

A REVIEW ON THE CONCEPT OF DRUTI: A BASIC PRINCIPLE OF RASA-SHAstra

Patil Anuradha

Associate Professor, Dept. of Rasashastra & Bhaishajya Kalpana, L.R.P. Ayurvedic Medical College, Islampur, Maharashtra, India

ABSTRACT

Background: All sciences are based on some of their own basic principles & each one of them has its own definitions & terminologies, which have meanings wider than what they seem to be. *Druti* is one such process in the science of *Rasashastra*, which forms both the basic principle & definition of the science.

The development of *Rasashastra* has made metals, minerals and stones pass through various processes like *shodhan*, *marana*, *jarana*, etc. with the help of supporting processes like heating, boiling, grinding, triturating, etc. so as to convert these inorganic crude drugs into a form or compound, which may suit the human body and can be absorbed and assimilated easily into the system without causing any toxic symptoms.

In most of the *dravyas*, we know the basis for the use of a particular form and procedure. We also know the effects of a particular process.

Aim: This paper is aimed at discussing some of the concepts of *Druti*.

Materials & methods: An attempt has been made to approach the concept through reviews from various Ayurvedic classical and modern texts, published articles and other sources. **Conclusion:** It was found that, the concept of *Druti* is unique and has not been limited only as a procedure for liquefying a metal/ mineral, but has other implications too.

Keywords: *Druti*, *Samskara*, *Rasashastra*, Liquefaction, Ayurvedic Pharmaceuticals.

INTRODUCTION

In the Ayurvedic Pharmaceuticals, *Samskara* means processing, done in order to establish the change in the qualities / properties of the drug. This is achieved, either by inducing a new property or improving the existing one and finally making the drug safe and more effective.

With the art and skill of formulation, a poisonous drug can be transformed into a safe and effective drug. A simple drug can be converted into a most potent one. Therefore, *Ayurveda*, the Science of Health and Healing, has given great emphasis to the comprehensive knowledge of

drugs, preservation and dispensing of prepared drugs. Only a competent physician who has mastered the knowledge of different medicaments can treat all types of diseases. To save the lives of ailing people he should also have a thorough grip on the principles of the formulations and their practical application.

Druti (Liquefaction) is one such important pharmaceutical processes of *Rasashastra*, wherein the metals / minerals / gems are transformed into a permanent and stable liquid form. Generally it is seen that when metals / minerals are heated upto a certain temperature, they melt. But as soon as the

heating is stopped, temperature drops down, and the material solidifies. The liquid state of the material is temporary. Hence, *Druti* does not mean melting, but maintaining the molten state permanently, with the desired characteristic features.

Details of the process and other things have been mentioned in *Rasaratna Sammucchaya* (R.R.S.), *Rasendra Chudamani* (Ra.Chu.), *Rasa Prakash Sudhakara* (Ra.Pr.Su.), *Ayurveda Prakash* (Ayu.Pr.), *Rasa Hridaya Tantra* (Ra.Hr.T.), *Rasarnava* and other classical texts of *Rasashastra*.

Definition:

Process which maintains hard and dense *dravyas* in the molten state is known as *Druti*.

1. *Aushadhaadhmaana yogena lohadhaatvaadikam tathaa| Santishthate dravaakaaram saa drutih parikeertitam|| R.R.S.8/84*
2. *Tushaadhaanyaadiyogena lohadhaatvaadikam tishthate dravaakaaram saa drutih parikeertitam|| Ra.Chu.4/101*

Lohadi dhatus and other mineral remain in the molten state after processing with some specific herbs and intense heat. This molten state is known as the *Druti* of that particular *dhatu* or mineral. Different opinions regarding the preparation of *Druti* are available in the classical texts of *Rasashastra*.

Types:

I. Based on their use:

1. In mercurial processes.
2. In treatment of diseases.

II. Based on the method of preparation

1. *Garbhadruti*
2. *Bahyadruti*

III. Based on the material

1. *Loha druti* (all metals)
2. *Ratna druti* (all precious stones)
3. *Gandhak druti*

4. *Abhrak druti*, etc.

Among these *Garbhadruti* and *Bahyadruti* are the methods used in mercurial processes.

Garbhadruti:

Grastasya draavanam garbhe garbhadrutirudaahrutaa|| R.R.S.8/ 81

When the material given as *grass*(bolus) is liquefied within mercury, it is known as *Garbhadruti*. The *satva*(extracts) of metals / minerals are liquefied within mercury. This is essential to digest the bolus as it cannot be done without liquefying.

Bahyadruti:

Bahireva drutam kuryaalohadhaatva adikam khalu| Jaaranaaya rasendrasya saa bahyadrutirucyate|| R.R.S.8/ 82

Melting *Abhrakadi satva* separately and then mixing with mercury for *Jarana* is known as *Bahyadruti*. The *satva* of minerals are liquefied separately and then mixed with mercury.

Druti lakshana: 5 characteristics of *druti* mentioned are:

Nirlepatvam drutatvam cha tajastvam laghuta tathaa| Asamyogaschasootena panchadhaa drutilakshanam|| R.R.S.8/ 83

Nirlepatvam: Nonsticking; should not stick to the container.

Drutatvam: Liquefied state; should be uniformly molten.

Tejastvam: Lustrous.

Laghuta: Lighter than the original weight.

Samyogaschasootena: Readily mixes with mercury.

Vessel for Druti: Different *mushas* according to their indications should be used for the purpose. Viz. *Vajradravani Musha* for *Vajra*, *Mahamusha* for *Abhrak*, *Lohadi satva*, etc

Fuel for Druti:

Draavane satvapaate cha maadhukaah khadiraah shubhaah| Durdraave

vamshajaaste tu swedane baadaraah shubhaah|| R.R.S. 8/ 38

For the process of melting or extraction of a metal or mineral, one should use the coal of *Madhuka* or *Khadeera* wood. For those which are difficult to melt, coal of *Vansha*, for swedan *Badara* coal should be used.

Storage:

Kusumbhatailamadhye tu samsthaapyaa drutayah pruthak| *Tishthanti chirakaalam tu praapte kaarye niyojayet*|| R.R.S.4/ 82

Druti is to be stored in glass containers, particularly *Ratnadi Drutis* in *Kusumbha Taila*.

METHOD:

Gandhakdruti:

Kalaamshavyosha samyuktam gandhakam shlakshna choornitam| *Aratnimaatre vastre tadveeprakeerya viveshtya tat*|| *Sootrena veshthayitvaa atha yaamam taile nimajjayet*|| *Dhrutvaa samdamshato vartimadhyam prajvaalayeccha tam*| *Druto nipatito gandho bindushah kaachabhaajane*|| R.R.S. 3/ 29, 30

Shudha Gandhak and *Trikatu Choorna* are taken in the proportion 16:1, respectively, and mixed properly. The mixture is spread over a piece of cotton cloth of one *aratni* (10½ inches) length and breadth. The cloth is then rolled and tied with a thread to make a wick and immersed in *Tila taila* for one *yama* (approx. 3 hours). The wick is then held in the centre with a pair of tongs and ignited at both the ends. Drops of oil dribble from the burning ends of the wick which is collected in a glass container.

Ratnadruti:

Raamatham panchalavanam sadaa kshaara yugmampi chetsupeshitam|| *Chullikaa-lavanam amlavetasam pakva-kumbhiphalam tathaiva cha*|| *Chitra-moolaka rudantike shubhaa jambukee jalayutaa dravantikaa*|| *Arkadugdha*

samasoudhadugdhakam sarvameva mruditam shilaatale|| *Golamasya cha vidhaayanikshippedratnajaatishu varaani peshayet*|| *Bhoorjapatramabhiveshnaa golake golakopari niveshtya sootratah*|| *Vastrena samveshtha yatra tatah prayatnaaddolaakhyayanre athaniveshya golakam*| *Sarvaamlayukte tushavaari-poorite paatre drudhamanmaya-samdneyake hi*| *Dinatrayam swedanakam vidheyam aahrutya tasmaadvaragolakam samkshaalayecchaamlajalena chaapi samjaayate ratnabhavaadrutishcha*|| *Ra.Pr.Su. 7/57-61*

Hingu, five *Lavanas*, two *Ksharas*, *Chullika lavana*, *Amlavetas*, ripe *Kumbhiphala*, *Chitraka mula*, *Rudanti*, *Jambuki*, fresh *Dravanti*, *Arka dugdha*, *snuhi dugdha* are made into fine paste. A ball of this paste is made; powder of the desired *ratna* is kept in the centre and wrapped in *Bhoorja patra*. This is then wrapped with a cloth and finally tied with a thread.

This *pottali* is further subjected to *swe-dana* in *Amla Tushodaka* with the help of *Dolayantra* for three days. The *druti* is then collected after washing with hot water.

Characteristics:

Varnena saa ratnanibhaa chakaantyyaa laghveebhaved dehakaree cha samyak| *Lohasyavedham prakaroti samyak sootena samyak milanam prayaati*|| *Tadaa bhaveyuh khalu siddhataa yadaa hingvaadivargena milanti samyak*| *Yaamadvayam kaamsyavimarditaa vai chaatiprayatnena tu vaidhavaryaih*| *Kasyaapi nuh siddhyati vai drutishcha yadaa prasannah khalu paarvateeshah*|| *Ra.Pr.Su.7/62-65*

Ratna Druti should possess the colour and luster of that *ratna* from which it is made. It should mix with mercury easily during *lohavedha*. It should be useful as *Deha-*

kara (immunomodulator). It should mix with *Hingvadi varga dravyas* in *kamsya patra*.

Methods of *Vajra dravana*, and *Vaikrant dravana* methods have told in the 6th *patala* of *Rasarnava*. *Ratna dravana* methods have told in the 7th *patala*.

Abhtrak Druti: 16 methods of *Abhtrak dravana* have been mentioned in the 6th *patala* of *Rasarnava* along with *Loha*, *Kantaloh*, *Suvarna*, and *Tikshna loha dravana*.

DISCUSSION

Not only the methods of *Druti* preparation have been mentioned, but also methods of mixing various *Drutis* for different purposes in the mercurial processing have also been elaborated in details by most of the *Acharyas*. But from the classical texts of the later centuries, *Rasaratna Sammucchaya* 2/50 and the Sanskrit commentary of *Ayurveda Prakash* 1/253, it can be understood that preparation of *Druti* has never been an easy task and therefore has not been mentioned in the texts in detail. One needs the blessings of *Lord Shiva* for the success of the procedure.

Druti bandha is one among the *Parad bandhas*, wherein, *Parad* (mercury) is stabilized by various procedures. This is so called because *Parad* is stabilized through *Bahyadruti*. Such *parad* is said to be useful in even most incurable diseases with a dose of just 1/4th *rajika* (1/2 mg).

CONCLUSION: It was found that, the concept of *Druti* is unique and has not been limited only as a procedure for liquefying a metal/ mineral, but has other implications too. Different procedures and drugs were used for the same which gave rise to many different methods of preparation. *Druti* has been developed for mer-

curial processes, especially *Lohaveda*, and later used in curing diseases as well.

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CORRESPONDING AUTHOR

Dr. Patil Anuradha

Associate Professor Dept. of Rasashastra & Bhaishajya Kalpana, L.R.P. Ayurvedic Medical College, Islampur, Maharashtra, India

Email: dranuap@gmail.com