An appraisal of Kshara Kalpana
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ABSTRACT

Ayurveda describes various dosage forms for the administration of the medicament in human body. These dosage forms are denoted by the term Kalpana. Many Kalpana have been described in the classical texts along with five basic Kalpana. One such Kalpana is Kshara Kalpana. The utility of Kshara is mainly seen in the field of Shalya Tantra where it is used in the management of the cases of Arsha, Bhagandara, Nadi Vrana etc. but at the same instance it also provides fruitful results in the cases of Shwasa, Mootrakrichha etc. Kshara proves its utility in the processing of Parada whereby it acts as a Vida and makes the processing of Parada easy. Due importance has been given to Kshara preparation in most of the classics but at the same moment, we find differences in the various methods mentioned for the preparation. Hence an attempt has been made to compile the various references available in the classical texts and to justify their probable use in the present paper.

Key words: Kalpana, Kshara, Shalya Tantra, Parada.

INTRODUCTION

Acharya Charaka has promptly mentioned the usage of various Dravyas as medicines. He has opined that all the Dravya we see around have medicinal properties.¹ In order to extract the active components of any Dravya and to instill therapeutic properties into it, it has to be subjected for various procedures. Then it has to be converted into suitable dosage form which is palatable and easy for administration. This also facilitates the dose fixation of the medicament. The aforementioned attributes can be attained by conversion of the drug into specific Kalpana.

It can thus be said that a specific drug performs different actions depending upon the Kalpana to which it is converted. The same proves to be true for Kshara Kalpana. Different methods of preparation of Kshara have been mentioned in various contexts according to the desired usage. An attempt has been made to compile those methods and to justify their probable use.

MATERIALS AND METHODS

Source of data

Various classical texts available in the Library of Shri Dharmasthala Manjunatheshwara College of Ayurveda, Kuthpady, Udupi, Karnataka were reviewed and the different opinions cited regarding the method of preparation of Kshara were compiled as under.

Charaka Samhita

Though we get profound usage of Kshara in varied clinical conditions still the reference regarding the method of preparation of Kshara cannot be traced in Charaka Samhita.

Sushruta Samhita

Acharya Sushruta has given a vivid narration regarding the method of preparation of Kshara.² He has
elaborately described the process for preparation of Mridu, Madhyama and Teekshna Kshara. The whole process can be described under the following sub-titles;

1. **Pre-processing**

This includes the selection of the plant, collection and drying of the plant. First of all it is told to select a plant which is of *Madhyama Aayu* and situated at an appropriate place, which is not infected by insects, it should be unaffected by the effect of sunlight, fire etc. The collection of plant should be done in *Sharad Ritu*.

It should then be cut into small pieces and allowed to dry at a place which is not exposed to direct flow of wind. Once dried, it should be taken to the suitable fire place where it should be burnt along with *Sudha Sharkara* kept in between the heap of the dried plant material. When the total plant material gets burnt and it becomes cool then the ash should be collected leaving behind the incompletely burnt plant material and the *Sudha* particles.

2. **Preparation of Kshara from the ash collected**

The ash thus collected should then be soaked in six times of water and stirred very well. Here Acharya Sushruta has clearly mentioned that *Gomutra* can also be used as the liquid medium to soak the ash. Then this mixture should be filtered through a clean cloth for twenty one times so as to obtain a clear *Ksharodaka* and remove all particles which are not dissolved in the liquid medium. This *Ksharodaka* thus obtained is taken into an iron vessel (*Kataha*) and kept on fire.

When it attains reddish colour and becomes *Picchila* (slimy) it is again filtered. Then one or one and a half *Kudava* of this *Ksharodaka* is kept aside and rest is again kept on fire for evaporation. Alongside *Katasharkara, Bhasmasharkara, Shukti, Shankha Nabhi* etc. *Dravyas* are collected and heated till they become red hot. Then these red hot *Dravyas* are immediately dipped into the *Ksharodaka* that was separated already. These are then powdered in the same *Ksharodaka* and added to iron vessel and heated till it becomes thick in consistency. The *Kshara* thus prepared is *Madhyama Kshara*. If *Shankha Nabhi* and other drugs are not added to this, the *Kshara* prepared will be *Mridu Kshara*. For the preparation of *Teekshna Kshara*, *Prativapa* of drugs like *Danti, Dravanti, Chitraka, Langali, Hingu, Vacha* etc. is told to be done. The quantity of each drug is mentioned to be one *Shukti*.

**Astanga Sangraha**

We get a detailed description regarding the method of preparation of *Kshara* in *Astanga Sangraha* also. A separate chapter has been dedicated on the various aspects of *Kshara* including its Guna, types, contraindications, procedure of *Kshara* application along with the method of preparation.

Plant *Panchanga* should be collected at right season and time, cut into small pieces and allowed to dry at a place where direct flow of wind isn’t present. These pieces are then burnt to ash along with *Sudha Sharkara*. When self-cool, the ash should be separated from the *Sudha* particles. One *Drona* of this ash is taken and then soaked into the liquid medium.

The specificity of this text is that, here the ash is told to be soaked in the mixture of both *Jala* and *Gomutra*. The ratio of *Jala* and *Gomutra* to the ash is told to be four times respectively. Then this is filtered through a clean cloth. Here we do not get any reference regarding the number of times the filtration to be done. It is being told that until we get a clear liquid, filtration should be continued.

We get the same methodology for the preparation of *Mridu, Madhyama and Teekshna Kshara*. Acharya Vagbhatta has mentioned the preparation should be done according to *Sneha Paka Vidhi*. He has also mentioned about the *Siddhi Lakshanas* which are as follows;

- Appearance of vapours.
- Appearance of bubbles.
- Thicker consistency.
- The final product sticks to spatula.

**Astanga Hridaya**

The methodology mentioned in this text is similar to as that mentioned in *Astanga Sangraha*. The
difference which can be ruled out is that, while preparing the Madhyama Kshara along with the drugs as mentioned in Astanga Sangraha addition of faecal matter of peacock, pigeon, etc; Pitta of peacock like birds and animals like cows and drugs like Haratala, Manahshila and Lavanas has been advocated.

Acharya Sharangadhara Samhita

Acharya Sharangadhara has also mentioned the methodology to be opted for Kshara preparation. He has not mentioned details regarding the name of the plants useful for the Kshara preparation and the time of collection. Moreover we also don’t get any citation of Mridu, Madhyama and Teekshna Kshara. He has described the types under two headings depending on the consistency as- Paniya Kshara and Pratisaraniya Kshara.

The dried Ksheeri plants should be collected and burnt to ashes. The ash thus obtained has to be soaked in four times of water and stirred well. This has to be kept undisturbed overnight. Next morning the supernatant water should be decanted carefully and kept in an earthen pot. This pot is then kept on mild fire and cooked. It should be heated till all the liquid part gets evaporated. The Kshara thus extracted is seen sticking to the base of the vessel which has to be scrapped carefully and stored in air tight containers.

Yogaratnakara

Yogaratnakara follows the method explained by Acharya Sharangadhara for Kshara preparation, which has been mentioned earlier.

Chakradatta

We get a detailed description of Kshara preparation in Chakradatta also. We also get the reference of Kshara Sutra preparation at the same instant. Two references for Kshara preparation are available. According to the first reference initially a suitable plant should be selected and burnt to ashes. One Aadhaka of this ash should be then dissolved in one Drona (four parts) of water. It should be then kept for boiling and when one fourth of the initial quantity remains it should be filtered through a clean cloth. To this filtrate one Kudava of Shankha Churna should be added and again kept for boiling. When it becomes concentrated then powders of Sarji Kshara, Yava Kshara, Shunthi, Maricha, Pippali, Vacha, Ativisha, Hingu and Chitraka should be added in quantity of 8 Masha each. It should be stirred well and then kept in an iron vessel.

Further more, he has separately described the procedure for Pratisarniya Kshara. Ash of Kalamushka should be taken in one Aadhaka amount and six times of water should be added to it. It should be kept in an iron vessel and subjected to heat. Continuous stirring should be done. When one fourth of initial quantity remains it should be filtered through a clean cloth. To this Ksharodaka obtained, Shankha Churna is added in specified ratio to obtain Mridu, Madhyama and Teekshna Kshara. The ratio told is as mentioned under;

- For Mridu Kshara - 1/4th of the Ksharodaka
- For Madhyama Kshara - 1/8th of Ksharodaka
- For Teekshna Kshara - 1/16th of Ksharodaka.

To see whether the Kshara Paka has been completed or not, a dry Eranda Nala is put into the solution. If this gets burnt within hundred Matra Kala, then it shows the completion of the Paka of Kshara.

Bhaishajya Ratnavali

Bhaishajya Ratnavali has quoted the reference of Chakradatta for the preparation of Kshara, which has been explained earlier.

Ayurveda Prakasha

We get the reference of Kshara preparation at two instances in this text. Firstly while mentioning the Siddhalakshmishwara Tantrokta Vida, the Teeka part explains the methodology opted for the preparation of Kshara. According to this reference, the Panchanga of Kshara Vriksha are collected and cut into small pieces, then pounded to decrease the particle size. They are then allowed to dry on a Shila. Once dried, they are burnt to ashes with the help of Tila Nala. The ash thus obtained is soaked in water or in the mixture of Khara Mutra, Gomutra and
Hayamutra. The ratio of ash and the liquid media is not specified here. It is then filtered through a clean cloth and the filtrate is kept for Paka on moderate fire. Once it starts to become dry and vapours appear along with the formation of bubbles which subsides immediately after formation, then powders of Trikatu, Hingu, Gandhaka, Kshara Trayya, Shada Lavana etc. should be added.

The second method is mentioned in the sixth chapter of this text,[12] where we get the reference similar to as that of the one mentioned by Acharya Sharangadhara in his text.

Rasendra Chintamani

Though we do not get a direct reference for Kshara preparation in this text still we get the context of Vida preparation. The methodology mentioned here is totally similar to that of Kshara preparation.[13] It has been mentioned that Panchanga of plants like Vasa, Eranda, Kadali, Devadali, Punarnava, Palasha, Tila etc. should be collected and cut into smaller pieces. Once dried, they are burnt along with Tila Nala and Mulika. The ash thus collected is soaked in any of the liquid media from Mutra Varga.

We don’t get any direct clarification regarding the ratio of ash and the liquid medium in the verse. However, in the commentary part it is mentioned as eight to ten parts of Mutra should be taken. It should then be filtered in an iron vessel and Paka should be done in Hansa Paka Yantra. Once profuse vapours and bubbles are observed, then powders of Kamkshi, Kasisa, Kshara Trayya, Trikatu, Gandhaka, Hingu etc. are added and the final product is collected in a Loha Patra. It should be kept in a pit made in the ground for seven days before taking into use.

Rasa Tarangini

Rasa Tarangini is considered to be the most recent text on Rasa Shastra. This is the only text of Rasa Shastra which has described the methodology opted for the preparation of Kshara along with the vivid description regarding the various aspects of Kshara in two separate chapters. It has quoted the general method of preparation of Kshara[14] along with the various Kshara and their qualities and therapeutic usages.

The approach seen in this text is quite different from the point of view of other texts. Here it has been told that the wood of the plant or tree out of which Kshara has to be prepared should be collected and burnt to ashes. This ash is then soaked in four times of water and proper stirring and maceration should be done for three hours continuously. It should be then filtered through a three folded cloth and then taken into a vessel and kept for boiling. As all the water get evaporated Kshara can be seen adhering to the base of the vessel.

We get two clarifications in the Teeka part of this reference. Firstly, by the reference of wood it should be understood that for big trees like Palasha the wood should be collected but for the shrubs like Apamarga, Panchanga should be collected. Moreover it also clarifies that iron vessel should be used for Kshara preparation.

Ayurveda Sara Sangraha

The methodology mentioned for Kshara preparation[15] is also available in this text also. The text states that Panchanga of the plant should be collected and burnt to ashes in an iron vessel. The ash thus collected should be taken into an earthen pot and eight times water should be added to it. Stirring should be done with a wooden stick. It should be then left undisturbed for two to three days and then the supernatant water should cautiously be decanted. It should be filtered through a four folded cloth for seven times. If the filtrate thus obtained is not clear then more water should be added and again filtration should be done on the following day. This filtrate should then be kept for boiling till it becomes thicker in consistency. Then it should be kept in sunlight where it gets completely dried. The Kshara thus obtained should be collected and stored in glass bottles.

Ayurvedic Formulary of India

We do get the reference of method of preparation of Kshara in AFI Part I also.[16] It has defined Kshara as alkaline substance derived from the ash of drugs.
The method of preparation of Kshara is described as follows. The drug is cut into small pieces and dried well. The pieces are put in an earthen pot and burnt to ash. First a few pieces are put and ignited. As they burn, more and more pieces are added. When all the pieces are burnt and reduced to ash, the ash is allowed to cool. Water is added to the ash in the ratio of 6:1 and mixed well. This is then strained through a piece of cloth. This process of straining may be done two or three times till a clear liquid is obtained.

This liquid is then put in an iron or earthen vessel and heated over a moderate fire till the water evaporates, leaving a solid salty white substance which is collected. This is known as Kshara.

The opinions of various authors are tabulated in Table 1.

Table 1: Comparative study of method of preparation of Kshara

<table>
<thead>
<tr>
<th>Reference</th>
<th>Ash: water ratio</th>
<th>Time for soaking</th>
<th>Vessel used</th>
<th>Fold of cloth</th>
<th>Numbe r of filtrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sushruta Samhita</td>
<td>1:6</td>
<td>-</td>
<td>Iron vessel</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td>Astanga Sangraha</td>
<td>4 times water &amp; GoMutra each</td>
<td>-</td>
<td>Iron vessel</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Astanga Hridaya</td>
<td>4 times water &amp; GoMutra each</td>
<td>-</td>
<td>Iron vessel</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Sharangadha Samhita</td>
<td>1:4</td>
<td>Overnigt</td>
<td>Earthen pot</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yoga Ratnakara</td>
<td>1:4</td>
<td>Overnigt</td>
<td>Earthen pot</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Chakradatta</td>
<td>1:4 or 1:6</td>
<td>-</td>
<td>Iron vessel</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

DISCUSSION

The first reference regarding the pharmaceutical preparation of Kshara can be traced in Sushruta Samhita. After that we get plenty of references in various classics including Astanga Sangraha, Astanga Hridaya, Sharangadhara Samhita, Yoga Ratnakara, Chakradatta, Bhaishaja Ratnavali, Ayurveda Prakasha, Rasendra Chintamani, Rasa Tarangini, Ayurveda Sara Sangraha, AFI etc.

Acharya Sushruta has explained about the method of preparation in detail. He has mentioned to use either Jala or Gomutra as the medium to soak the ash of the plant. We do not get a clear indication regarding the time for soaking but it should be allowed to stand still for sometime so as to permit the undissolved particles to settle down. He has mentioned to carry out the preparation in an iron vessel. He has not mentioned about the thickness of the cloth to be used for the filtration but at the same instance he has mentioned that filtration should be done for 21 times. It may be understood that if a single layered thick cloth is taken then also, after filtering it 21 times all the particles which were not dissolved in the liquid medium could have easily been removed out. The reference clearly indicates about the importance of the filtration and
the removal of the particles which could not be dissolved. Acharya Sushruta has further mentioned the colour of the Kshara as whitish. Probably if any undissolved particles remain in the Ksharodaka taken for the Kshara preparation may alter with the colour of the final product and also may change the properties. Moreover he has also mentioned to store it in an iron vessel with its lid properly closed. As Kshara is hygroscopic in nature so probably to prevent it from absorbing moisture from the environment it has been told to keep it in an air tight container.

In Astanga Sangraha also, the method of preparation of Kshara has been quoted. The text advocated the use of both Jala and Gomutra as the media to soak the ash. Each of these media should be taken four times to that of the ash taken. This probably was told by the experience of the author as the total amount of the liquid medium becomes eight times which seems to be sufficient to dissolve the Kshara into it. Moreover the use of both the media may help in potentiating the final product obtained. He has not mentioned about the number of filtrations after soaking the ash into the liquid medium but while doing the Paka when the product attains Rakta Varna and Picchila Guna, one time filtration should be done. Continuous stirring is advised which probably facilitates the evaporation of the liquid. He has also mentioned about the Paka Lakshanas of Kshara which is the only reference available in the Brihatrayees. The final product has been told to be stored in an iron vessel. This vessel is again advised to be kept in Dhanyarashi. This may probably help in keeping the Kshara safe from fluctuating environmental factors.

The method of preparation mentioned in Astanga Hridaya is similar as mentioned in Astanga Sangraha. Sharangadhara Samhita also explains about the method of Kshara preparation. The methodology opted here is a bit different as compared to the previous references. Here he has mentioned to soak the ash in four times of water. This much of water may dissolve less amount of Kshara but its potency may be better as it will be having greater specific gravity. Secondly he has propagated the use of earthen pot for the preparation. Earthen pot is considered as inert in nature so it may minimise the incidence of any chemical change to occur in the final product. He has mentioned to soak the ash and keep it undisturbed overnight. By this, all the undissolved particles will settle down and the water with Kshara dissolved in it can be decanted easily. Keeping it overnight facilitates the settling of the undissolved particles to the full extent and hence the Ksharodaka obtained would be clear which ultimately will lead to the formation of white colored Kshara.

The reference available in Yoga Ratnakara is similar to that of Sharangadhara Samhita.

In Chakradatta, two references are available regarding the method of preparation. One is entitled as Kshara Saadhana Vidhi while the other one is captioned as Pratisarniya Kshara Nirmana. It suggests that due importance has been given to the pharmaceutical aspects of the two types of Kshara and hence the differentiation has been done. The ratio of ash and water is different in the two types. In the former, it has been told to use four times of water while in the latter six times of water has been advocated. This clearly gives a hint regarding the potency of the two types of Kshara. Moreover, he has further differentiated the Pratisarniya Kshara on the basis of the Sankha Bhasma added to it. The transformation of Kshara from Mridu to Madhyama or Teekshna is indeed an attribute of the pharmaceutical procedure.

Ayurveda Prakasha has also described the method of preparation of Kshara at two instances. The first reference is seen in the context of Vida preparation for the processing of Parada. A specific Vida named as ‘Siddhalakshmiswaratantrotka Vida’ has been quoted in the main text in the commentary of which the preparation of Kshara has been mentioned. The process doesn’t specify the ratio of the ash and the liquid medium but the use of water along with mixture of Kshara Mutra, Gomutra and Haya Mutra has been advocated to soak the ash of the plant. Vida is used to increase the Bubhuksha of Parada and to do Jarana of different Dravya into it. This needs Teekshna
Dravya or Kshara, hence the use of the mixture of Khara Mutra, Gomutra and Haya Mutra in the Kshara preparation can be substantiated. The second method mentioned is similar to that of the one mentioned by Acharya Sharangadhara. Bhai Shajaya Ratnavali has quoted the same reference as that of Chakradatta for the Kshara preparation.

Rasendra Chintamani has also explained the method of Kshara preparation in the context of Vida. This clearly indicates the importance of Kshara in various processes related to Parada. Moreover the methodology mentioned here is also a bit different in terms of the liquid medium to be used for soaking of the ash of the plants. He has advised to take a combination of the Mutra Varga to soak the ash which gives a hint regarding the potency of the final product. Furthermore, a specific Yantra named as Hamsa Paka Yantra has been told to do the Paka of this Kshara. This probably meant to give a specific quantum of heat and in a proper manner. This also indicates that for the Vida preparation Kshara has to be prepared by using Mutra as the soaking medium which probably helps in the easy processing of Parada. The final product has to be stored in an iron vessel and has to be kept in a pit dug in the ground for seven days before taking into use. This can be attributed to the Kala Prakarsha Samskara as mentioned by Acharya Charaka. This may help in potentiating the drug further.

The reference available in Rasa Tarangini states that the ash of the plant should be soaked in four times of water and should be macerated well. It should be kept undisturbed for three hours so as to allow the undissolved particles to settle down and to facilitate the dissolution of Kshara in the water. The duration for soaking mentioned here is less as compared to that mentioned in Sharangadhara Samhita. Probably due to maceration the dissolution of Kshara may be facilitated and the sedimentation of the undissolved particles will occur to a great extent during this period. Further to remove the undissolved particles it has been told to filter it through a three folded cloth till clear Ksharodaka is obtained. Folding of cloth may help in reducing the number of filtrations as the Ksharodaka has to pass through three different layers of cloth successively so chances of the particles getting trapped will increase to a great extent.

As per the method quoted by Ayurveda Sara Sangraha, the ash of the plant should be soaked in eight times of water and should be kept undisturbed for two to three days. This helps in both easy diffusion and dissolution of the Kshara into the water. While keeping it undisturbed for three days helps in proper sedimentation of the undissolved particles. After this the supernatant liquid should be decanted and filtered through a three folded cloth for three times. This seems to be a modification in the methods as mentioned in Rasa Tarangini and Sushruta Samhita. The process should be carried out in earthen pot or steel vessel both of which are considered to be inert in nature.

**CONCLUSION**

With the inputs obtained by the present review it can be concluded that Kshara and its preparation has been given prime importance in all classical texts. It serves its utility in both aspects of managing the clinical entities like Arsha, Bhagandara, Mootrakrichha etc. and also in the processing of Parada and other Rasa Dravya. Out of the various methods mentioned for Kshara preparation, the selection of any method can be done keeping the desired use of the final product into consideration.

**REFERENCES**


3. Vagbhatta, Astanga Sangraha with Shashilekha commentary of Indu, edited by Shivprasad Sharma,


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