with the simple herbal preparations. Herbo-metallic preparations are prepared after various processing and thus they have a higher rate of bioavailability. Various techniques such as *Jarana*, *Shodhana*, *Putta* etc. are employed to increase the bioavailability and to reduce the toxic effects of the components. Everything which appears to be a blessing should be used wisely. Formulations comprising of metals and herbs must be prepared appropriately and should be indicated after considering certain factors such as *Prakriti* of the patient, *Pathya*, *Roga*, its *Hetu* etc. *Ayurveda* focuses not only on physical health but also on the mental health equally. Thus everything which is given to the body should be given in an appropriate dosage, through appropriate delivery form. This article represents the various aspects of *Rasashastra* such as formulations, precautions in detail.

KEYWORDS: Formulation, *Ayurveda*, *Rasashastra*, *Shodhana*, *Prakriti*, *Roga*.

INTRODUCTION

Ayurvedic scholars have mentioned about the various processes of preparation of drugs consisting of metals, herbals, minerals, animal products along with their indication and contraindications. *Rasashastra* is the branch of *Ashtanga Ayurveda* which deals with *Naishtiki Chikitsa* and its main aim is to cure the disease permanently. *Rasashastra* literally means science of mercury. It is a specialized branch of *Ayurveda* which deals mainly with materials known as *Rasadravyas*. These materials are very potent in eliminating dreadful diseases and also for rejuvenation purpose. *Rasaushadies* have acquired superior status among the *Ayurvedic* medicines because of their small dose, palatability, quick action and high efficiency. They try to fulfill the principle of *Swasthasyasyaswaryarakshanam* (to maintain the health) and *Aturasyarogaprashanam* (to cure the disease).

Drugs obtained through various sources are processed in combined form and then transformed to different dosages to administer them easily in to the body and to reduce the side effects. Different preparatory processes are used such as *Shodhana* (purification), *Marana* (oxidation), *Jarana* etc. to make the drug harmless. To maintain the health, body prevents inflammation and free radical

formation. For this, the usage of herbo-metallic preparations are proven to be very effective. Drugs made from metal and mineral sources provide long lasting effects in comparison to simple herbal drugs. *Rasashastra* comprises of the preparations made of combination of drugs derived from mercury, various metals, minerals and herbs. Firstly, minerals are processed with *Bhavana Dravyas* to enhance the availability of their medicinal properties. Afterwards they are exposed to various processes such as *Shodhana*, *Marana*, *Jarana* etc to change them to more *Anjana* form (micro size) and then they are turned to several organo-metallic-herbal compounds. They possess more therapeutic properties and are more effective. Some procedures used in preparation of formulations are mentioned in figure 1.

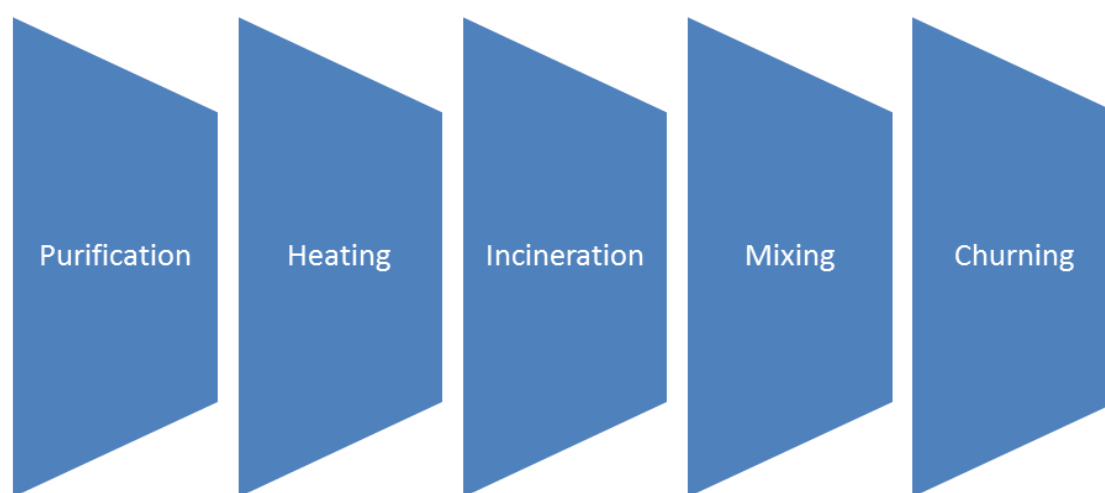


Figure 1: Procedures used during preparation on Rasaushadhies.

Various types of *Rasadravyas* such as *Rasa*, *Ratna*, *Dhatu*, *Uparasa*, *Visha* etc are considered to be important in *Rasashastra*. The word *Rasa* means liquid possessing some adaptogenic properties, *Ratna* word indicates substance possessing gem like qualities, *Dhatu*

word indicate material that provides strength and *Visha* is the poisonous material. *Rasashastra* give preference to use *Parada* as the primary liquid metal which provides strength to the formulation. Various types of *Rasadravyas* are mentioned in figure 2.

<i>Rasa</i>	• <i>Parada</i>
<i>Maharasa</i>	• <i>Abhraka</i> (mica) • <i>Maakshika</i> (Copper pyrite)
<i>Uparasa</i>	• <i>Gandhaka</i> (sulphur) • <i>Kaaankshi</i> (Alum)
<i>Sadharana Rasa</i>	• <i>Somala</i> (arsenic) • <i>Hingula</i> (Cinnabar)
<i>Dhatu</i>	• <i>Swarna</i> (gold) • <i>Raupya</i> (silver) • <i>Taamra</i> (copper)
<i>Upadhatu</i>	• <i>Swarna Maakshika</i> (copper pyrite) • <i>Sindura</i> (Red lead oxide)
<i>Ratna</i>	• <i>Muktaa</i> (Pearl) • <i>Maanikya</i> (Ruby) • <i>Heeraka</i> (Diamond)
<i>Uparatna</i>	• <i>Suryakaant</i> (sunstone) • <i>Chandrakaant</i> (moon stone)
<i>Visa</i>	• <i>Sarp visha</i>
<i>Upavisha</i>	• <i>Datura</i> • <i>Snuhi</i>

Figure 2: Types of *Rasadravyas*.

Formulations in Rasashastra

Rasaushadhi is a word related to *Parada* (mercury). It was used as a bio-enhancer but soon it was found that its combination with other drugs reduces the dose and increases the efficiency and therapeutic power of formulation to many times. Mercury in its original form is harmful for the body thus at first it is purified to make it as *Suddha Parada* and later on it is transformed to stable and effective drug known as *Baddha Parada*.

On the basis of preparation mercury based drugs are divided into following types

- **Parpati Rasa** – Mercury and sulphur are mixed and grind together to form a black coloured powder known as *Kajjali*. It is then heated to obtain a molten mass, which is poured on banana leaf kept on surface prepared from fresh wet cow dung or mud. This provide smooth surface for the free flow of molten mass. This mass is again covered by banana leaf and then pressed to obtain thin sheet of material. This obtained material is known as *Parpati*. Examples – *Rasa Parpati*, *Panchamrit Parpati*, *Swarna Parpati* etc.
- **Khalvi Rasa** – Metallo-herbal drugs are grind together in mortar to produce the finely powdered preparation. Example – *Kajjali*, *Tribhuvankirti Rasa* etc.
- **Kupipakva Rasa** – Mercurial or *Kajjali* drugs which are prepared through controlled heating in a narrow mouth high long neck flask named as *Kupi*. The obtained preparation through this method is termed as *Kupipakva Rasa*. Example – *Makardhwaja Rasa*, *Rasa sindura* etc.
- **Pottali Rasa** – **Pottali** word means transforming scattered material to a collective form. *Kajjali* and other drugs are mixed with *Swarasa* to change it to bolus form. This is then packed in silk cloth and is exposed to intense heat. *Pottali* should be given by scratching. It should not be hammered. Example – *Rasagarbha pottali*.

Other preparations are non mercurial and are termed as *Pisti*, *Bhasma* and *Satva*. Some examples are *Swarnabhasma*, *Pravalapisti*, *Muktapisti* etc.

Precautions related to Rasaushadhies

To remove the harmful effects of *Rasa Dravyas*, various preparatory procedures such as *Shodhana*, *Jarana*, *Marana* etc. should be followed. If these are not followed properly then the formed formulation can cause severe side effects. One should keep focus on all the aspects while prescribing the *Rasa dravyas*.

While preparing the formulations, heating should be done gradually in a controlled way in the expert supervision. Improper heating can affect the therapeutic value of the formulation. All the steps should be followed to neutralize the toxic effects of the various drugs. One should make sure that adulteration is avoided while preparation and later on *Aushadhipariksha* should

be done to check the qualities of the finished product. For the best results, shelf life of the formulation plays very important role. Formulations should be stored properly to preserve the efficiency of the *Aushadhies*. After fixed time period, *Rasaushadhies* should be evaluated and reprocessed to increase the shelf life.

Physician should diagnose properly and also give some dietary advice to the patients while prescribing *Rasaushadhies*. During *Pottali sevana*, intake of *Taila*, *Amladravyas* is prohibited. One must not take medicines without the expert advise. Dose is the most important precaution, which should be taken care of always. Inappropriate dose can cause side effects and can be fatal.

It is very important to maintain cleanliness while preparing the formulations. *Yantra* and *Musha* should be cleaned before the use. *Putra* and *Kosthi* should be used according to the mentioned procedures. Heating arrangements should always be taken care of before starting the procedures. At the last, *Dravyapariksha* must be performed everytime to avoid any complication. Before prescribing medicines, *Prakriti* of the patient should be noticed. Drugs of specific *Doshas* if administered in patient of opposite *Doshas* then it can increase the problem.

Contraindications

There are certain conditions when one must avoid intake of *Rasaushadhies*

- Renal problems
- Cardiac problems
- Polyuria
- Dyspnoea
- Jaundice
- Skin problems
- Heavy dosage in weak patients
- Small children
- Weak pregnant ladies

CONCLUSION

Rasashastra is an important branch of *Ayurveda* which deals mainly with the Herbo-metallic preparations in which *Parada* is one of the important component. *Ayurvedic scholars* have mentioned about the harmful effects of *Rasaushadhies* if not prepared appropriately. They can be eliminated by following the principles of drug safety and the methods of preparation mentioned in the *Ayurvedic* texts. *Rasaushadhies* are prescribed by considering some factors such as *Roga bala*, drug dose, method of administration, shelf life of the formulation, contraindications etc. *Rasaushadhies* should be given according to the *Sara (Dhatus)*, *Prakriti* (constitution of the body), edible, non-toxic, compatible, pharmaceutical procedures are used such as *Sodhana*, *Bhavana*, *Putta*. *Rasaushadhies* help in providing hepato-protective, rejuvenating, antioxidising hypoglycemic actions etc.

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