REVIEW OF GANDHAKA SHODHANA AS PER RASA RATNA SAMMUCHAYA

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ABSTRACT
Rasaratnasamuchaya is widely accepted as an authentic text book of medieval period. The above said text narrates 3 methods of Gandhaka Shodhana (Sulphur purification) by using different drugs, instruments & methods. Gandhaka (Sulphur) is an abundantly available and extensively used drug in Rasashastra. Purification is the initial step in the preparation of any Rasaoushadhis (Metals & Minerals). Keeping this in mind present study has taken up in reviewing the literary aspect of Gandhaka shodhana as described in the Rasaratnasamuchaya.

KEYWORDS: Gandhaka, Shodhana, Dhalana, Bhudara, etc.

INTRODUCTION
Gandhaka is a widely used drug in Ayurveda as well as in other system of medicines also. Sulphur is a chemical element with symbol S and atomic number 16. Elemental Sulphur is a bright yellow crystalline solid when at room temperature. Sulphur occurs naturally as pure element and also Sulphide & Sulphate minerals. In Rasashastra, Gandhaka comes under Uparasavarga which is used as a chief drug in many formulations. Mythologically, it is opined as rajas (menstrual blood) of Goddess Parvati.11

Shodhana is a process in which different drugs are used with various methods such as grinding, pounding, heating and mixing them with a view to remove their toxicity.
Gandhaka being Rasoushadhi should be purified to remove its harmful effects. If not it may cause deleterious effect over the body. The ultimate goal of Gandhaka Shodhana process is to increase the bio-availability and further potentiating the Gandhaka by means of purification. Hence, Rasaratnasammuchaya explains 3 methods of Shodhana i.e 2 Dhalana (pouring) & 1 Bhudara method respectively in the 3rd chapter.

**RASARATNASAMUCCHAYA**

It is a widely appreciated treatise of medieval period. This treatise belongs to 13th century A.D & is written by Vagbhatacharya. The text has 30 chapters. The pattern of text book explains the core areas of Rasashastra in a very systematic manner. The first eleven chapters deal with basic fundamentals of Pharmaceutical science i.e Mercury, group of Minerals & Metals, Gem stones, ancient equipments, heating devices, natural fuels, Pharmacy etc. The remaining chapters deal chiefly with disease and their treatment.[1]

**NECESSITY OF GANDHAKA SHODHANA**

By nature Gandhaka possesses shila churna (Stony substance) & visha (Poison). Hence, it must be purified before administration.

**HARMFUL EFFECTS OF ASHODHITA GANDHAKA**

Administration of Ashodhita Gandhaka may causes Kushta, Tapa, Bhrama, Paittikavikara & does naasha of rupa (appearance), sukha (happiness), balaveerya (loss of strength) etc. Thus it is necessary to do Gandhaka shodhana.

**PROCEDURE**

The Gandhaka is melted along with equal quantity of Goghrita (Ghee) & poured into a ksheerayukta paatra through a cloth. After swangasheeta it is taken out & washed thoroughly with warm water to obtain Shuddha Gandhaka. By this process the stony substances remain over the cloth, the poisonous substances mix with Goghrita (Ghee) & float on milk like husk. The obtained Gandhaka will be in pindakara. Thus intake of purified Gandhaka does not cause any untoward effect even in case of apathy. On the contrary, if not purified it acts like Halahala visha.[1]

Gandhaka is taken in Lohadarvi (Iron ladle) & melted over mandagni (low flame), poured into Bhringaraja (*Eclipta alba*) swarasa (juice) yukta patra. This procedure is repeated 7 times to obtain shuddha gandhaka.[1]
Milk is taken in a wide mouthed vessel and its mouth is tied with a clean cloth. Gandhaka is made into coarse powder & spread upon the vastra (cloth). It is covered with a thick & wide sharava (earthen plate), ignited from above by using Vanopala (Cowdung cake). By this Gandhaka melts & dribbles into the milk through the cloth. Thus Shuddha Gandhaka (Purified Sulhur) is obtained. This procedure if repeated 100 times will make Gandhaka free from odour.[1]

**Table 1: Different Methods of Gandhaka shodhana as per Rasa Ratna Sammuchaya**

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Principle Adopted</th>
<th>Equipments Required</th>
<th>Drugs Required</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhalana</td>
<td>Mud vessel, Iron vessel, spoon, stove, cloth</td>
<td>Goksheera, Goghrita</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Dhalana</td>
<td>Mud vessel, Iron vessel, Spoon, Stove</td>
<td>Bhringarajaswarasa</td>
<td>7 times</td>
</tr>
<tr>
<td>3</td>
<td>Bhudhara</td>
<td>Mud vessel, lid, cowdung cake, cloth</td>
<td>Goksheera</td>
<td>100 times</td>
</tr>
</tbody>
</table>

**DISCUSSION**

As per the translation only Dhalana method is adopted, however the mention of Swinna (Sudation) makes us think of boiling it in milk for duration of 1 hour i.e Ghatimatra. Is it
practicable? Whether the changes made in the translation are mainly due to its impracticability or does it really have a different meaning is to be considered. When we analyze logically Gandhaka melts in Goksheera (Cow’s milk) as soon as it starts boiling. So, heating for 1 hour may not be significant. When Gandhaka melts along with Goghrita then the fat soluble toxins get dissolved in Goghrita. This when poured into Goksheera the toxins remain in the ksheera along with Goghrita & only shuddha Gandhaka will solidify. The Visha (toxic) of Gandhaka may be laghu (light) in nature, like tusha (husk) & hence it may float on Goksheera. The appearance of visha over the milk may simulate tusha (husk). For melting Gandhaka the quantity of Goghrita to be taken has not been mentioned. But according to general rule of preparation that is understood, we have to take equal quantity of Goghrita. The quantity of Goksheera in the vessel is not mentioned in the shloka. Hence, sufficient quantity of Goksheera necessary to submerge Gandhaka completely is taken. Highlighting halahala (Poison) visha makes it mandatory to do shodhana before administration. The verse also says even if one does not follow pathya (diet) during consumption shodhita gandhaka will be clinically effective. This emphasizes the importance of shodhana.

The use of vastra for filtering process has not been mentioned. However, it has been mentioned in the earlier method that vastra removes spurious material and the principle adopted is same in both the procedure. Hence we can use vastra in this method also. While melting Gandhaka in the 1st method addition of Goghrita is mentioned which is not specified in the 2nd method. Perhaps addition of Goghrita may have an added advantage in the form of removal of fat soluble toxins. As per the explanation, Dhalana is the chief principle. However, in the shloka there is mention of the word swinna which makes us think of swedana. According to classics, swedana can be done by using Dolayantra or Swedani yantra. Since Gandhaka has low melting point & melts quickly. Hence, Gandhaka shodhana may also be carried out by using swedani yantra where the chief principle is swedana.

Quantity of Goksheera has not been specified. So, the doubt arises regarding the quantity of Goksheera to be used. One can assume that the Goksheera taken should be enough to submerge the Gandhaka completely. Perhaps making Gandhaka into Sikathakruthi (Crystalline) signifies that Gandhaka should not seep into the Goksheera through the vastra before providing heat. Hence using Gandhaka in Sikhatakara ensures safety during the procedure by avoiding early seepage. Thus it facilitates proper shodhana. Number of
Vanopalas (Cow dung cakes) has not been mentioned in the procedure. By this it makes Vaidya to think seriously regarding the quantity of same. It is widely known that Gandhaka has low melting point & melts very quickly on mandagni. Therefore, in practice 8 to 14 vanopalas are sufficient to carry out shodhana comfortably. As per the present description subjecting Gandhaka shodhana 100 times removes bad smell. At this point, this method makes us to think critically that whether visha is in the form of smell or not. If we go through the synonyms of Gandhaka they are putigandha, Atigandha, Kruragandha, etc. By this it clearly states that Gandhaka possesses bad smell. Therefore it may cause discomfort in the form of durgandhata during consumption. Also durgandhata may have negative impact on the efficacy of the final product. Keeping this point as a top priority, author has made it compulsory to carry out Gandhaka shodhana hundred times.

CONCLUSION
There are 3 methods of Shodhana as per present reference. They are 2 Dhalana methods & 1 Bhudhara method.\(^1\) Gandhaka shodhana may remove Shilachurna (Stone particles) & Vishadosha (Toxic effects). An attempt has been made to interpret the sholakas (Versus) & clear most of the ambiguities. By this it provides scope for further studies.

BIBLIOGRAPHY