ISSN: 2249- 5746
International Journal of Ayurvedic and Herbal Medicine 15:6 (2025) 5254-5266
Journal homepage: http://www.interscience.org.uk
DOI: 10.47191/ijahm/v15i6.07
Impact Factor: 8.254

A Critical Review of Pharmaceutico-therapeutic aspect of *Kshara Kalpana* through lens of Ayurvedic Literature

Jeel Patel[1], Dr. Bharti Umretia[2]
[1]PG Scholar, Upgraded Department of Rasashastra and Bhaishajya Kalpana, Government Ayurved College, Vadodara, Gujarat
[2]Reader and Head Upgraded Department of Rasashastra and Bhaishajya Kalpana, Government Ayurved College, Vadodara, Gujarat

Corresponding Author: Jeel Patel

ABSTRACT: *Kshara Kalpana* represents a distinctive pharmaceutical procedure in Ayurveda, wherein alkaline substances are end products of the ashes of medicinal plants, animal derivatives, and minerals through a systematic process. Its preparation involves combustion followed by the extraction of water-soluble components, yielding a highly concentrated alkaline substance. The method of preparation varies across classical treatises, reflecting different procedural approaches. Classical texts provide detailed descriptions of its pharmaceutical and therapeutic aspects. The present study aims to critically review *Kshara Kalpana* in its various dimensions, based on references from 38 classical Ayurvedic texts. Acharya Sushruta was the first to systematically elaborate on this dosage form along with its therapeutic applications. The outcome of this review is a comprehensive understanding of it through systematic compilation and analysis of pharmaceutical diversity in Ayurvedic pharmaceutics. It serves as a valuable resource for researchers seeking to explore its methods of preparation and other pharmaceutical description along with classical significance.

KEYWORDS: Combustion**,** Alkaline substance, Ayurvedic pharmaceutics

INTRODUCTION

In Ayurvedic pharmaceutics, the fundamental principles underlying the preparation of different dosage form is that the whole plant or classically mentioned part of it may not possess the desired therapeutic effect. However all components of the plant are therapeutically active, each metabolites exhibit specific activity. These active components must be extracted from the plant for desired therapeutic application. Water, being a relatively inert universal solvent, serves as the medium for the extraction of these active ingredients from the plant material.

Subsequently, *Kshara Kalpana* (an alkaline dosage form) represents a unique and potent pharmaceutical formulation within Ayurveda, noted for its alkaline characteristics. The preparation process commences with the preparation of ash derived from medicinal materials, followed by the extraction of water-soluble substances by immersing the ash in water for a specific period. Subsequently, the mixture is decanted and filtered. The resulting filtrate is then subjected to evaporation to yield *Kshara* (alkaline substances). This methodology is documented in numerous classical Ayurvedic texts, with notable variations including the ash-to-water ratio, soaking time, and filtration duration, among other factors. Additionally, some sources outline

alternative preparation methods for *Mridu*, *Madhyama*, and *Tikshna Kshara*, which are distinguished by their respective levels of potency.[1,2,3]

Kshara is of considerable importance in both pharmaceutical and therapeutic application. The therapeutic use of *Kshara* encompasses both internal application (i.e. *Paniya Kshara*) and external use (i.e. *Pratisaraniya Kshara*). *Chhedana* (Excision), *Bhedana* (Incision), and *Lekhana* (Scraping) properties of *Kshara* plays an important role in surgical indications, and in the treatment of various challenging diseases such as *Arsha*, *Bhagandara*, *Gulma*, *Udararoga* and many others.

A detailed account of *Kshara* is provided in Ayurvedic texts, which discuss its pharmaceutical aspects, including classifications based on different criteria, preparation methods with validation tests, properties, indications, contraindications, shelf life, and its significance. The present review provides a comprehensive analysis of the pharmaceutical approach of *Kshara* through literature retrieval.

MATERIALS AND METHOD

In this study, 35 classical Ayurvedic texts were screened to gather and analyze descriptions related to *Kshara Kalpana*. Furthermore, the Ayurvedic Pharmacopoeia of India, the Ayurvedic Formulary of India and the Drugs and Cosmetics Rules, 1945 were reviewed to explore the regulatory provisions concerning *Kshara*.

RESULT AND DISCUSSION

According to Shabdakalpadruma, the word "]ar " derived from "]r " *Dhatu* which means movement.[4] In Amarakosha, the term "*Kshara*" refers to "*Kacha*" (glass), which means to fasten or to shine; *Bhasma* (ash) and *Lavana* (salt) is also accepted. It also gives other meanings, such as *Chapa* (stone), *Rasa*, *Suta* and *Parada*.

The substance that expels out "*Dusta Tvagmasadi*" by its *Ksharana* or *Kshanana* action is called *Kshara*.[5] Or the substance which mobilizes and removes the deformed flesh, skin etc. or which removes the vitiated *Dosha* from their location with its "*Ksharana*" action is called *Kshara.*[6] It removes the *Mala*.[7] It is alkaline compound which obtained from the ashes of drugs.

Classification

Ayurvedic literature classifies *Kshara* based on several factors, including its origin, therapeutic application, and numerical grouping. Based on origin, *Kshara* is categorized into three types i.e. *Vanaspatijanya* (plant-derived), such as *Apamarga Kshara*, *Yava Kshara*, and *Palasha Kshara*; *Pranijanya* (animal-derived), including *Gomaya Kshara*, *Aja Karisha Kshara*, and *Gajamala Kshara*; and *Khanijajanya* (mineral-derived), such as *Tankana* and *Surya Kshara*. Based on therapeutic application, it is classified into *Paniya* (administered internally) and *Pratisaraniya* (applied externally).[8] *Pratisaraniya Kshara* is further sub-classified according to its strength: *Mridu Kshara* (containing only *Avapa Dravya*), *Madhyama Kshara* (comprising *Avapa* and *Prativapa Dravya*), and *Tikshna Kshara* (containing *Avapa*, *Prativapa*, and additional potent substances).[9] Furthermore, classical texts also categorize *Kshara* on numerical basis such as *Ksharadvaya*, *Ksharatraya*, and *Ksharapanchaka* etc. which are detailed in table 1.

Table No.1: Classification of *Kshara* based on their numbers

Kshara	**No. of *Kshara***	**Name of *Kshara***	**Reference**
Ksharadvaya	2	*Svarjika, Yava*	Y.T. 1/67 B.P. Pu. 2/223 R.K.D. 1/4/177 R.T. 2/6

Ksharatraya	3	*Svarjika, Yava, Tankana*	B.P. Pu. 2/223 D. N. 7/73 R.N.22/8
			R.H.T. 9/7 Rnv. 5/30 R. Chu. 9/3 R.S.S. 1/112 R.R.S. 10/68 R. T. 2/6
Ksharapanchaka	5	*Yava, Svarjika, Usha, Pakima, Tankana*	Su. Su. 46/323
		Yava, Svarjika, Tila, Palasha, Mushkaka	D.N. 7/71 R.N. 22/48 R.R.S. 10/69 R.T. 2/7
		Svarjika, Tankana, Tila, Palasha, Mushka	R.K.D. 1/4/178
		Yava, Svarjika, Tankana, Tila, Palasha	R. Cd. P. 716
Ksharashastaka	6	*Tila, Palasha, Vacha, Apamanga, Kutaja, Mushka*	D.N. 7/73
		Apamarga, Kutaja, Langali, Dhava, Tila, Mushka	R.N. 22/51
		Apamarga, Indraja, Langali, Patala, Tila, Mushka	R.K.D. 1/4/179
Ksharasaptaka	7	*Svarjika, Yava, Tankana, Suvarchika, Palasha, Gaurya, Shikhari*	A.P. 3/15
Ksharashtaka	8	*Apamarga, Palasha, Arka, Tila, Mulaka, Yava, Svarjika, Tankana*	D.N. 7/74
		Apamarga, Arka, Chincha, Tila, Yava, Svarjika Shikhari, Vahni	B. P. Pu. 2/224
		Vajra, Chitraka, Tumbi, Arjuna, Tankana, Yava Svarji, Arka	Rnv. 6/34
		Tila, Palasha, Mushka, Yava, Svarjika, Shigru, Mayura, Tankana	R.KD. 1/4/180
		Apamarga, Arka, Chincha, Tila, Yava, Svarji, Sudha, Palasha	R.T.2/8
Ksharadasaka	10	*Chitraka, Ardraka, Nimba, Ikshu, Shikhari, Mochaka, Shigru. Mulaka, Palasha, Chukrika*	R.N. 22/57 R.K.D. 1/4/181

The method of preparation of *Kshara* varies according to different texts. Here, it can be divided into general and specific methods of *Kshara* preparation, as mentioned below.

General method of preparation

The dried plant material is ignited and allowed to burn completely until it is reduced to ash. In some classical references, the plant material is burnt along with *Sudhasharkara*. The ash is then allowed to cool and subsequently mixed with water in a specified ash-to-water ratio. After thorough mixing, the mixture is left undisturbed for sedimentation, allowing the insoluble particles to settle at the bottom. The clear supernatant liquid is then carefully decanted and filtered through a clean cloth to obtain *Ksharajala*. This filtrate is subjected to heating until complete evaporation of water occurs. Finally, a white solid powder is obtained, which is collected from the bottom of the vessel as *Kshara*. Various factors—such as the type of liquid medium, the ash-to-liquid ratio, sedimentation time, number of filtrations, folds of cloth used, and the type of vessel employed— differ according to classical references and are summarized in table no. 2.

Table No.2: Difference method of *Kshara* preparation mentioned in different texts

Liquid media	Ash:liquid ratio	Sedimentation time	Folds of cloth	Numbers of filtration	Vessel	Reference
Water/ *Gomutra*	1:6	-	-	21	Iron	Su.Su. 11/9
Water, *Gomutra*	4 times water and *Gomutra* each	-	-	1	Iron	A.S.Su. 39/9
Water, *Gomutra*	4 times water and *Gomutra* each	-	-	1	Iron	A.H.Su. 30/21
Water	1:4 or 1:6	-	-	1	Iron	C.D. 5/143
Water	1:2, 1:4, 1:21	-	-	-	Iron	V.S.21/382
Water	1:4	1 night	-	-	Earthen	Sha.S.M.Kh. 11/101, R.P./280-282
Water	1:4	1 night	-	-	Earthen	A.P.6/60
Water	1:4 or 1:6	Over night	-	-	Earthen	B.R.10/262
Water	1:4	3 hours	3 folds	-	-	R.T.14/59-61
Water	1: 8	2-3 days	4 folds	7	Earthen/ tin coated vessel	Ayurveda Sara Samgraha

Kshara is primarily considered the water-soluble extract of plant ash; therefore, in its preparation, water is predominantly employed as the extraction medium. *Gomutra* is also described in some references as a liquid medium, since it can enhance alkalinity and may contribute additional bioactive components. The ratio of ash to liquid medium generally ranges between 1:4 and 1:21, as a larger volume of solvent facilitates

more efficient extraction of soluble fractions from the ash. Research studies have further compared ash–water ratio of 1:4, 1:6, and 1:8, with the maximum yield observed at the 1:8 ratio in *Apamarga Kshara* preparation.[10] This is because the concentration gradient between solid ash and solvent increases, and excess quantity of solvent raises its saturation level, which helps dissolve the maximum amount of water-soluble alkali salts until the solubility limit is reached, so yield improves only up to that point. Sedimentation time ranges from 3 hours to 3 days**,** and its primary role is to allow insoluble particles to settle at the bottom while ensuring proper dissolution of the soluble components. The use of multiple folds of cloth together with an adequate number of filtrations directly ensures a clear supernatant, which improves the separation of soluble and insoluble fractions and enhances the quality of the extract. In *Kshara* preparation, iron, earthen, or tin-coated vessels are used because the alkaline solution is highly corrosive and can react with ordinary metals. Earthen vessels are inert, tin coating prevents corrosion, and iron vessels not only withstand boiling but may also impart trace iron considered effective as a therapeutic agent.

Specific method of preparation

Based upon the intensity of alkaline substance, the specific method further classifies into *Mridu*, *Madhyama*, and *Tikshna*. *Mridu Kshara* is prepared in the same manner as the general method.[11] In some other references *Kshara* made using after *Nirvapa* of *Katasharkara*, *Bhasmasharkara*, *Shukti* and *Shankha Nabhi* to *Ksharodaka* is considered *Mridu*.[12,13] *Madhyama Kshara* is prepared by heating *Ksharodaka* until it becomes reddish and slimy. Then about one to one-and-a-half *Kudava* of *Ksharodaka* is set aside. Ingredients such as *Katasharkara*, *Bhasmasharkara*, *Shukti*, *Shankha Nabhi*, etc., are heated until red-hot and then quickly quenched in this *Ksharodaka*. These ingredients are ground into a fine powder in the *Ksharodaka*. Two *Drona* of *Ksharodaka* and eight *Pala* of *Shankhanabhiadi* are then taken in an iron vessel and heated until the proper *Ksharapaka* stage is reached.[14] In some references, powders of *Kshiravanka, Shankha* and *Sudha Sharkara* are added for *Madhyama Kshara*, while according to other reference[15] also mentioned ingredients like the fecal matter and bile of peacock and cow, along with *Haratala*, *Manahshila*, and various *Lavana*. *Tikshna Kshara* is prepared by adding the *Prativapa* of drugs such as *Danti, Dravanti, Chitraka, Langali, Hingu*, and *Vacha*, in a quantity of one *Shukti* (~24 g) during preparation.[16,17,18,19]

Additionally, as per some other reference for *Mridu Kshara, Shankha Churna* is added in a quantity equal to one-fourth of *Ksharodaka*. For *Madhyama Kshara*, it is added in one-eighth proportion, and for *Shreshtha* or *Tikshna Kshara*, it is added in one-sixteenth proportion. These variations reflect the diverse classical methods for preparing different grades of *Kshara*.[20,21]

Principles involved in *Kshara* preparation

1) *Bhasmikarana* (combustion)

The process of combustion involves the complete burning of dried plant material in the presence of oxygen, resulting in its reduction to ash. During this process, the organic matter undergoes oxidation of its carbonaceous components, leading to the formation of stable inorganic mineral residues. These residues, primarily composed of oxides and carbonates, constitute the ash**.**[22]

2) *Nissarana* (decantation) and *Vastragalana* (filtration)

In the preparation of *Ksharajala*, the plant ash is mixed with a measured quantity of water to form a mixture of soluble alkalis and insoluble residues. The heavier particles settle at the bottom by gravitational sedimentation, leaving a clear alkaline layer above.[23] The supernatant is carefully decanted and filtered through multiple folds of cloth to remove fine impurities, yielding a clear, water-soluble alkaline extract enriched with dissolved alkali salts.

3) *Nirvapa* (heating and quenching)

In the preparation of *Madhyama Kshara*, carbonate-rich materials such as *Shankha* etc are heated until red-hot, facilitating the thermal decomposition of carbonates into their corresponding oxides. These oxides are then immediately quenched in *Ksharajala* - a process termed *Nirvapa*. The sudden quenching induces exothermic reactions between the metal oxides and the alkaline liquid, forming hydroxides and enhancing the overall alkalinity and reactivity of the mixture.[24]

4) *Prativapa* (Incorporation of *Tikshna Dravya*)

During the formulation of *Tikshna Kshara*, potent herbs such as *Danti*, *Dravanti* etc. are added to the boiling *Ksharajala*. The inclusion of these *Tikshna Dravya* augments the potency of the preparation through their inherent *Ushna* and *Tikshna* properties. From a chemical perspective, plant-derived acids, resins and phenolic interact with the alkaline medium to form alkaline salts and complex bioactive compounds, collectively intensifying the alkalinity and therapeutic efficacy of the *Kshara*.

5) *Agnisamyoga* (heating)

Ksharajala is then heated to evaporate water, concentrating the dissolved alkali salts. As supersaturation occurs, the salts crystallize, and continued heating removes residual moisture, yielding a dry, stable *Kshara* powder suitable for therapeutic use.

Confirmatory test

Confirmatory test for assessing the potency of *Kshara* by immersing a dry *Eranda Nala* (castor stem) into the *Kshara* solution. If the stem burns within *Vakshata Matra Kala* (the time required to recite the word "*Laghu*" 100 times), it indicates *Tikshna Kshara*; if it burns before this time, it signifies *Ati Tikshna Kshara*; and if it does not burn even after this period, it is classified as *Mridu Kshara*.[25,26,27] *Vakshata Matra Kala* as the optimal time frame for testing.[28,29] The ideal *Paka Lakshana* (endpoint of processing) for *Pratisaraniya Kshara* is characterized by a consistency that is neither too thick nor too thin.[30] *Ksharapaka* indicators includes *Bashpa Samutthana* (appearance of vapors), *Budbuda Samutthana* (formation of bubbles), *Sandrata* (increased viscosity), and *Darvipralepa* (tendency of the final product to adhere to the spatula), all of which serve as critical parameters for determining the completion of *Kshara* preparation.[31] Colour of *Kshara* is white and the appearance of both *Pratisaraniya* and *Paniya Kshara* in the forms of *Churna* and *Kvatha* respectively.[32]

Rasapanchaka

Rasa (taste) of *Kshara* is *Amlavarjita Sarva Rasa* (possessing all tastes except sour) with *Katu Rasa* (pungent) as dominant *Rasa. Lavana* (salty) is mentioned as the *Anurasa*.[33] However, *Lavana Rasa* is also considered the dominant *Rasa* of *Kshara* in some other references. *Kshara* is also attributed with *Tikshna Guna* (sharp quality), *Ushna Virya* (hot potency) and *Katu Vipaka* (pungent post-digestive effect).[34]

Kshara is characterized by its actions of *Pakta* (helping in digestion), *Vidarana* (piercing), *Dahana* (burning), and *Dipana* (stimulating digestion). Additionally, all forms of *Kshara* are said to possess qualities similar to *Agni* (fire).[35] It is *Tridoshahara* (alleviating three *Dosha*), *Saumya* (gentle), *Pachaka* (digestive), *Ushna Virya* (hot in potency) and *Tikshna* (sharp). Its therapeutic action includes *Shodhana* (purifying), *Ropana* (healing tissue growth), *Shoshana* (absorbent), *Lekhana* (scraping), *Vilayana* (liquefier of granular tissues), *Krimighna* (destroying organisms), *Amahara* (alleviating *Kapha Dosha*), *Kushthaghna* (curing skin diseases), *Medohara* (alleviating variety of fatty substance) and *Punsatvahara* (destroying sexual potency on prolong administration).[36] Properties of *Ksharajala* are *Agnidipana*, *Shulahara* and *Adhmanahara*.[37] Other properties of *Kshara* is tabulated in table no**.** 3.

Table No.3: Properties of *Kshara* as mentioned in different texts

Sr. no.	References					
	Charaka Samhita[38]	**Sushruta Samhita[39]**	**Astanga Samgraha[40]**	**Ashtanga Hridaya[41]**	**Vangasena Samhita[42]**	**Rasatarangini[43]**
1	*Tikshna*	*Nati Tikshna*	*Nati Tikshna*	*Nati Tikshna*	*Nati Tikshna*	*Tikshna*
2	*Ushna*	*Natimridu*	*Natimridu*	*Natimridu*	*Natimridu*	*Atyanta Ushna*
3	*Laghu*	*Shukla*	*Shveta*	*Shita*	*Shukla*	*Dahaka*
4	*Rukhsa*	*Shlakshna*	*Shlakshna*	*Shlakshna*	*Shlakshna*	*Krimighna*
5	*Kledi*	*Picchila*	*Picchila*	*Picchila*	*Picchila*	*Pachaka*
6	*Pakta*	*Avishyandi*	*Avishyandi*	*Avishyandi*	*Shiva*	*Daraka*
7	*Vivarana*	*Shiva*	*Shighra*	*Sukhanirvapya*	*Shighrakari*	*Shodhana*
8	*Dahakaraka*	*Shighrakari*	*Shikhari*	*Shighragami*	-	*Ropana*
9	*Dipana*	-	*Sukhanirvapya*	*Shikhari*	-	*Mutrala*
10	*Chhedana*	-	*Alpa Ruga*	*Natiruka*	-	-

Kshara is considered to be *Pumstvaghataka* if taken for a long duration. Ten *Kshara Dosha* includes *Ati Tikshna, Ati Mridu, Ati Ushna, Ati Shita, Ati Tanu, Ati Ghana, Ati Picchila, Visarpi, Hina Aushadha* and *Hina Paka.*[44]

Therapeutic use

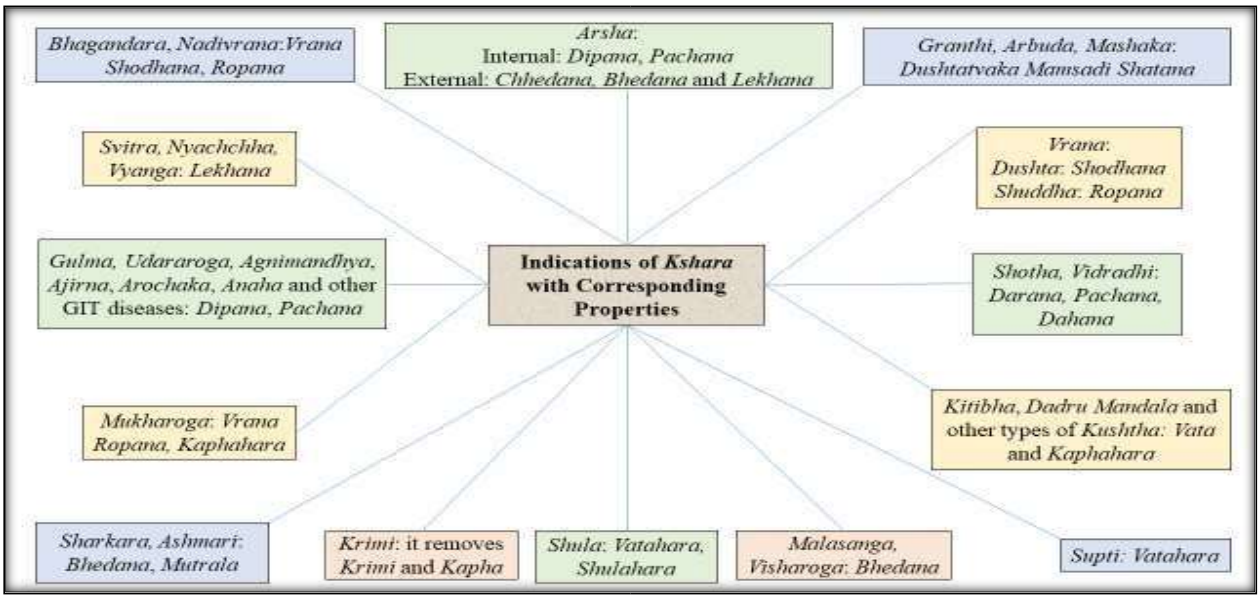
Indications of *Pratisaraniya* and *Paniya Kshara* are listed in table no. 4.

Table No.4: Indications of *Pratisaraniya* and *Paniya Kshara*

Pratisaraniya Kshara					***Paniya Kshara***				
Indications	**Su.[45]**	**A.S[46]**	**A.H[47]**	**R.K.D[48]**	**Indications**	**Su.[49]**	**A.S[50]**	**A.H[51]**	**R.K.D[52]**
Kushtha	+	+	+	+	*Visharoga*	-	-	-	+
Kitibha	+	-	-	+	*Gara Visha*	+	+	+	+
Dadru	+	-	-	+	*Gulma*	+	+	+	+
Mandala	+	-	-	+	*Udara Roga*	+	+	+	+
Kilasa	+	+	-	+	*Agnimandya*	+	+	+	+
Bhagandara	+	+	+	+	*Ajirna*	+	-	-	-
Arbuda	+	+	+	+	*Arochaka*	+	-	-	-
Granthi	-	-	+	-	*Anaha*	+	+	-	+
Bahya Arsha	+	+	+	-	*Sharkara*	+	+	-	+

Dushta Vrana	+	+	+	+	*Ashmari*	+	+	+	+
Nadi Vrana	+	+	+	+	*Antah Vidradhi*	+	-	-	-
Charmakila	+	+	-	+	*Krimi*	+	-	-	+
Tilakalaka	+	+	-	+	*Visha*	+	-	-	
Nyachchha	+	-	-	-	*Arsha*	+	-	+	+
Vyanga	+	-	-	-	*Malasanga*	-	+	-	-
Mashaka	+	-	+	-	*Shula*	-	+	-	+
Bahya Vidradhi	+	-	-	-	*Shotha*	-	-	-	+
Krimi	+	+	-	-	*Gudaroga*	-	-	-	+
Visha	+	+	-	+	*Udirnaroga*	-	-	-	+
Sapta Mukha Roga	+	+	-	-					
Svitra	-	-	+	-					
Supti	-	-	+	-					
Yakshanili	-	-	-	+					

A total of 37 different indications of *Kshara* were identified from various classical texts. Among them, it is used internally in 23 diseases and externally in 18 diseases. 5 diseases are common to both categories, where it is used for both internal and external applications. It is used in different indications due to its specific properties. In each disease, its mode of action through particular activities helps to break the respective pathological process. The graphical presentation of its indications with corresponding properties is shown below in Graph no. 1.



Graph No. 1: Indications of *Kshara* with corresponding properties Contraindications of *Kshara Karma*

Ksharakarma is contraindicated in certain site, diseases, physical status and season which is mentioned in table no.5.

Table No.5: Contraindication of *Pratisaraniya Kshara*

Site[53]	**Disease**[54]	**Physical status**[55]	**Season**[56]
Marma	*Pittaja Roga*	*Durbala*	*Shita Kala*
Shira	*Raktaja Roga*	*Balaka*	*Ushna Kala*
Snayu	*Vataja Roga*	*Vriddha*	*Varsha Kala*
Sandhi	*Jvara*	*Bheeru*	*Durdina*
Tarunasthi	*Atisara*	*Garbhini*	-
Sevani	*Hrida Roga*	*Rutumati*	-
Dhamani	*Shiro Roga*	-	-
Gala Pradesha	*Pandu*	-	-
Nabhi Pradesha	*Aruchi*	-	-
Nakhanta	*Timira*	-	-
Vrushana	*Sarvanga Shotha*	-	-
Strotasa	*Ajirna*	-	-
Alpa Mamsa Pradesha	-	-	-
Akshi Roga except *Vartma*	-	-	-

Kshara Karma is contraindicated in certain areas because these sites are delicate and its corrosive nature may cause tissue injury. In some diseases, its application can aggravate the condition rather than provide relief. Due to its *Ushna* and *Tikshna* properties, *Kshara* is also not recommended in individuals with certain physical conditions or during specific seasons, as it may lead to complications.

Significance

Apart from its therapeutic use these *Kshara* has also used in various pharmaceutical procedures such as *Shodhana, Marana, Jarana, Satvapatana, Druti* etc. It is also used in various *Samskara* of *Parada* such as *Svedana, Murchchhana, Patana, Dipana, Garbhadhruti* etc.
Ksharodaka is also used as different procedures such as *Bhavna, Nirvapa, Svedana* etc.

Shelf life

Shelf life of *Kshara* is 5 years as mentioned in Drugs and Cosmetics Rules 1945, Rule 161- B.[57]

Dose

The dose of *Kshara* is mentioned as follows for *Paniya Kshara* the *Uttama Matra* is 1 *Pala* (~48 ml) the *Madhyama Matra* is 3 *Karsha* (~36 ml) and the *Hina Matra* is half *Pala* (~24 ml).[58] The dose of *Kshara* for internal use is 2 – 8 *Gunja* (250 mg to1 g).[59] For *Pratisaraniya Kshara* the dose is applied as per requirement.

CONCLUSION

Kshara is considered a water-soluble substance obtained from the ashes of medicinal materials. It is known for its corrosive nature and can be found either naturally (i.e. *Tankana*) or artificially prepared from natural substances (i.e. *Yava Kshara*, *Apamarga Kshara*) through a unique procedure known as *Kshara Kalpana.* Extensive and detailed descriptions of *Kshara Kalpana* are documented across multiple classical texts, underscoring its significant pharmacotherapeutic value. The diversity in its preparation methods reflects its historical evolution. It remains a valuable contribution to Ayurvedic pharmaceutics and therapeutics, reflecting its significant role in treating various diseases in the body. The prominence of *Kshara Kalpana* across multiple Ayurvedic texts suggests its wide acceptance and utility in ancient times, reaffirming its relevance in current integrative and evidence-based Ayurvedic practices.

REFERENCES

1. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 11-14, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.46
2. Vagbhatta, Astanga Samgraha, *Chikitsa Sthana*, Ch.22/22,hindi commentary of Kaviraja Atridev Gupt, Chaukhambha Krishnadas Academy, Varanasi, reprint 2019 pg. 122
3. *Acharya* Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 23 Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg. 330
4. Raja Radha Kanta Deva, Sabdaklpadruma, 3rd edition, Chaukhamba Sanskrit series, Varanasi, 1967.
5. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 4, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.45
6. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 4, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.45
7. Shri bhairavananda yogi, Rasarnavam or Rasatantram "Rasachandrika" Patala 5/43 Hindi commentary by Dr. Indradeo Tripathi, edited by Dr. Shri krishna Dixit 5th edition, Chaukhambha Sanskrit Series,Varanasi, 2012 pg.62
8. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11, Ver. 6 Varanasi:Chaukhambha Sanskrita Samsthana; Reprint 2017 pg. 46
9. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 13-15, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.47
10. Balabhadra Shrishti et. al., pharmaceutical study of different samples of *Apamarga Kshara,* International journal of research in Ayurved and Pharmacy, 2018, 9(1), pg no: 17-22.
11. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 11-14, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.46
12. Vagbhatta, Astanga Samgraha, *Chikitsa Sthana*, Ch.22/22,hindi commentary of Kaviraja Atridev Gupt, Chaukhambha Krishnadas Academy, Varanasi, reprint 2019 pg. 122
13. *Acharya* Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 23 Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg. 330
14. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 11-14, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.46
15. *Acharya* Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 23 Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg. 330
16. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 11-14, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.46

17. Vagbhatta, Astanga Samgraha, *Chikitsa Sthana*, Ch.22/22,hindi commentary of Kaviraja Atridev Gupt, Chaukhambha Krishnadas Academy, Varanasi, reprint 2019 pg. 122
18. *Acharya* Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 23 Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg. 330
19. *Acharya* Chakrapanidatta, Chakradutta, with Vaidyaprabha Hindi commentary by Dr.Indradeva Tripathi, edited by Prof.Ramanath Dwivedi. Reprint, Ch.5.Ver.156. Varanasi: Chaukhambha Sanskrit Bhavana;2019. pg. 66
20. Vangasena, Vangasena Samhita, edited and translated by Pandit Hariharaprasad Pandya, cha 21, verse 372-384, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2016 pg 307
21. https://en.wikipedia.org/wiki/Wood_ash
22. https://www.google.com/search?q=ash+disolve+in+water+what+found+after+some+time&oq=ash+disolve+in+water+what+found+after+some+time+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIJCAEQIRgKGKABMgkIAhAhGAoYoAEyCQgDECEYChigATIHCAQQIRiPAjIHCAUQIRiPAtIBCTE0MTA3ajBqNKgCALACAQ&sourceid=ch rome&ie=UTF-8
23. https://www.google.com/search?q=when+carbonate+rich+minerals+heated+till+red+hot+and+quenched+in+alkaline+solution&oq=when+carbonate+rich+minerals+heated+till+red+hot+and+quenched+in+alkaline+solution+&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRiPAtIBCTIwMzI1ajBqN6gCCLACAfEFEZHz4rwDnHk&sourceid =chrome&ie=UTF-8
24. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 20, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.48
25. Acharya Chakrapanidatta, Chakradutta, with Vaidyaprabha Hindi commentary by Dr.Indradeva Tripathi, edited by Prof. Ramanath Dwivedi., Ch.5. Ver.146. Varanasi: Chaukhambha Sanskrit Bhavana; Reprint: 2019. pg. 66
26. Vangasena, Vangasena Samhita, edited and translated by Pandit Hariharaprasad Pandya, cha 21, verse 372-384, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2016 pg 307
27. Acharya Chakrapanidatta, Chakradutta, with Vaidyaprabha Hindi commentary by Dr.Indradeva Tripathi, edited by Prof. Ramanath Dwivedi., Ch.5. Ver.146. Varanasi: Chaukhambha Sanskrit Bhavana; Reprint: 2019. pg. 66
28. Vangasena, Vangasena Samhita, edited and translated by Pandit Hariharaprasad Pandya, cha 21, verse 372-384, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2016 pg 307
29. Acharya Chakrapanidatta, Chakradutta, with Vaidyaprabha Hindi commentary by Dr.Indradeva Tripathi, edited by Prof. Ramanath Dwivedi., Ch.5. Ver.146. Varanasi: Chaukhambha Sanskrit Bhavana; Reprint: 2019. pg. 66
30. *Acharya* Shimad Vagbhatta, Ashtanga Samgraha, edited by Kaviraja Atrideva Gupt, Sutrasthana, Ch. 39, Ver. 10, Varanasi: Chaukhambha Sanskrita Prakashana; Reprint 2019. pg. 255
31. *Acharya* Sharangadhara, Sharangadhara Samhitha, edited by Brahmanand Bhushana, Madhyama Khanda, Ch. 11, Ver. 103, Varanasi: Chaukhambha Surbharti Prakashana; Reprint 2021. pg. 185
32. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 19, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.48
33. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 19, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.48

34. Acharya Agnivesha, Charaka samhita of *Acharya* Charaka, Dridhabala krit, edited by Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi. Vimana Sthana, Ch. 1, Ver. 17, Varanasi: Chaukhamba Bharti Academy; 2020. pg. 603
35. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 5, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.45
36. *Acharya* Harita, Harita Samhita, edited by Vaidya Jaymini Pandey, Trutiya Sthana Ch. 4,vrse 31 Varanasi: Chaukhambha Vishwabharati;2022. Pg 249
37. Acharya Agnivesha, Charaka samhita of *Acharya* Charaka, Dridhabala krit, edited by Pt. Kashinath Shastri and Dr. Gorakhnath Chaturvedi. Sutra Sthana, Ch. 39, Ver. 11, Varanasi: Chaukhamba Bharti Academy; 2019. Pg 256
38. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 16, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017.
39. Acharya Shimad Vagbhatta, Ashtanga Samgraha, edited by Kaviraja Atrideva Gupt, Sutrasthana, Ch. 39, Ver. 16 Varanasi: Chaukhambha Sanskrita Prakashana; Reprint 2019. pg.258
40. Acharya Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 24, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2019 Pg.330
41. Vangasena, Vangasena Samhita, edited and translated by Pandit Hariharaprasad Pandya, cha 21, verse 377, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2016 pg 307
42. Pranacharya Shree Sadanand Sharma, Rasa Tarangini, commentary by dr. Devnathsinha Gautam, Varanasi, Chaukhambha Surabharati Prakashana, reprint 2018, Taranga 14/62-63, pg. 319
43. *Acharya* Shimad Vagbhatta, Ashtanga Samgraha, edited by Kaviraja Atrideva Gupt, Sutrasthana, Ch. 39, Ver. 11, Varanasi: Chaukhambha Sanskrita Prakashana; Reprint 2019. pg.256
44. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 7, Varanasi: Chaukhambha Sanskrita Samsthana; Reprint 2017. pg.48
45. Acharya Shimad Vagbhatta, Ashtanga Samgraha, edited by Kaviraja Atrideva Gupt, Sutrasthana, Ch. 39, Ver. 16 Varanasi: Chaukhambha Sanskrita Prakashana; Reprint 2019. pg.258
46. Acharya Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 321,Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg.328
47. Shri chudamani Mishra, Rasakamdhenu "Suvivrutti" Hindi Commentary by vd. Shri santosh kumar sharma, Edited by Acharya Shree Gulraj Sharma Mishra reprint edition, Chuakhambha Orientialia, Varanasi, 2015, 60/155 pg. 474
48. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 7, Varanasi: Chaukhambha Sanskrita Samsthana;Reprint 2017. pg.48
49. Acharya Shimad Vagbhatta, Ashtanga Samgraha, edited by Kaviraja Atrideva Gupt, Sutrasthana, Ch. 39, Ver. 16, Varanasi: Chaukhambha Sanskrita Prakashana; Reprint 2019. pg.258
50. *Acharya* Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 3-21, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg.328
51. Shri chudamani Mishra, Rasakamdhenu "Suvivrutti" Hindi Commentary by vd. Shri santosh kumar sharma, Edited by Acharya Shree Gulraj Sharma Mishra reprint edition, Chuakhambha Orientialia, Varanasi, 2015, 60/154 pg. 473
52. Acharya Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 19, Varanasi: Chaukhambha Sanskrita Samsthana;Reprint 2017. pg.48
53. Acharya Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 5-7, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg.329

54. *Acharya* Sushruta, Sushruta Samhita, edited by Shastri Ambikadatta, Sutra Sthana Ch. 11 Ver. 30, Varanasi: Chaukhambha Sanskrita Samsthana;Reprint 2017. pg.49
55. Acharya Shimad Vagbhatta, Ashtanga Hridaya, edited by Bramhmanand Tripathi, Sutrasthana, Ch. 30, Ver. 8, Varanasi: Chaukhambha Sanskrit Prakashan; Reprint 2017 Delhi. pg.329
56. D&C act2. The Gazette of India, Notification-2016
57. Sharma PV, Cakradatta, english translation, 1st edition, Varanasi, Chaukhambha Orientalia, 2007, 5/4-20, pg.73-75.
58. Sharma PV, Cakradatta, english translation, 1st edition, Varanasi, Chaukhambha Orientalia, 2007, 5/4-20, pg.73-75.