WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 13, Issue 12, 1284-1295. Review Article ISSN 2277–7105

AN ESSENTIAL CONCEPTS IN RASASHASTRA

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Article Received on
05 May 2024,

Revised on 25 May 2024,
Accepted on 15 June 2024

DOI: 10.20959/wjpr202412-33029

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ABSTRACT

Core principles are basic ideas that have been routinely evaluated in a number of forms that are important for the comprehension of applied research. Every research has its own basic values. Rasashastra, a division of Ayurveda, is called an Indian herbo-mineral preparation pharmaceutical business. The concepts connected with the creation and growth of Rashastra are not explicitly stated and are dispersed in numerous ancient classical documents. The effort has also been made to examine these basic concepts in a systematic and informative way.In the present research, therefore, an effort has been made to carry out a systematic analysis of the core concepts of Rashastra and to explain their distinguishing features. Lohavada and Dehavada; 18 mercury refining processes, Rasashastra jargon, tools, crucibles, blowers and pits for the incineration of metals / minerals, purification, incineration, Amritikarana, incineration and levitation experiments are the eight fundamental concepts of Rasashastra. A full comprehension of these principles with a view to both Ayurvedic and contemporary science is the secret to study and growth in Rashastra. Because faulty techniques while preparing rasaushadhi can lead to toxic effects on health of community and create chaos. So need to understand the basic principles while making rasaushadhis

KEYWORDS: Rasoushadhi, Basic concept, advance technique.

INTRODUCTION

The famous Rasa Shastra formed about 7th century as a branch of the Ayurveda. While the theme of Rasa Shastra can be traced back to the Vedic period where noble metals are meant to derive from the holy fire (Yangyan) for the well-being of human society[1], the methods or art or science are not clearly defined or well known today. In the Samhita time, the materials related to Rasa Shastra are contained in a dispersed manner by means of a detailed explanation of their therapeutic application, but without a definition of their mode of care. The Middle Ages claim to be the golden age of Rasa Shastra; the explanation of the raw materials manufacturing processes, along with the therapeutic and alchemical usage of the finished product, can be found in various literatures of this era. Every research has its own vocabulary of speech and its own basic values. For a better understanding of the topic, literature of various ages is the key source, and awareness of basic principles is the primary requirement to obey the texts.

Fundamental principles

Values / concepts / phenomenons that are necessary within a given discipline or method are known to be the basic principles of that discipline or method. These are important for a detailed and proper comprehension and creation of subjects or programs. Topics, manufacturing processes, raw materials evaluation, product validation, harmful effects and their remedies, etc., are defined in ancient Rasa literature, which are very useful for a better understanding of the subject matter. Upon going through the entire body of literature and tracking it from the Vedic period to the present, it is concluded that the following points may be considered to be the basic concepts of Rasa Shastra.

Paribhasa (Technical terminologies)

- *Mana* (Measurement)
- *Yantra*, M*usha* (Tools and devices)
- *Puta,Kosthi* (Heating arrangements)
- *Dravyapariksha* (Identification of materials)
- *Rasashala* (Setup of Ayurvedic pharmacy)
- Processing technologies & their sequence (*Shodhana*, M*arana*)
- Aushadhipariksha (Techniques of assessment of finished product)
- Dose determination
- Therapeutic uses.

- Knowledge of adverse effect of Rasaushadhies and their remedies.

Technical Terminology (Paribhasa)

As other philosophy, Rasa Shastra has its own vocabulary of speech and comprehension. The literature for the same are also enriched with so many technical terms which are practically difficult to understand by common people and scientists of other discipline. Hence, it is very much necessary to explore these technical terms, conveying principles of working, appraisal of products, references and meaning of,[2] hidden/partially explored concepts, for its better understanding and cross disciplinary study, for development of the system in particular and well-being of the society in general.

Measurement (Mana)[3]

Rasa Shastra is the topic of medicinal diagnosis, dosage calculation and clinical usage of Rasaushadhies (Herbo- mineral preparation) and thus proportions are important instruments to use. As the measuring form of ancient India (e.g. Rati, Tola, Pala, Sana, etc.) was specific in relation to the modern period, the correct translation of such measures must be understood to those concerned. The raw materials used in the manufacture of medicinal goods are manufactured into a number of folding techniques involving many similar materials of specific origin (mineral / herbal / animal) and hence, in each and every phase, the appropriate quantity of measurement plays a significant role in the excellence of the finished product. Rasaushadhies contains drugs made from Hg, As, Pb, Sn, Cu etc. Thus, the utmost precaution must be taken with respect to the assessment during the determination of the medication, since the actual dosage type is to be given to the human body. E.g. 1 Rati of 125 mg. 1 Tola of 12.5gm, 1 Pala of 50gm, etc.

Tools and devices (Yantra, Musa)[4]

Tools and equipment are important for the development of some form of medication. These not only serve as the keeper of raw materials during manufacturing, but are often constructed in such a way that, depending on the raw materials to be handled, these induce an improvement in the potency of the prepared drugs and at the same time decrease the toxic impact of the so-called Doshas of the raw materials. These are also used to control the material during dealing with them. According to the nature of raw material to be processed, working principle for particular processing, requirement of the quality of the finished product to be achieved, arrangement of heating devices to be employed, the Yantra (different kinds of instruments) and Musas (different kinds of crucibles) are constituted and designed. Hence,

these are the fundamentals of all personals associated with Ayurvedic drug manufacturing. e.g.- Dolayantra for Swedana, Damaruyantra for Hingulothaparada, Kachhapayantra for Gandhakajarana, Musa for Sattvapatana, etc.

Heating arrangements (Puta, Kosthi)

These are heating systems used for the processing of pharmaceutical items, primarily of metallic/mineral type. Among them, Puta is the main note for the preparation of Bhasma and Kupipakvarasayana. It is the quantity of heat needed to achieve the desired quality product in the cycle of Marana (incineration) with the warning that more or less quantum results in the spoilage of medicinal goods. Puta induces Apunarbhava, Varitara, Laghutva, and Deepana consistency in the prepared Bhasma. This also allows the drug to circulate rapidly through the micro- circulation of the body.[5] Puta also induces a decrease in dose and introduction of medicinal efficiency, and eventually causes Mrita (Bhasma) of the raw material extracted in this scheme.[6]

It is very necessary, without awareness of Bhasma and hence the Rasaushadhies cannot be prepared. Once, it is important as the utmost precaution must be taken to include a particular volume of heat over a specified duration of time for the development of a diligent substance that should be therapeutically successful with little to no negative effects on the human body. For processing of different raw materials an understanding regarding the Putas is indispensable.

Every kind of Puta offers three phases of the temperature cycle, i.e. the cycle of the increasing temperature, the pattern of the maximum temperature range and the pattern of self-cooling.

Three of these formulations yield the desired result. High temperature range (absolute temperature level measured over all period of time) and self-cooling play a more critical part in the processing and compounding of products. Different Putas described in various literatures are Mahaputa, Gajaputa, Varahaputa, Kukkutaputa, Balukaputa, Bhandaputa, Gorbaraputa etc. for Marana of different materials as per need.

Kosthi is a particular scale and form of heating device used for the extraction and purification of Sattva (R.R.S 10/32). Kosthi is constructed in such a manner that a sufficient volume of oxygen is supplied to the furnace during the cycle to ensure a high temperature for the

content being treated. It is used primarily for the extraction of Sattva. Any mineral Sattva extraction is required therapeutically because Sattva Bhasma is more effective than Bhasma of the same raw material. Sattva is an important prerequisite throughout any alchemical cycle (Abhraka Sattva & Makshika Sattva for Dvandana). For Sattva Patana, therefore, knowledge of Kosthi is necessary and is integrated into the fundamentals of Rashastra.[7]

Identification of materials (Dravyapariksha)

Raw materials are the foundation of an appropriate and honorable formulation in some type in care technique. The recognition of raw materials is an essential step for GMP (Good Manufacturing Practice). So, it is only by deliberately choosing the raw material; the Rasashastra moto can be accomplished. If the raw material is not up to the mark and according to the Grahya Lakshana (acceptable features) mentioned in different Rasa literature, then all subsequent attempts to prepare the medication to cure a specific disease will not be effective. There are several products that appear somewhat identical in their organoleptic properties but behave differently after processing. The supplier and all relevant staff must be informed of the main features for the differentiated recognition of such products, for the planning of appropriate medicines. Until the processing of raw materials, the following may be confirmed.

- Understanding the Grahya Lakshana of the raw materials in the literature.
- By questioning local and field experts where the document is silent on the correct features.
- POLAN by matching the marker compounds and the various analytical fingerprints produced by an authoritative entity for a specific item. For other products where the raw material recognition requirements are provided for the product, but the manufacturing procedures to be practiced, such as the form of Puta, no. of Puta, no. of Bhavana, etc They are not described; in this circumstance there is a chemical structure such as MP, solidity, Sp. Gravity, stiffness, interaction with specific Maraka drugs (associated substance used during the incense phase) in various conditions should be understood to start the process.

Establishment of Ayurvedic Pharmacy (Rasashala)[9,10]

In ancient India, Rasa sala was designed to create Rasaushadhies, both for alchemical and therapeutic purposes, and was regulated by Acharya. They were architect the Rasashala and placed the needful equipment's, raw materials, finished product and cited proper

manufacturing area with respect to different techniques like firing, washing, drying, grinding etc. in such a way so as to maintain the balance with the magnetic and cosmic resonance of the nature e.g. the jobs related with fire like Putapaka, heating etc. are supposed to be done in Agneya corner, job related to air like drying etc. are done in Vayavya corner. The positioning of students, scholars and support staff was often used to position them in the right location in order to promote better coordination and successful performance. The Deity Rasa Bhairava was also an essential edifice of the ancient Rasashala and was put in the East corner so that all could believe that God is watching after individual success and giving mental calm and attention to the work that should be performed.

In the modern period, the manufacturing unit is regulated by the rules and regulations established / amended by the Government of India or by the various State Governments on a time-to-time basis, as required, to provide the patient with real medicine for the better service of humanity. In India, GMP (Good Manufacturing Practices) has been compulsory for new units since 23 June 2000 and for old units making Ayurvedic medicines for sale since 23 June 2002. This is listed in Schedule-T of the Drugs & Cosmetics Rule-1945.

GMP guarantees protection of raw materials, minimization of the variability component, recycling of products, standardization of pharmaceutical procedures and quality management of medical drugs through quality assurance. Under GMP a manufacturing area for Ayurvedic pharmacy requires min. 1200 sq. ft. This has again specified a min. area required for manufacturing of particular dosage form like for Asava & Arista 200 sq.ft. Kupipakva 150 sq. ft etc. Different rules and regulations are related to GMP for Ayurvedic pharmacy such as regarding application for license and for GMP, cancellation of license, penalties for offence etc. must be known to the parties most affected. Knowledge for the establishment of the Ayurvedic Pharmacy, along with the rules and regulations that are the fundamental concepts of Rashastra, is therefore necessary in the current scenario.

Processing methods and their sequence

The core aspect of Rasashstra is the refining of raw materials into medicinal dosage type. As a consequence, the various methods and strategies introduced have their own interpretations in order to increase the consistency of the drugs to be prepared. Also-stepwise processing proves more effective & logical to the nobleness of the finished products, instead of by passing certain intermediary processes which is sometimes seen in practice by certain manufacturers. There is not much processing mentioned in Rasa's literature on the essence of

the raw material to be handled, but some processing is very important and sometimes happens in most Rasashastra raw drugs. They are Sanskara, Shodhana, Jarana, Marana, Amritikarana and Sattvapatana.

Sanskara[11]

Sanskara is a method that causes the necessary properties of the raw material to be used for various purposes. According to Acharya Charaka sanskara, it is achieved with the aid of water / fire or by adding / subtracting any necessity, or by executing other procedures, such as churning, crushing or automated time development. In Rasashstra Sanskara, Parada is conducted with the intention of obtaining medicinal and alchemical results. 08 Sanskaras are made for the first purpose and 18 sanskaras are made for the latter.12 Growing Sanskara is performed only after the previous one has been successfully completed. Today, 18 Sanskaras are hardly in action. Sanskara may allow trace elements to be incorporated to certain specific materials used in the procedure which can enhance Parada's therapeutic progress.

Shodhana[13]

It is a primary method for all raw products, irrespective of their type, such as plant, mineral or animal. Shodhana can be characterized as Ayurvedic treatment of raw drugs that reduce Doshas (impurities)/toxic effects and induce therapeutic properties by means of a variety of techniques, such as wet trituration (Bhavana), pounding / grinding (Mardana), fomenting (Swedana), heating (roasting / frying), heating / quenching (Nirvapa), etc., not just material purification.

Shodhana Signifies

- Reduction of Doshas (impurities) /toxic effect
- Induction of therapeutic property
- Reduction of size of raw drugs.
- Facilitation of Marana (incineration) process.
- Probably addition of certain necessary trace elements

Marana[14]

This is the key method used to adopt the effective dosage type of Ayurvedic Therapeutics for the preparation of Bhasmas. Marana can be defined as a process in which the Shodhita material is subjected to Bhavana with certain herbal juices/decoctions with or without addition of certain other mineral/ animal originated materials followed by burning in different

types of Puta system of heating with the rich involvement of oxygen. Puta is the usual device used for Marana. Types of Puta are chosen according to the quality of the substance to be handled. The text has immense instructions for the collection of a kind of Puta for a specific item. But, practically a particular Bhasma is hardly prepared as per exact type and no. of Puta described for the same in the texts. Nevertheless, the signs are reasonably available and performed with some adjustment by examining the substance from time to time and studying the expert opinion. Throughout the case that no sign is detected, the procedure is started by an professional opinion on the chemical and physical properties of the material.

Marana Signifies

- Conversion of components into compounds and current substances in raw materials into some other substances for planned medicinal usage known as Bhasma.
- Reduction of particle size.
- Approximate introduction of some trace elements to the final product and are known to be helpful to the human body for medicinal usage.

Amritikarana[15]

Amritikarana is a specific pharmaceutical treatment conducted in some products, such as Tamra, Abhraka, etc., after Marana, to eliminate residual toxicity when current, with the intention of ensuring the best quality of Bhasma with no or reduced toxicity.

Ancient Acharyas were well aware of the toxic existence of Tamra and hence explicitly identified Amritikarana for this content, which is also shown in a scientific analysis that Tamara bhasma contains highly toxic mercury oxide compounds, while Amritikarana does not contain any mercury oxide compounds. Therefore, amritikara is an integral operation.[16]

Jarana

Once Gandhaka and other items are digested by various methods in the procession, the method is known as Jarana. Yet in the case of Putilohas (Pb, Sn & Zn), Jarana is the medium of Bhasmikarana Inputilohas Jarana is achieved after Shodhana, by rubbing with various organic alkali materials (Apamargakshara, Ashwatthakshara etc.) in the presence of heat to turn it into powder shape in order to promote the cycle of Marana. This is very relevant for both the medicinal and alchemical processes.

Sattvapatana[17]

The method in which the substance is mixed with Mitrapanchaka / Dravakagana drugs stored in Musa and shot in an extreme fire in Kosthi with the intention of removing the metal essence is regarded as Sattvapatana. Sattvapatana is important for both alchemy and therapy since it is believed that Sattva Bhasma is more therapeutically active than Bhasma of a particular substance. Abhraka Sattva and Makshika Sattva are necessary criteria for Dvandana (amalgamation) in Parada Jarana during alchemical production.

Aushadhipariksha

Upon production, it is really important to determine the consistency of the final product before it is planned for human use. There are so many quality assurance metrics for Bhasmas of various materials recorded in ancient Rasa texts. These are Varitara, Rekhapurna, Apunarbhava, Nirutha, Niswadu etc. Now a days quality of Bhasmas is also tried to control by marker compounds present in particular Bhasma or by certain analytical fingerprints documented by authorized organization through different research programme like range of particle size of final Bhasma by TEM (Transmission Electron Microscopic Study), SEM (Scanning Electron Microscopic Study), presence of different chemical compounds in specific Bhasma qualitatively and quantitatively by EDAX (Energy Dispersive X-ray Analysis), X-Ray diffraction, Atomic Absorption Spectroscopy study etc. Which are important for the growth of the program and for the opening up of the science sector to cross-disciplinary discussion.

Identification of dosage and administration Rasaushadhies are of a particular type in terms of their deadly personality and medicinal efficacy. Hence determination of dose and preparation of the dosage form is an important and cautious part of Rasa Shastra that should be known by the learner. Somala, Harital, Manahshila, Rasakarpura etc are used in very small quantity (in milligrams) and a little increase in dose may prove fatal hence greatest care must be taken during dose fixation according to the patient. Even very limited volume is difficult to administer, so proper diluents are required to prepare a dosage type, such as the use of Maricha powder in Somala and the use of Twak powder for Rasakarpura etc. The learner and the people involved will be made aware of all such facts. It is also important to consider the time of administration, route of administration and rhythm of administration of medicine for success in therapeutic use.[18]

Therapeutic Uses[19]

Acharya Charaka has stated the fair usage of poisonous materials that serve as a drug, and that the abuse of drugs may also function as a toxin. As a consequence, the rational usage of Rasaushadhies contributes to progress in clinical practice, whereas discrimination in use may cause adverse / toxic, even lethal, consequences. It is therefore important to recognize the correct medicinal application, for which all other attempts become worthless.

Monitoring and remedying of harmful medication reactions

Nowadays, surveillance and recording of ADR (Adverse Drug Reaction) is an imperative requirement for Ayurvedic medicines in general and Rasaushadhies in particular for the growth of the program and for the responsible usage of pharmaceutical products by licensed practitioners only. The experience of ADR must also be communicated to those involved, beginning from the processing of raw materials to the delivery of medicines.

DISCUSSION

PARY has the freedom to accomplish the ultimate intent of Ayurveda in general and Rashastra in particular, i.e. The physical and spiritual well-being of a human person deserves real care, which must be followed by all the basics. It is essential to know the science terminology for a better understanding of the topic before doing any study. Because Rasashastra is mainly considered to be the science of metals and minerals of medicinal value, emphasizing the parade and their care through clinical application, it is important to have awareness of raw materials in terms of their physical and chemical existence.

Manufacturing of drugs is the main note for Rasashastra. For the awareness of various processes, such as Shodhana, Marana, etc., as well as the techniques involved there in, such as Nirvapa, Dhalana and Puta fire, etc., the team concerned, along with the awareness of the tools and devices needed, must be identified. For the manufacturing of Rasaushadhies well equipped Rasashala i.e. GMP certified Ayurvedic Pharmacy is the need of time which should also involve environmental care. In today's age there are several concerns regarding the Rasaushadhies, and hence the evaluation of the nobleness of the preparation of Rasa has become important from one to all criteria as physical, chemical, experimental, clinical to confirm it. Before doing some serious moral research, particularly in Ayurveda (preparation of medicine for the healing of the sick), our philosophy believes in worship. In today's age, this activity is almost missing, too many times only when all the requisite outcomes have been obtained as anticipated.

CONCLUSION

- Group Basic values are necessary.
- All the basic concepts have their own value in the design of the structure.
- At present, several of the values that should be deemed essential that will strengthen the structure are yet to be revealed.

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