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A Review on Anupalabdha and Krutrima Dravyas in Rasashastra

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Abstract

The branch Rasashastra deals with paradadi rasadravyas which include metals, minerals, precious and semiprecious gems, marine products, poisonous drugs etc., classified under different categories based on their nature and use which is utilised for pharmaceutical and therapeutical purposes. The availability of genuine drugs has crucial role for the pharmaceutical field as it denotes the quality of the prepared formulations. In the absence of a drug, artificial methods are adopted to prepare such rasadravyas in laboratories. This article has highlighted the drugs that are listed as anupalabdha (non-available) and kritrima (artificial/synthetic) dravyas(drugs).

Keywords: Rasashastra, anupalabdha, kritrima, rasadravya

Introduction

Rasashastra is a pharmaceutical branch of Ayurveda which mainly deals with the metals, minerals, animal origin product, toxic herbs and their use in treatment.[1] Acharyas have listed several rasadravya in distinct categories. Some of these rasadravya are sandigdha (controversial) in relation to their origin, synonyms, types, colloquial names, etc.,[2] while others are anupalabdha (unavailable), which means that they are either used in their pratinidhi (substitute) drug formulations or in their kritrima (artificial/synthetic) form. The term "controversy" refers to misconceptions and unsubstantiated statements on any subject. Since their true identity and verification are unknown, it is challenging to successfully standardize Rasaushadhis due to such controversial drugs. Pratinidhi dravya, as defined by Acharya Vagbhata, is the use of a drug with comparable potency in terms of rasa, guna, virya, and vipaka when a certain drug is unavailable during the creation of a compound.[3] Additionally, depending on the patient's state, the passage of time, or the ailment, a Vaidya can substitute a certain Dravya from a yoga (compound formulation).[4]

Review

Any drug's controversy may arise from a number of factors, including the drug's rarity or lack of availability, a lack of awareness and its popularity, misunderstandings, and a knowledge gap between the past and present.[5] Rasaka and sauviranjana are two anupalabdha dravya due to its controversies in the field of rasashastra. Similarly, drugs like sasyaka, kasisa, rasanjana and hingula are prepared synthetically nowadays. It can be because the drug's variety, identification, or incidence are unclear. Furthermore, the lack of native forms of minerals or ore-minerals makes it hard to evaluate the grahya- agrahya lakshnas described by Rasacharyas in

the current mineral drugs. In order to develop a standard rasashastra preparation, it is necessary to draw attention to the areas of controversy within the rasashastra discipline.

Rasaka

In present day Rasaka, which is the ore mineral of Yashada is out of use because of difficulty in selection of genuine drug. When we look through classics, Rasarnava has quoted 3 varieties of Rasaka based on the physical appearance, namely mrittikabha (ZnO), gudabha (ZnS) and pashanabha ($ZnCO_30$). In the context of tuttha, Acharya chakrapani mentioned two variety of Tuttha i.e., Mayura tuttha and Kharpara tuttha. In commentary, Dalhana clarified that best quality tuttha is Mayura tuttha and ordinary one is known as kharparika tuttha. In Rasaprakasha sudhakara, the satwa of kharpara is like lead.[5] While Rasendra Chudamani states that it is similar to vanga (tin).[6] According to rasa paddhati, Rasaka is a type of Tuttha because of its similar properties and synonymously known as Kharpara.[7] Some Vaidya use Yashada Bhasma or calamine instead of kharpara in Vasantamalati rasa. But in present day it is very difficult to compare the available sources with the verses of acharya.

Sauviranjana

It is said to be the best among the Anjana. It is said to be in the form of shila (stone) and obtained from natural form. There is difference of opinion regarding the types of Anjana. Rasaratna samuchaya mentioned 5 types- sauvira, rasanjana, pusha, nila, srotanjan.[8] According to Ayurveda prakasha 2/226, Sweta Sauviranjana and Krishna Strotanjana are the two types of Strotanjana.[9] Also states that sauviranjana is similar to srotoanjana with only one exception is it is white in colour. Both of these are compounds of antimony, thereby considered to be same. According to Rasa tarangini, two types of Anjana are explained i.e., Srotanjana and sauviranjana. Grahya lakshana of Sauviranjana is dhumabha (externally smoky) internally shiny appearance and gives black colour on rubbing (mashi varna).[10] Sauviranjana is therapeutically used in raktapita, visha, hikka, akshiroga, vrana shodhana ropana. The predominant ore of Antimony is Stibinite (Sb_2S_3) which is also white in colour.

Sasyaka

Sasyaka synonym Tuttha is one among the Maharasa (group of minerals) and that occurs in nature is called Sasyaka. That which is made artificially is called Tuttha. Chemically Tuttha is found to be compound of copper with chemical compound formula of Sasyaka is Cu_5FeSO_4 and Tuttha is $CuSO_4.5H_2O$. Tuttha is known as copper (II) sulphate, (chalcanthrite), blue vitriol and blue stone. Purified Copper is made into powder and kept in a glass vessel. Sulphuric acid is added to it drop by drop and gently stirred. When copper is completely dissolved, the solution is kept on mild heat for drying. It is then kept in mortar, ground adding hot water till it is completely dissolved in water and then shifted to wide vessel. It is left for cooling down when crystals of tuttha (copper sulphate) are formed.[11]

Kasisa

Kasisa belongs to Uparasa varga and also included in Krishna varga by rasaratna samuchachaya. The chemically kasisa is ferrous sulphate ($FeSO_4.7H_2O$). it is available in both natural & artificial form. Kasisa is obtained in natural form where there are hot springs of sulphur. Thus, sulphur get reacted with iron in the earth and ferrous sulphate and other compound of sulphur are formed. Artificially obtained by reaction of Conc. sulphuric acid over Iron. Pure Iron powder is taken in a glass container and diluted sulphuric acid is added drop by drop until iron powder is dissolved completely. When sulphuric acid is added, Iron powder becomes hot and froth is formed in the liquid. When froth stops, solution is filtered through filter paper. Fluid part is collected properly and same part pure alcohol is added to that, so that precipitation takes place and Kasisa gets settled at bottom. Supernatant fluid is separated and Kasisa settled at the bottom is collected and dried in sunlight. After drying we get green coloured crystals of Kasisa.[12]

Rasanjana

It is a type of Anjana having synonyms such as rasodbhuta, rasagarbha, darvikwathodbhava, tarkshyashaila, agnisaram etc. It has three varieties shailaja and kritrima- 1 & 2. First one is vailable in tarkshya shaila and

contains rasa, the kritrima-1 variety is the solid extract of peeta Chandana and third variety (kritrima-2) is the solid extract of daruharidra (Darvi) kwatha. In Anandkhanda, the rasasnjana is told as rasodbhuta that which is obtained from tarkshyashailaja or the slag obtained from brass smelting industry. In this absence of above two variety, one can prepare artificially by daruharidra rasakriya / darvi ghanakriya. Darvi kwatha rasanjana is accepted by majority of acharya as the artificial preparation which is of herbal origin. Few other consider rasanjana as yellow oxide of mercury.[13]

Hingula

Hingula is catogorised in the group of sadarana rasa. it is correlated with Cinnabar after looking into the grahya lakshana of hingula. two kinds, viz, one is obtained in mines and another is prepared at laboratory by the combination of mercury and sulphur. The artificial preparation of Hingula is explained by Bhudeb Mookerjee, the author of Rasa Jala Nidhi in volume 2. One part mercury and 4 parts sulphur are to be taken together in an iron pot and heated for some time. Thus, formed compound is broken into pieces and put into a glass flask wrapped over 1 angula thick with clay smeared cloth and dried in shade. Later assemble in the Valuka Yantra and subject to heating process and continue the heating for 5 consecutive days with gradual increasing of temperature. Finally stop heating and bring back to the room temperature. Collect the material by break opening the flask. The resultant material is Hingula.[14]

Conclusion

In Rasashastra, descriptions of rasadravya are explicit. As a result of scarcity, unavailability, and incorrect drug interpretations, some medications and formulations are now not in use and are categorized as controversial, few are prepared artificially. As of now, accurately identifying the source of a medicine remains a major challenge. It is imperative that the scientific validation procedure be carried out by encouraging in order to protect the scientific treasures. Standardization is required to rule out the state of uncertainty regarding the identification and use of drugs to meet the challenges of new millennium with increasing demand on our products globally. This article reviews a number of unavailable and artificially prepared rasadravya in order to provide a concise overview of those that are endangered.

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