Importance of Rasaushadhis in Ayurveda

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Abstract: The word Rasa-aushadhis is basically used for “Preparations of Mercury”. But, Rasa-aushadhis refer all herbo-mineral or metal formulations used for preventive as well as therapeutic purpose. Methods of manufacturing and preventive & therapeutic use of Rasa-aushadhies are studied in Rasa Shastra. Rasa Shastra is one of the Pharmaceutical & Clinical Sciences of Ayurveda developed in medieval India. Treatment with Rasa-aushadhies is known as Rasa Chikitsa and Physicians using ‘Rasa-aushadhies’ in the management of disease are called ‘Rasa Vaidya’. Due to use of Rasa-aushadhies, Rasa Vaidyas are supposed to be superior to their professional counterpart using surgical procedures and plant drugs for treating disease. Now-a-days, many Rasa-aushadhies are considered as Nano-Medicine due to its Nano size & specific properties proved by modern scientists. The prime objective of Rasa-aushadhies to provide safe, effective and quality treatment. Rasa-aushadhies are herbo-minerals/metals Ayurvedic medicine in different doses form as Mercurial Rasa-aushadhies like Khbalva Raskalp, Parpati Raskalp, Kupi Pakva Raskalp, Potali Raskalp and Non-mercurial Rasa-aushadhies like Dhatu Bhasmas, Satva, Pishi. The processes involved in manufacture of Rasa-aushadhies are Shodhan, Marana, Jarana, Amaritikaran, Lohitikaran, Bhasma Priksha, Bhavana etc. Rasa-aushadhies in Ayurveda keep very important place due to its quicker action, pataility, easy to administration, bioassiable, gently absorbable, adaptable and digestible in body, enhancement of action of other ingredients of formulation, able to treat of complex diseases, able to do symptomatic treatment, non-toxic, more shelf life, more effective and lesser therapeutic dose as compare to any other formulation of Ayurvedic aushadhi. Rasa-aushadhies being most efficacious drug in Ayurveda but due to lack of sufficient information in modern research scenarios are less acceptable on global platform. Therefore, more and more researches should be done to prove its actual importance regarding welfare of mankind.

Keywords: Ayurveda, Rasa Shastra, Rasa-aushadhi

1. Background

In Sanskrit the word Rasa is used to describe a number of different things, including juice, taste and essence; within context of Rasa Shastra it is used to describe the metal Mercury, also known as quicksilver. The word Shastra means knowledge or sacred scripture. The term Rasa Shastra, therefore, could be called as ‘the science of mercury’. Thus, the word Rasa-aushadhies is basically used for “Preparations of Mercury”. But, Rasa-aushadhies refer all herbo-mineral or metal formulations used for preventive as well as therapeutic purpose. Methods of manufacturing therefore, could be called as ‘the science of mercury’. Thus, the word Rasa-aushadhies is basically used for “Preparations of Mercury”. But, Rasa-aushadhies refer all herbo-mineral or metal formulations used for preventive as well as therapeutic purpose. Methods of manufacturing and preventive & therapeutic use of Rasa-aushadhies are studied in Rasa Shastra. Rasa Shastra is one of the Pharmaceutical & Clinical Sciences of Ayurveda developed in medieval India. Rasa Shastra developed a new approach to the healing arts by its introduction of herbo-metallic-mineral formulations. Not only were these remedies at the disposal of the sick and dying, but were also made available to the strong and healthy who wishes to extend their lives. Eventually, after experimentation and refinement, this system found itself altogether new territory, that of empowered elixirs. These new elixirs no longer sought to heal or regenerate, but to make the body impervious to the ravages of time – for all the time, thus setting the ancients upon a new quest, the search of immortality.

Rasa Shastra is Vedic based Medical Alchemy. Using a fusion of metals, minerals, gemstones, animal products and herbal ingredients, highly medicinal compounds known as Rasa-aushadhies were formulated for rejuvenation, the cure of chronic disease and ultimately life-extension. On a more esoteric level some of this work also provided a practical guide to the art of gold-making. Though this science was established in antiquity, its practice very much continues to the present day. Ultimately it was the medicinal side this work that prospered, producing a vast array of highly potent formulas dedicated to relieve humanity from its pains and suffering.

Rasa Shastra could be said to follow two pathways, firstly Lohasiddhi, referring to the transmutation of lower metals into noble metals such as gold and silver. The second pathways, Dehasiddhi, referred to the act of physical transformation that is to make the human body imperishable (or immortal).

“न च रसशास्त्रं शास्त्रवादाध्ययनं अंतर्न्यं, देहवेधद्वारा मुक्तिरेव परमप्रयोजनालावृधन् ||”
(सौरवदेशसंह)

Treatment with Rasa-aushadhies is known as Rasa Chikitsa and Physicians using ‘Rasa-aushadhies’ in the management of disease are called ‘Rasa Vaidya’. Due to use of Rasa-aushadhies being the most efficacious drug in Ayurveda, Rasa Vaidyas are supposed to be superior to their professional counterpart using surgical procedures and plant drugs for treating disease.

“उत्तमो रसैवेधस्व नरैव न्योत्तिकादिभिः
अधमः शास्त्रधातवसंग्रहमेव वैधानिकम् मतः”
(सौरवदेशसंह)

Volume 12 Issue 2, February 2023

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Paper ID: SR23211001202
DOI: 10.21275/SR23211001202
The processes involved in manufacture of Rasaushadhies are herbal drugs. forms also where Rasdravyas are formulated from these, there some other preparation includes Potali Raskalp. The non-preparation, the mercury based mercurial Ayurvedic

2. Methods

Ayurvedic medicines, Rasaushadhies can be classified in distinct doses form classes as Mercurial and Non-mercurial Rasaushadhies. Based on the method of preparation, the mercury based Rasaushadhies are classified as Khalva Raskalp, Parpati Raskalp, Kupipakva Raskalp and Potali Raskalp. The non-mercurial Rasaushadhies preparation includes Dhatubhasmas, Satva and Pisti. Apart from these, there some other herbo-mineral Ayurvedic dose forms also where Rasdravyas are formulated along with herbal drugs.

<table>
<thead>
<tr>
<th>Table 1: Types of Rasaushadh &amp; Examples.</th>
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<tbody>
<tr>
<td>Type of Rasaushadh</td>
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<tr>
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</tr>
<tr>
<td>Khalvi rasa</td>
</tr>
<tr>
<td>Parpati rasa</td>
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<tr>
<td>Kupipakva rasa</td>
</tr>
<tr>
<td>Potali rasa</td>
</tr>
<tr>
<td>Bhasma &amp; Pisti</td>
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<tr>
<td>Lauha &amp; Mandura</td>
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</tbody>
</table>

Use of Rasa-aushadhis is independent from dosh, dusya, desh, kaal or rogi priksha. This is why it can be used in the time of urgency and emergency management. These properties also show superiority of any other Ayurvedic formulations.

After development of modern Nanomedicine science, it could be clearly accepted that many rasa-aushadhis come in the criteria of nanomedicine. The Rasaushadhies were totally different from original particles in chemical composition and structure [Fig. (1)]. It not only increases the surface area but the Nano size also helps the drug to reach the target site efficiently.

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Aim

The principle objective of Rasa-aushadhis is to make healthy by maintenance and promotion of health, prevention and cure of sickness.

The prime objective of Rasa-aushadhis to provide safe, effective and quality treatment. According to need, the combinations of rasa-aushadhis can cure or prevent even from complex diseases. Rasa-aushadhis has ability to provide in endemic, epidemic and pandemic management.

Analysis using parameters described in Ayurveda texts:-

1) Physical parameters - Varitar, Ummama, Rekhaapoorntva, Shlakshnatvam and 2) Chemical parameters - Varna, Gatarasatvam, Nishchandratva, Apoornabhavatva.

Analysis using modern parameters:

The bhasma as well as the starting material must also be analysed using the following techniques:

- X-ray diffraction (XRD) - qualitative.
- Scanning electron microscopy (qualitative).
• Analysis by advanced analytical techniques like particle size distribution (PSD) analysis, scanning electron microscopy (SEM), and inductive coupled plasma spectrometry (ICP).

### Table 2: List of some Poisonous substances of mineral origin under Schedule-E6 and some of their aushadhayog.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of Drug</th>
<th>Chemical Name</th>
<th>Aushadhayoga</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Gauripashana</td>
<td>Arsenic</td>
<td>Sameernaamag rasa, Mallassundra</td>
</tr>
<tr>
<td>2.</td>
<td>Hartala</td>
<td>Arsenosulphide</td>
<td>Kasturibhairava rasa, Taalkeshvara rasa</td>
</tr>
<tr>
<td>3.</td>
<td>Parada</td>
<td>Mercury</td>
<td>Rasa parpati, Rasa sindoora</td>
</tr>
<tr>
<td>4.</td>
<td>Raskarpura</td>
<td>Hydargyritisubchloridum</td>
<td>Used as formulation itself.</td>
</tr>
<tr>
<td>5.</td>
<td>Tuttha</td>
<td>Copper sulphate</td>
<td>Mahamrunyunjaya rasa, Jatyadighrita</td>
</tr>
<tr>
<td>6.</td>
<td>Hingula</td>
<td>Cinnabar</td>
<td>Hinguleshwa rasa, Anandbhairava rasa</td>
</tr>
<tr>
<td>7.</td>
<td>Sindura</td>
<td>Red oxide of lead</td>
<td>Sindrulilepa</td>
</tr>
<tr>
<td>8.</td>
<td>Girisindura</td>
<td>Red oxide of mercury</td>
<td>Paadarimalhara</td>
</tr>
</tbody>
</table>

**Important factors related to Rasaushadhis administration:**

1. Dose (Proper/Lesser/Overdose or excessive dose)
2. Time (Appropriate/Inappropriate)
3. Mode/Vehicle (Anupana) for drug administration (Appropriate/Inappropriate)
4. Diet and Routine management (Pathya/Apathya) Each time a patient.
5. Recommended precautions: Ayurveda emphasizes on safe treatment hence, to prevent the drug-induced illness many restrictions have been suggested which include. GCP (Good Clinical Practices) concern on administration, prescription of expired medicines, knowledge of inappropriate drug, examination of patient and disease before prescription. The quality concerns are controlled by formulary guidelines called AFI (Ayurvedic formulary of India) developed by dept of AYUSH (Ayurveda, Unani, Siddha) and CCRAS (Central council for Research in Ayurveda and Siddha).

The risk related to toxic effects of Rasaushadhis can be considerably reduced by use by following Good Collection Process (GCP), Good Manufacturing Process (GMP) and Good Laboratory Practice (GLP) for quality control and quality assurance for good quality processed medications and following various guidelines mentioned in Ayurveda classics related to administration of drug.

### 3. Result

Rasa-aushadhis is unique in all aspects due to its quicker action, patability, easy to administration, bioassailable, gently absorbable, adaptable and digestible in body, enhancement of action of other ingredients of formulation, able to treatment of complex diseases, able to do symptomatic treatment, non-toxic, more shelf life, more effective and lesser therapeutic dose as compare to any other formulation of Ayurvedic aushadhi. All the above desirable characters are generated after Sanskars over its Crude materials. Sanskars remove unwanted or toxic part of initial material and make acceptable for medicinal use.

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"अन्नमाध्यमपौषोदितः अर्थेषप्रसंस्तः
शिरमार्गाधिविन्दः ओषध्यभोजिकः रामः"
(रम. मा. म.)
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It is fact that Rasashastra appeared as a big boon for humanity and a medicaments showed quick effectiveness even in very small doses. But now a day there is big issue about the use of Rasaushadhis (Herbomineral medicine) regarding their safety and impurity.

### 4. Discussion & Conclusion

Use of metals and minerals in Ayurvedic drugs remains a most controversial issue for the followers of western medicine. These concerns not always true; mere presence of metal in a formulation will not develop adverse effects. Judicious administration considering all variants as explained in Ayurveda determines the benefit or otherwise. Pioneers of Ayurveda have considered in detail about the possible ways by which untoward effects can be occurred and provided all guidelines to avoid such occurrence. Use of various Herbo -metal-mineral medicines containing metals and minerals in therapeutics is an essential part of Ayurveda but safety and toxicity concern in the two decades creates debates in conventional community which attempted to damage the glory of Ayurveda. Purpose of this study was to see the incidence of kidney injury due to Ayurvedic drug consumption. As Rasaushadhis (Herbomineral medicines) are used by many of Ayurvedic practitioners; and patient got relief from their illness as we expected. In spite of this adverse effect of Rasaushadhis (Herbomineral medicines) remains questionable. To answer such questions study was conducted. This study creates confidence to Ayurvedic practitioners to use herbomineral drugs in patients.

Rasa-aushadhis being most efficacious and effective drugs in Ayurveda but due to lack of sufficient information in modern research scenarios are less acceptable on global platform. With standard International guidelines and vigorous directional researches, rasa aushadhis can move towards its ideal glory in International Scientific community as well as general global community. Therefore, more and more researches should be done to prove its actual importance regarding welfare of mankind.

Now it is time, the Centre of Rasa-shatra Nalanda need to be revive once with world class Rasa-aushadhis Research Wing to return the glorious history of Rasashastra & Rasaushadhis of India. It will be great gratitude to all rasashastris (iatrochemists) specially “Father of Rasa Shastra, Nagarjuna”, former vice-chancellor of old Nalanda University (the second oldest university of world) for his incredible work.
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