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Kshara Kalpana - A contribution to present medical practice

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ABSTRACT

Various natural products are processed and used as medicine in Ayurveda. These medicinal products are used in different categories of dosage forms in Ayurveda Pharmaceuticals. *Kshara Kalpana* (alkaline preparation) is one of them. *Kshara* is a substance obtained from the ash of drugs of animal origin (*Shankha*, *Kapardika*, *Pravala* etc.), minerals (*Tankana*, *Surya Kshara*, *Sarji Kshara* etc.) and plants (*Mulaka*; *Raphenus sativus* Linn., *Snuhi*; *Euphorbia nerifolia* Linn., *Apamarga*; *Achyranthes aspera* linn.) origin, where water soluble alkaline portion is extracted from the ash of these drugs. *Kshara Kalpana* is the dosage form of alkaline substance, which may be used in a single or compound form.

Key words: *Kshara*, *Kshara Kalpana*, *Ayurveda*, *Pharmaceuticals*.

INTRODUCTION

The word *Kshara* is derived from the root Sanskrit word 'Char' which means to remove, the one which is destructive or 'Kshana' meaning violence. In total, the substance that expels out the 'Dushta Twak Mamsadi' (unhealthy fleshy mass) is called as *Kshara*.

Kshara is defined as the one which mobilizes and removes the deformed body tissues. The literal meaning of the word 'Kshara', is the substance which possesses corrosive, caustic, pungent, saline and acidic properties.^[1]

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Historical Review on Kshara

Vedic and Upanishad (2000 -1500 B.C)

Even though Veda do not quote about *Kshara*, in the successive literatures like Upanishad and Puranas, description of *Kshara* is available. Ramayana considers *Kshara* in the sense of salt.^[2]

Samhita Period

Charaka Samhita (1200 B.C)^[3]

Acharya Charaka has defined *Kshara* as the one which removes the *Dosha* from its deep rooted site by its corrosive nature. He has mentioned about the types of *Kshara* based on method of preparation, as *Mrudu*, *Madhyama* and *Tikshna* as well as two varieties based on mode of application, as *Bahirparimarjana* (external use) and *Antahparimarjana* (internal use). He has also mentioned the uses of *Kshara* according to the diseases i.e. *Kamala Kshara* in *Kaphaja Raktapitta*, *Palasha Kshara* in *Raktaja Gulma*, *Aswagandha Kshara* in *Shwasa* and *Kasa*, *Bhallataka* and *Duralabhadi Kshara* in *Jalodara*.

Sushruta Samhita (1000 B.C)

Acharya Sushruta has introduced a chapter on *Kshara Karma* owing to its importance. He considered *Kshara*

as superior among *Shastra* (surgical) and *Anushastra* (para surgical) procedures, due to its properties like *Chedana* (excision), *Bhedana* (incision), *Lekhana* (scraping). He defines *Kshara* as the one which removes morbid *Doshas* from the body. He has also mentioned preparation of three varieties of *Kshara* i.e. *Mrudu*, *Madhyama* and *Tikshna* with specific indications. Acharya Dalhana, the commentator of *Sushruta Samhita*, explains the word *Ksharana* as the one which destroys the unhealthy tissues of *Twak*, *Mamsa*.^[4]

Sangraha Period (3-4th century)

Acharya Vagbhata, has mentioned general properties, *Dosha* and *Karma* of *Kshara*. He has also described the procedure for the application of *Kshara* and *Agni* i.e. '*Ksharagni Vidhi*'. He has considered *Kshara* as best among *Shastra* and *Anushastra*.^[5]

Chakradutta (11th century A.D)

Acharya Chakrapani has mentioned about the procedure of preparation of *Ksharasutra* in detail and its indications.^[6]

Sharangadhara Samhita (13th century AD)

Acharya Sharangadhara has mentioned in detail regarding the method of preparation of *Kshara* and indications of '*Pratisaraniya*' and '*PaniyaKshara*' with suitable vehicles.^[7]

Rasa Tarangini (19th century AD)

Kshara Nirman Vigyana has been described in detail.^[8]

Rasamritam (20th century AD)

Acharya Yadavaji, has described *Kshara Kalpana* along with *Lavana Kalpana* in a separate chapter. In the context of *Kshara Varga*, *Yava Kshara*, *Sarji Kshara*, and *Tankana Kshara* are described.^[9]

Synonyms of Kshara^[10]

- *Kshara*
- *Kaacha*
- *Rasa*
- *Guda*

- *Bhasma*
- *Dhurta*
- *Lavana*

Types of Kshara

Based on mode of utility^[11]

- *Pratisaraniya Kshara* - External application
- *PaniyaKshara* - Internal administration

Based on mode of preparation/ potency^[12]

- *Mrudu Kshara*
- *Madhyama Kshara*
- *Teekshna Kshara*

Properties of Kshara^[13]

- *Rasa* - *Amlavarjita Katu Pradhana Lavana Anurasa*.
- *Virya* - *Ushna*.
- *Guna* - *Tikshna, Soumya, Agneya*.
- *Varna* - *Shukla*.
- *Doshaghata* - *Tridoshaghata*.

Qualities of Kshara^[14]

SN	Qualities	S.S	A.H	C.S	R.T
1.	<i>Na Atitikshna</i> (neither too strong)	+	+	-	-
2.	<i>Na Atimrudu</i> (neither too mild)	+	+	-	-
3.	<i>Shukla</i> (whitish)	+	+	-	-
4.	<i>Shlakshna</i> (smooth)	+	+	-	-
5.	<i>Picchila</i> (slimy)	+	+	-	-
6.	<i>Abhishyandi</i> (dripping)	+	+	-	-
7.	<i>Sheegrakari</i> (spreading fast)	+	+	-	-
8.	<i>Shiva</i> (quick)	+	-	-	-

9.	<i>Sheeta</i> (cold)	-	+	-	-
10.	<i>Sukhanirvavya</i> (easily removable)	-	+	-	-
11.	<i>Tikshna, Ushna</i> (strong, hot)	-	-	+	+
12.	<i>Laghu, Ruksha</i> (light, dry)	-	-	+	-
13.	<i>Kledi</i> (unctuous)	-	-	+	-

Kshara Karma (Functions of Kshara)^[15]

- *Dahana* (produces burning)
- *Pachana* (digestive capacity)
- *Dhaarana* (opens the wound)
- *Vilayana* (liquefaction)
- *Shodhana* (purification)
- *Ropana* (healing)
- *Shoshana* (dries)
- *Mutrala* (diuretic)

Indications of Pratisaraniya Kshara

SN	Disease	S.S ^[16]	A.H ^[17]	Sh.S ^[18]
1.	<i>Kushta</i>	+	+	+
2.	<i>Kitiba</i>	+	-	+
3.	<i>Dadru</i>	+	-	+
4.	<i>Mandala</i>	+	-	+
5.	<i>Kilasa</i>	+	-	+
6.	<i>Bhagandara</i>	+	+	+
7.	<i>Arbuda</i>	+	+	+
8.	<i>Arshas</i>	+	+	+
9.	<i>Dushtavrana</i>	+	+	+
10.	<i>Nadivarna</i>	+	+	+

11.	<i>Charmakila</i>	+	-	+
12.	<i>Tilakaalaka</i>	+	-	+
13.	<i>Nyacha</i>	+	-	+
14.	<i>Vyanga</i>	+	-	+
15.	<i>Mashaka</i>	+	+	-
16.	<i>Bahya Vidradhi</i>	+	-	+
17.	<i>Krimi</i>	+	-	+
18.	<i>Visha</i>	+	-	+
19.	<i>Rohini</i>	+	-	+
20.	<i>Granthi</i>	-	+	-
21.	<i>Shwitra</i>	-	+	-

Indications of Paniya Kshara

Roga	S.S ^[19]	A.H ^[20]	Sh.S ^[21]	D.C ^[22]	R.T ^[23]
<i>Gara</i>	+	+	-	+	-
<i>Gulma</i>	+	+	+	+	+
<i>Udara</i>	+	+	-	+	-
<i>Agni Sanga</i>	+	+	-	-	-
<i>Ajirna</i>	+	-	-	+	-
<i>Arochaka</i>	+	-	-	-	-
<i>Anaaha</i>	+	-	-	+	-
<i>Sharkara</i>	+	-	+	+	-
<i>Ashmari</i>	+	+	+	+	+
<i>Abhyantara Vidradhi</i>	+	-	-	+	-
<i>Krimi</i>	+	-	+	+	+
<i>Visha</i>	+	-	-	+	-

Arshas	+	+	+	+	+
Grahani	-	-	+	-	+
Shoola	-	-	-	+	-
Pleeha	-	-	-	-	+
Mutrakrichra	-	-	-	-	+

Contra Indicators of Kshara Karma^{[25],[26]}

SN	Disease	Personal status	Site of the disease	Season
1.	Jvara	Durbala	Dhamani	Shita Kaala
2.	Atisara	Bheeru	Sandhi	Varsha Kaala
3.	Hridroga	Vrudda	Mamsa	Ushana Kaala
4.	Shiroroga	Baalaka	Tarunasthi	Durdina
5.	Pandu	Garbhini	Sira	-
6.	Sarvangashotha	Ritumati	Snayu	-
7.	Ajeerna	-	Sevani	-
8.	Aruchi	-	Vrushana	-

Assessment of the Kshara Karma Procedure^[27]

SN	Samyak Dagdha	Atidagdha	Heena Dagdha
1.	Vikaraprashamana (subsidence of disease)	Daha (burning)	Toda (pain)
2.	Laghutwa (lightness)	Murcha (fainting)	Kandu (itching)
3.	Aasraava	Pipasa	Jaadyata

	(stoppage of bleeding/ secretion)	(thirst)	(stiffness)
4.	-	Angamarda (bodyache)	Vyadhivruddhi (aggravation of disease)
5.	-	Marana (death)	-

Alkali

The word "Alkali" is derived from an Arabic word which means 'calcined ashes', referring to the original source of alkaline substance. A water extract of burned plant ashes, called potash and composed mostly of potassium carbonate, was mildly basic. After heating this substance with calcium hydroxide, a far more strongly basic substance known as caustic potash (potassium hydroxide) was produced.

Caustic potash was traditionally used in conjunction with animal fats to produce soft soaps, one of the caustic process that rendered soaps from fats in the process of saponification, known since antiquity.

Plant potash lent the name to the element potassium, which was first derived from caustic potash, and also gave potassium its chemical symbol 'K', which is ultimately derived from alkali.^[28]

The word Alkali is also defined as the solution of a base in water. Since a base is defined as a substance which yields or creates hydroxide ions when dissolved in water, an alkali is a solution of hydroxide ions and their corresponding positively charged ions.

Common Properties of an Alkali

Alkalis are aqueous solutions, bitter in taste (compared with acid solution which are described as sour), caustic (i.e. causing chemical burns), slippery to touch (due to caustic reaction dissolving the surface of the skin and finger print), and has pH more than 7.

Confusion between Base and Alkali

The terms base and alkali are very often used interchangeably but many of the substances referred to as alkalis are more correctly bases.

To clarify further, an alkali is a type of base (one which has been dissolved in water) but the un-dissolved form is not an alkali.

Frequently people often refer common bases like Calcium Carbonate or Ammonia as alkali but only when they are dissolved in water they yield Carbonate or Ammonium ions respectively and can be called as alkalis.

The below mentioned basic salts are commonly referred to as alkali salts.

- Sodium Hydroxide (Caustic soda)
- Potassium Hydroxide (Potash)
- Calcium carbonate (free lime)^[28]

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