

Ksharasutra- A Review

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Abstract: *Ksharakarma is utilised as a substitute of surgical instruments. It has been proved to be effective in treating many disorders like Dushta Vrana (wounds), Bhagandara (Fistula-in ano), Arsha (haemorrhoids), Charmakeela, Ashmari (Stone), Gulma, Udara (ascites), Kushtha (leprosy), Rohini etc. Acharya Sushruta, has mentioned 23 drugs plants as: Mushkka, kutaj, Palash, Ashwakarna, Paribhadrak, Bhibitaka, Aragvadha, Tilwaka, Arka, Snuhi, Apamarga, Patla, Naktamal, Vrusha, Kadali, Chitraka, Putika, Asphota, Ashwamarak, Saptachanda, Agnimantha, Gunja, Koshataki in Kshara Paka Vidhi Adhyaya for kshara preparation. Kshara can be a multiple combination of many herbs or may be from single herb. Kshara is used internally and externally as medicines in different formulation. i.e., Kshara Gutika (tablet), Vati, Ksharavleha, Kshara-Ghrita, external application directly as Ksharapichu (gause-piece), Kshara Sutra, Ksharavarti. External application of Kshara is indicated in children, weak persons and decrepit.*

INTRODUCTION

Ksharasutra Nirmana Vidhi is a pharmaceutical process which is dealt under Kshara Kalpana. Kshara is a kind of medication described in Ayurvedic texts for the management of various disorders. Acharya Sushruta has given a clear description of Kshara, its method of preparation, physical qualities and its therapeutic properties, both externally and internally. Kshara is alkaline in nature obtained from the ashes of medicinal plants. Acharya Sushruta has described in detail regarding Kshara in Kshara Paka vidhi Adhyaya. Kshara causes Ksharana (Destruction of tissue) to Mamsa and another Dhatu. Kshara is Anushastras and one of the Upakrama for Vrana (Wound). It is the superior most among the sharp and performs Chedana (excision), Bhedana (incision), Lekhana (scraping) and destroys the Tridosha disorders

Concept of Kshara Kalpana:

Nirukti:

Kshara is that which scraps or erodes.

Kshara are those which removes malas².

Kshara are those which move downwards³.

Defintion:

तत्र क्षरणात् क्षणनात् वा क्षारः ॥

Ksharas are that which corrodes the skin or flesh⁴.

Ksharas are considered to be superior among Shastras and Anushastras because Ksharas can be used where Shastra chikitsa is contraindicated. In cases that require incising, excising and scraping, alkalis and alkaline preparations are of greater importance than surgical instruments⁵.

Types of Kshara:

Ksharas are mainly of two types:

1. Paniya Kshara
2. Pratisaraniya Kshara⁶

Ksharas on Number:

- a) Kshara dwaya : Sarja Kshara⁷ and Yava Kshara⁸
- b) Kshara traya : Sarja Kshara, Yava Kshara and Tankana Kshara⁹
- c) Kshara panchaka : Sarja Kshara, Yava Kshara, Apamarga Kshara¹⁰, Tila Kshara, Palasha Kshara
- d) Kshara ashtaka : Sarja Kshara, Yava Kshara, Apamarga Kshara, Tila Kshara, Palasha Kshara, Chinch Kshara, Arka Kshara, Sudha Kshara

Ksharas according to:

Rasatarangini:

Samanya Kshara- Yava Kshara, Sarja Kshara, Tankana Kshara

Vishesha Kshara- Navasagara, Surya Kshara, Arka Kshara, Snuhi Kshara, Chinch Kshara, Palasha Kshara

Rasamritam:

Sphatika is mentioned under Ksharas.

Paribhasha Prakarana:

Kshara dvaya, *Kshara traya*, and *Kshara panchaka* are mentioned.

Gunas (Qualities of *Kshara*):

According to *Acharya Charaka*,

Kshara's are *tikshna*, *ushna*, *laghu*, *ruksha*, *kledi*, *vrana pachaka*, *vrana vidaraka*, *daha karaka*, and *agni dipaka*. In short, *Kshara*'s have the properties as that of *Agni*¹¹.

According to *Acharya Sushruta*,

Kshara's are not too *tikshna*, not too *mrudu*, white in color, smooth, slimy, and non-spreading in nature. They are wholesome and quick acting¹².

According to *Rasa tarangini*,

Kshara's are *tikshna*, *ushna*, and *dahakaraka*. It is indicated in *gulma*, *grahani*, *pliha*, *mutrakruhra* and *ashmari*. It eradicates *bahya* and *abhyantara krimi*. *Kshara* enhances digestive capacity, *vrana vidaraka*, *vrana shodaka*, *ropaka* and *mutrala*¹³.

Processing of *Kshara* (*Kshara nirmana vidhi*)¹⁴:

Kshira vrikshas are which exude the milk sap are collected, dried and cut in to small pieces. These *kashtas* are burnt and the ash is mixed with 4 parts of water and kept overnight.

Next day, the supernatant liquid is filtered into a clean vessel, and the water is boiled till all water portions evaporate.

Scrap the *Kshara* from the vessel which is white in colour.

The above procedure is adopted for drugs like *yava*, *kutaja*, *palasha*, *ashwakarana*, *paribhadra*, *vibheetaki*, *aragwadha*, *bilwa*, *arka*, *snuhi*, *apamarga* etc.

Method of preparation of *Kshara* (in general)¹⁵:

The plant from which the *Kshara* is to be prepared is dried completely and cut into small pieces. These *kashtas* of plants are to be burnt to ash. To this ash, 6 parts of water (4 parts according to *Yogaratanakara* and *Rasatarangini*) should be added, stirred well and kept overnight. Next morning, it should be filtered through a thick cloth. The process of filtration should be repeated for 21 times. The filtrate is then taken in an iron vessel and heated to evaporate the liquid

portion. The *Kshara* collected in the form of flakes in the bottom of the vessel is scraped, powdered and preserved in an airtight glass bottle.

Method of preparation of *Pratisaraniya Kshara* and *Paniya Kshara*:

According to *Acharya Sushruta*,

Kshara is mainly of two types: *Pratisaraniya Kshara* and *Paniya Kshara*.

Method of preparation of *Pratisaraniya Kshara*¹⁶:

Mridu Kshara:

Ash of 1 *Drona* of drug is to be added with 6 *Dronas* of water then filter it for 21 times then heat it to reduce 1/3rd (2 *Dronas*)

Madhyama Kshara:

From that 2 *Dronas* take out 8 *palas* (400 ml) of *Kshara jala* just to mix 8 *palas* (400gms) of drugs like *shankha nabhi*, *Khanda sharkara*, *shukti* etc after doing *nisheka*, if it doesn't completely dissolve then do *peshana* and mix it back to two *drona* and boil till *nati sandra nati drava*.

Teeksna Kshara:

To the *madhyama Kshara* again add *teekshna dravyas* like *danti*, *chitraka*, *ativisha*, etc drugs in *shukti*(*Ardha pala*) *pramana* each, till the consistency of *nati sandra nati drava*.

Method of preparation of *Paniya Kshara*¹⁷:

Paniya Kshara is prepared by pouring out, twenty one times (after dissolving the ash) in water six or four times in quantity.

Kshara matra:

Pratisaaraneeya Kshara :

Lepapramana: *Padmapatra sama*

Paneeya Ksharodaka Pramanam:

Uttama matra : *Pala*

Madhyama matra : *Karshatraya*

Adhama matra : *Ardhapala*

Taste of *Kshara*:

According to *Acharya Sushruta*,

The substances of all taste enter into the composition of an alkali except the *Amla rasa*. *Katu rasa* is the principle taste of *Kshara*, while *Lavana* form its *Anurasa*. This *Lavana rasa* in conjugation with the *Amla rasa* renounces the extremely sharp or irritating property and is thus formed into *Madhura rasa*. Hence, it is that, *Amla rasa* tends to allay the burning incidental to an application of *Kshara* in the same way as water tends to put out fire¹⁸.

Importance of *Kshara*:

According to *Acharya Sushruta*,

In cases that require incising, excising and scraping, alkalis and alkaline preparations are of greater importance than surgical instruments and appliances¹⁹.

Dosha of Kshara:

According to *Acharya Sushruta*,

The *Kshara*'s defectiveness consists of being too mild, excessive whiteness, excessively strong or irritable, excess of sliminess, excessive stickiness, excessive thickness, insufficient boiling and insufficient component of ingredients²⁰.

Improper and Proper administration of *Kshara*:

According to *Acharya Sushruta*,

An alkali administered by an ignorant Physician is dreadful more than poison, fire blows with weapon, thunder bolts or death itself. While in the hands of intelligent Physician, it is potent enough to speedily subdue all serious diseases in which its use is indicated²¹.

Mode of action on skin:

Ksharas destroys the *soumya*, properties also cures the diseases. Though first it produces the *kshta* (hurt or wound), later it gives the relief (*akshata*).

Preservation of *Kshara*:

In air –tight container, because of its hygroscopic nature, alkali is preserved.

Saveeryata of Kshara:

Acharya has given the method of potentiating *Kshara* by adding the *ksharodaka* and heating it by this the *Kshara* retains the potency.

Antidote of *Kshara*²²:

The area affected by *Kshara* should be washed with *Amla dravyas*.

CONCEPT OF KSHARASUTRA

Preparation of *Ksharasutra*:

According to *Chakradatta*,

भावितं रजनी चूर्णैः स्नुहिक्षीरैः पुनः पुनः ।

बन्धनात् सदृढ सूत्रं छिनत्यर्शो भगन्दरम् ॥

Firm threads having been impregnated with *Haridra* powder and *Snuhi* Latex several times cuts hemorrhoids and fistula-in-ano by tying²³.

Ksharasutra Nirmanavidhi:

In 11th century A.D., *Chakradatta* has mentioned about the preparation of *Ksharasutra*. According to the text, the paste of *Snuhi Kshira* and *Haridra* churna are applied repeatedly to a strong thread. But, he has not mentioned about the number of applications (i.e. coatings and the procedure of preparation of *Ksharasutra*).

A team of Doctors of BHU, after a sufficient discussion, experimentation and a long experience of trial and error, came to a conclusion and described the following standard method of preparation of *Ksharasutra*.

Preparation of *Apamarga Ksharasutra*²⁴:

Ksharasutra is a medicated device prepared with a linen thread of specified physical characteristics, to meet the quality of the finished product by coating it with layers of materials obtained from plants as mentioned.

1	Linen thread of 20 gauge, of suitable length			
2	<i>Snuhi kshira</i>	<i>Euphorbia neriifolia</i>	Latex	QS
3	<i>Apamarga Kshara</i>	<i>Achyranthes aspera</i>	Water soluble ash	QS
4	<i>Haridra</i>	<i>Curcuma longa</i>	Rhizome	QS

Method of preparation:

1. Spread the surgical linen thread of size 20 throughout the length and breadth of the hanger of the specially designed cabinet known as *Ksharasutra* cabinet.
2. Smear the thread with latex, uniformly and carefully all around the thread with the help of a clean gauze piece soaked in the *Snuhi kshira*. After smearing all the threads on the hanger, place the hanger in the *Ksharasutra* cabinet for drying.
3. Close the cabinet properly and dry overnight. Close all the outlets of the *Ksharasutra* cabinet properly in order to prevent the entry of moisture into the cabinet.
4. After eleven such coatings with *Snuhi kshira*, process next day for the 12th coat of *Snuhi kshira* and then pass wet thread through a heap of finely powdered *Apamarga Kshara* immediately.
5. After smearing all the threads with *Kshara*, shake the hanger gently; allow the excess particles of *Kshara* to fall down. Place the hanger in the *Ksharasutra* cabinet and dry.
6. Repeat this process, till seven coatings of *Snuhi kshira* and *Apamarga Kshara* are achieved, thus completing 18 coatings on the thread.
7. Perform the three coatings with *Snuhi kshira* and fine powder of *Haridra* as per the above said procedure making total coatings of 21 on the thread.
8. Cut the threads of uniform length for packing.

Ksharasutra Prayogavidhi:

An erudite surgeon should excise a sinus occurring in any of the *marmas* or in a weak, timid or emaciated person with *Ksharasutra*, and not with a surgical knife. The course of the sinus should be ascertained with a director; and a needle, threaded with a string of alkaline thread should be passed from one end of the sinus and quickly drawn out through the other. Then, the two ends of the thread should be firmly fastened together. An intelligent surgeon should likewise pass another alkaline thread in the event of the first thread being comparatively weak. This should be repeated till the sinus completely cuts through. The surgeon should know that the procedure may be as well adopted in case of fistula in *ano*, *arbuda* etc. they should be lifted up and tied around their base with an alkaline thread or it should be punctured around with a kind of needle with their mouth resembling of a barley corn and then tied again

at their base with an alkaline thread. After their falling off, they should be treated as common *vrana*.

CONCLUSION

Kshara can be utilized to treat many diseases like *Vrana*, *Bhagandara*, *Arsha*, *Ashmari*, *Charmakeela* etc. it is very important part of *Shalya Tantra* with very simple and very safe, effective procedure with minimal or no complications. *Kshara* is indicated in children, weak persons and minimal interference in patient's routine work. *Kshara* has important role in medicine, surgical and para- surgical practice. *Ksharakarma* has been considered as a boon, a strong weapon in *Ayurveda*. *Ksharasutra* described by *Acharyas* are effective, easily practicable and can avoid the recurrence.

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