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RESEARCH ARTICLE

THE SIGNIFICANCE OF *RASAUSHADHIS* IN AYURVEDA

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Abstract

Rasaushadhis refer to herbo-mineral or metal-mineral formulations utilized for therapeutic purposes in Ayurvedic medicine. In Ayurvedic practice, *Rasaushadhis* are regarded as more effective and beneficial due to their lower therapeutic doses, enhanced efficacy through synergistic action with other ingredients, extended shelf life, rapid onset of action, and improved palatability compared to herbal preparations. *Rasaushadhis* are considered fundamental to Ayurveda due to their *Rasayana* (rejuvenating) and therapeutic properties. The bioavailability of these preparations is significantly higher, as they undergo a series of processes known as *Samskaras*, which facilitate the swift absorption and assimilation of even trace amounts of the ingredients in the body. While the term "*Rasaushadhi*" is often associated with mercury, it encompasses a wide range of minerals and metals described in *Rasashastra* (the science of alchemy in Ayurveda), such as *Shilajatu*, *Swarna* (gold), and *Rajata* (silver), which possess *Rasayana* properties. As *Rasayana* therapy, *Rasaushadhis* contribute to the promotion of longevity, physical strength, immunity, cognitive function, sensory sharpness, and the overall quality of the body's tissues (*Dhatus*). They nourish the entire system, enhance immune function, and improve natural resistance to infections. For centuries, *Rasaushadhis* have been used in the treatment of various diseases without causing significant adverse effects.

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Introduction:-

The term '*Rasa*' generally refers to substances such as *Parada*, *Maharasa*, *Uparasa*, and *Sadharana Rasa*, but it also encompasses incinerated or processed metals and toxic tubers. Therefore, formulations containing these components can be categorized as *Rasaushadhis*. Ayurveda outlines the science of *Rasaushadhis* to enhance both the quantitative and qualitative lifespan of humans. Numerous *Rasa* preparations have demonstrated effectiveness in treating various disorders with minimal adverse effects. The minerals and metals used in these formulations are potent and highly effective for immunization, rejuvenation, and disease elimination. *Rasaushadhis* are considered safe when used in therapeutic doses and are easily absorbed by the body.

Compared to conventional medicines, *Bhasmas* and other *Rasa* preparations are unique in their ability to cure diseases, as they can quickly enter the bloodstream and are more biocompatible. These formulations have contributed to the development of a new era in nanomedicine due to their nanoparticle size and holistic approach to

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disease management. However, not all *Rasa* preparations are suitable for every patient. Factors such as the indication, dosage, mode of administration, duration of treatment, the patient's nature (*Prakruti*), and dietary considerations (*Pathya-Apathya*) must always be carefully considered before prescribing *Rasa* medicines.

As **Acharya Charaka** wisely stated, "A drug that is perfectly understood is a life-saving elixir, while one that is not properly understood is like poison, a weapon, a thunderbolt, or fire. A drug whose properties, form, and name are not known, and which is misused, can lead to disaster."

Rasaushadhis are herbo-mineral or metal-mineral formulations used in Ayurvedic therapeutics. These preparations often include heavy metals such as mercury, tin, arsenic, and lead. While the term *Rasaushadhi* is commonly associated with mercury (*Parada*), these formulations can be classified into two main categories:

1) **Mercurials** and 2) **Non-mercurials**. The use of mercury in therapeutics was initially introduced as a bio-enhancer, rather than a primary drug. When combined with other substances, mercury is believed to reduce the required dose of the other ingredients while significantly enhancing their efficacy.

A) Mercurial Preparations

Mercury-based drugs are further classified based on their method of preparation, which includes the following types:

1. **KhalviyaRasa**
 2. **ParpatiRasa**
 3. **KupipakwaRasa**
 4. **Pottali Rasa**
- a. **Khalviya Rasa:** *KhalviyaRasaushadhis* are prepared using a mortar and pestle. Initially, mercury and sulphur are mixed in the mortar and triturated until they form a black-colored powder. Subsequently, other herbal or mineral ingredients are added, and the mixture is further triturated with specified herbal juices. The resulting mixture is then shaped into pills according to the prescribed dose. The term *Khalviya* derives from the Ayurvedic term *Khalva*, meaning "mortar," as the preparation is ground in a mortar.
 - b. **ParpatiRasa:** In the preparation of *Parpati Rasa*, mercury and sulphur are first triturated, and if indicated, a specific metal *bhasma* is added. If no metal *bhasma* is required, the mixture is ground without it. This results in a homogeneous, fine black powder known as *Kajjali*.
 - c. **Kupipakwa Rasa:** In the preparation of *Kupipakwa Rasa*, *Kajjali* is filled up to one-third of a narrow-mouthed glass flask, known as a *Kupi*. This flask is then subjected to controlled heating. Sometimes, this process is carried out in an earthenware crucible called a *Mushaa* or a metallic crucible. The controlled heating in these vessels results in the formation of *Kupipakwa Rasa*.
 - d. **Pottali Rasa:** *Pottali Rasa* involves triturating a mixture of metal and mineral ingredients with herbal substances and forming it into a bolus (known as *Pottali*). This bolus is then wrapped in a silk cloth with a layer of sulfur spread on it and tied securely. The bolus is then heated in molten sulfur until the final product is obtained.

B) Non-mercurial Preparations

Non-mercurial *Rasaushadhis* include *Dhatubhasma*, *Satva*, and *Pisti*. These formulations do not contain mercury but are composed of other metals and minerals that are processed and used for therapeutic purposes.

Important Factors Related to *Rasaushadhi* Administration

When administering *Rasaushadhis*, the following factors must be carefully considered:

- **Proper Dose:** The correct dosage should be adhered to for effective therapeutic action.
- **Timing:** The right time for administering the preparation is essential for optimal absorption and effectiveness.
- **Mode of Drug Administration:** The method of administration (oral, topical, etc.) should align with the type of formulation.
- **Diet and Routine Management:** The patient's diet and daily routines should be aligned with the administration of *Rasaushadhis* for better therapeutic outcomes.
- **Shelf Life (*Saviryataavadhi*):** The shelf life of the formulation must be considered to ensure its potency and safety over time.
- **Testing and Analysis Before Use:** Proper testing and analysis should be conducted to ensure the quality and safety of the preparation before its use.

Problems in *Rasa* Preparations

- **Purification Requirement:** All *Rasa* materials undergo a purification procedure before they are administered to the human body. Improper purification can lead to toxicity.
- **Toxicity Risks:** Unpurified or poorly prepared *Rasa* preparations can be highly toxic and may pose significant risks to the patient's health.
- **Slow and Complex Preparation:** The preparation of *Rasa* medicines is time-consuming and labor-intensive.
- **Global Non-availability:** *Rasaushadhis* are not always readily available on the global market.
- **Global Non-acceptance:** There is limited global acceptance and recognition of *Rasaushadhis* in mainstream medical practices.

Advantages of *Rasaushadhis*

- **Minimized Dosage:** *Rasaushadhis* are used in minute doses, making them more efficient and easier to administer.
- **Palatability and Fast Action:** These preparations are easily palatable and provide quick therapeutic action.
- **Extended Shelf Life:** Incinerated minerals, which are a key component of *Rasaushadhis*, have long-lasting therapeutic value and a prolonged shelf life.
- **Easy Preservation:** The preservation of *Rasaushadhis* is straightforward, ensuring their long-term usability.
- **Faster Assimilation:** The preparation of *Rasaushadhis* involves specific processes called *Samskaras*, which significantly enhance the body's ability to absorb even minute doses rapidly.
- **Increased Efficacy Over Time:** The efficacy of *Rasa* medicines tends to improve over time, which means that they do not have a set expiry date.

Importance of *Rasaushadhis* in Ayurveda

Rasa Shastra is a branch of Ayurveda dedicated to the preparation and use of *Rasaushadhis*. It evolved primarily during the medieval period and deals with the therapeutic application of metals, minerals, and their combinations. These formulations, in different valence states and crystal structures, are used for chronic diseases at varying levels of purity and in specific combinations and dosage forms.

The proper preparation of *Rasaushadhis* is crucial for their safety and efficacy. These preparations are widely used in the treatment of various ailments such as **diabetes, liver diseases, anaemia, obesity, heart diseases, skin disorders, respiratory tract issues**, and even **cancer**. They are known for their ability to improve the immune system and support overall well-being, including longevity, physical strength, mental clarity, sensory sharpness, and vitality.

Rasaushadhis also play a key role in *Rasayana* therapy, which focuses on rejuvenation and anti-aging effects. Ayurveda recognizes approximately **430 *Rasa* preparations** that are specifically used for pacifying *Jwara* (fever), such as:

- ***Mrityunjaya Rasa*** – Used to revitalize destroyed cells, particularly in infectious fever conditions.
- ***Tribhuvanakeerti Rasa*** – Used for conditions related to fever in the *Udara* (alimentary), *Urah* (respiratory), and *Shiras* (neural) areas.

Additionally, there are around **342 *Rasa* preparations** used to pacify *Kasa* (cough), assisting physicians in managing respiratory conditions.

- ***Kasakuthar Rasa*** – Used for treating **cough** and **headache**.
- ***Swasakasachintamani Rasa*** – Used for **chronic cough**, **undiagnosed asthma**.
- ***Abhraka Bhasma*** – Used for **chronic cough**.

There are approximately **87 *Rasa* preparations** to support the management of **Rheumatoid Arthritis**. Examples include:

- ***Amavatari Rasa*** – A specific **drug of choice** for **rheumatoid arthritis**.
- ***Chandraprabhavati*** – Used when **obesity** and **GIT (gastrointestinal) issues** precipitate in **rheumatoid arthritis**.

There are approximately **118 *Rasa* preparations** to support the management of **Kamala** (Jaundice). Examples include:

- **Dhatriloham** – Used for **jaundice**.
- **LakshmivilasRasa** – Used for **jaundice associated with anaemia**.
- **Lohaparpati** – Used for **jaundice with complications** such as **diarrhoea, fever, puerperal jaundice, or neonatal jaundice**.

There are approximately **23 Rasa preparations** to support the management of **Obesity**. Example:

- **Shiva Gutika** – Used for **obesity** in combination with **diabetes** and **COPD**.

There are approximately **162 Rasa preparations** to help physicians manage **Atisara** (diarrhoea). Example:

- **LohaParpati** – Specifically used when **anaemia** is present, as it helps to relieve **constipation**.

Some Important Examples of *Parpatis* and Their Therapeutic Indications:

1. **Rasa Parpati**
 - Therapeutic Indications: Colic pain, malabsorption syndrome, diarrhea, dysentery, inflammation, jaundice, anemia, fever, rheumatism, hemorrhoids, skin disorders, dyspepsia, and digestive issues.
2. **Bola Parpati**
 - Therapeutic Indications: Menorrhagia, metrorrhagia (abnormal bleeding), bleeding disorders, and bleeding hemorrhoids.
3. **PanchamirtaParpati**
 - Therapeutic Indications: Malabsorption syndrome, hemorrhoids, vomiting, diarrhoea, fever, tastelessness, bleeding disorders, age-related skin and hair changes, eye disorders, digestive impairment, and oligospermia (low sperm count).
4. **Lauha Parpati**
 - Therapeutic Indications: Digestive impairment, malabsorption syndrome, dyspepsia, anaemia, *Jwara* (fever), postpartum fever (puerperal fever), diarrhoea, jaundice, and splenic disorders.

Some Important Examples of *Pisti* and Their Therapeutic Indications:

1. **Pravala Pisti** (from Coral)
 - Therapeutic Indications: Oligospermia (low sperm count), loss of strength and immunity, digestive impairment, low intelligence, and general weakness.
2. **MuktaPisti** (from Pearl)
 - Therapeutic Indications: Diarrhoea with bleeding, heart disease, mania, psychosis, and bleeding disorders.
3. **ManikyaPisti** (from Ruby)
 - Therapeutic Indications: Loss of body strength (immunity), heart disease, oligospermia, digestive impairment, weakness, and low intelligence.

Some Important Examples of *Pistis* and Their Therapeutic Indications:

1. **Makara Dhvaja**
 - Therapeutic Indications: Weakness of the heart, senility/premature aging, fever, digestive impairment, aphrodisiac, and nutrient for both body and mind. It also has adaptogenic, immuno-modulatory, neuro-endocrine properties.
2. **Malla Sindura**
 - Therapeutic Indications: Bronchial asthma, diseases due to **Vata** and **Kaphadoshas**, and Syphilis.
3. **Rasa Puspa**
 - Therapeutic Indications: Gastroenteritis with piercing pain, ascites, dysuria, and related conditions.
4. **RasaSindura**
 - Therapeutic Indications: Diseases due to **Kaphadosha**, loss of strength/immunity, tissue wasting, heart weakness, colicky pain, digestive impairment, anaemia, obesity, ulcers, etc.
5. **Vatagni Kumara Rasa**
 - Therapeutic Indications: Cough, dyspnoea/asthma, fever, and diseases related to **Vatadosha** (*Vataroga*).
6. **Samirapannaga Rasa**
 - Therapeutic Indications: Diseases due to the vitiation of all three *doshas*, stiffness in joints due to **Kapha dosha**, fever, dyspnea, asthma, and cough.
7. **Svarna Vanga**
 - Therapeutic Indications: Chronic cough, dyspnea/asthma, diabetes and polyuria, and diseases of the urinary tract.

8. **Svarna Sindura**

- Therapeutic Indications: Oligospermia, tissue wasting, learning disabilities, and a wide range of other diseases.

Conclusion:-

From the above examples, it is clear that *Rasaushadhis* are crucial formulations in Ayurvedic therapeutics and serve as the backbone of Ayurveda. These preparations, when used in minute doses, can navigate the smallest bodily channels (*srotas*) and penetrate the deepest tissues, delivering their therapeutic effects. The primary advantages of *Rasaushadhis* lie in their potency, longevity, and effectiveness. They are typically tasteless, odorless, and require only a minuscule dose to produce a strong and long-lasting effect, eliminating the need for prolonged use. Ayurveda has developed the science of *Rasaushadhis* to enhance both the quantitative and qualitative lifespan of humans. However, before recommending *Rasaushadhis*, factors such as proper dosage, indications, mode of administration, and *pathya-apathya* (dietary and lifestyle considerations) should always be carefully evaluated.

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