**ABSTRACT**

Ayurveda promises, a disease free, happy and long life. Among the eight branches of Ayurveda, each branch consists of enormous knowledge from basic concepts up to critical health care strategies. *Shalya tantra* a prime branch in *Astanga Ayurveda* is the rich in many aspects of modern surgical concepts. This branch has immense potential to belt the solution of many challenging and unresolved complicated surgical ailments. *Acharya Sushruta* the pioneer in the field of surgery described four principles therapeutic types in the management of *Arshas* i.e., *Bheshaja, Kshara karma*, *Agni Karma* and *Shastra Karma*. Ayurvedic approach especially *Kshara Karma* stood for better than modern therapeutic option in terms of safety, easy, low cost, devoid of post operative complications and can be done as OPD procedure with minimal set up. *Nimba pratisaraneeya kshara* has been mentioned throughout the classical literature for *Arsha*, described as an *Upakrama* and is substitute for surgical procedure. *Nimba pratisaraneeya teekshna kshara* which is having antibacterial, antiviral and antifungal properties and is specially told by *Acharya Sushruta*. It can be successfully used in the management of *Ardra Arshas* without any post operative complications. *Pratisaraneeya kshara* is external application of *Kshara* whereas internal use of *Kshara* is known as *Paniya kshara*. Acharya Dalhana the commentator of *Sushruta* explained that the substance which produces *Shodhana* of bodily *Dosha, Dhatu, Maladi* because of its *Ksharana* action is called *Kshara*. It is known as *Kshara* (alkali) also because of its corrosive nature (*Ksharana*) *Kshara* is having benefits like *Chedana, Bhedana, Lekhana, Shodhana* and *Ropana* properties with early hemostasis and total eradication of infection, so that it reduces recurrence, helps for the wound healing and also the duration of treatment is less. Though many researchers have been carried on *Nimba* till date, this review is done to highlight the significance of *Kshara* property in *Nimba* along with its therapeutic use.

**INTRODUCTION**

*Acharya Sushruta* has included *Arshas* under *Asta Mahagadas*[^1]. *Arshas* are characterised by *Mrudu, Prasruta, Avagada* and *Uchhrut*[^2]. *Arshas* co-related with haemorrhoids are the vericities of the tributaries of the haemorrhoidal vein. At least 5% of the general population suffers from haemorrhoids and the incidence apparently increases with age. At least 50 to 60% of the people over the age of 50 have some degree of haemorrhoids[^3]. Bleeding is the cardinal sign of internal haemorrhoids, in classic it is one of the main symptoms in 1st and 2nd degree haemorrhoids[^4].

The effect of *Kshara* is praised so much that it can replace *Shastra Karma* since it does the *Chedana, Bhedana, Lekhana karma* without help of *Shastra*. *Nimba pratisaraneeya kshara*[^5] having properties like *Sheeta veerya, Tikta* and *Kashaya rasa* acts on haemorrhoids by cauterising the Pile mass, due to its...
**Teeksha Kshara guna** and coagulates protein in haemorrhoidal plexus.

The present therapeutic modalities like sclerotherapy, cryosurgery, rubber band ligation, infrared photo coagulation etc, needs high cost sophisticated instruments. Even though these are simple procedures, further they have their own disadvantages. In such conditions the alternative is *Kshara karma* procedure that gives relief and less post operative pain.

*Neem* tree (*Azadirachta Indica*) belongs to the family *Meliaceae* which is found in abundance in tropical and semitropical regions. It is indicated in *Jwara*, *Kushta*, *Krimi*, *Prameha*, *Vrana*, *Kasa*, *Chardi*, *Visha roga*, *Arsha*, *Gulma*, *Kandu*, *Netra roga* etc. The parts used from *Nimba* are root bark, stem bark, gum, fruit, flower, leaves, seeds and seed oil. *Nimba* having many synonyms like *Arista*, *Pichumanda*, *Hinguniryasa*, *Tikta*, *Satika*, *Niyamana*, *Sutika*, *Niyamana*, *Puyari*, *Chardana*, *Sukapriya*, *Neta*, *Malaka*, *Prabhadra*, *Kakaphala*, *Varatikta*, *Varatwacha*. *Nimba*[6] is available in different varieties like *Nimba* (*Azadirachta Indica*), *Maha nimba* (*Melia azadirach*), *Parvata Nimba* (*Alianthus exelsa*).

**Properties of Nimba**[7]

**Rasa Panchakas**
- *Rasa*– *Tikta*, *Kashaya*
- *Guna*– *Laghu*, *Ruksha*
- *Virya*– *Sheetha*
- *Vipaka*– *Katu*
- *Doshaghna*– *Kapha-pittahara*
- *Karma-Deepana*, *Grahi*, *Krimighna*, *Netrya*, *Madhumehaghna*.

**Indications**
- *Jwara*, *Prameha*, *Kasa*, *Chardi*, *Arsha*, *Gulma*, *Kandu*, *Netra roga*, *Krimi*, *Kushta*

**Part used**
- Root bark, stem bark, gum, fruit, flower, leaves, seeds, seed oil.

| Table 1: Therapeutic Uses of Nimba |
|-----------------------------------|
| **Part**                      | **Uses**                                      |
| Root, bark, leaf, flower, and fruit together | Blood morbidity, biliary afflictions, itching, skin ulcer, burning sensation, leprosy |
| Seed oil                       | Leprosy, intestinal worms                     |
| Seed pulp                      | Leprosy, intestinal worms                     |
| Gum                             | Effective against skin diseases like ringworms, scabies, wounds and ulcer |
| Twig                            | Relieves cough, asthma, piles, phantam tumour, intestinal worm, diabetes |
| Fruit                           | Relieves piles, intestinal worms, urinary disorder, epistaxis, phlegm, eye problem, diabetes, wounds and leprosy |
| Flower                          | Bile suppression, elimination of intestinal worms and phlegm |
| Bark                            | Analgesic, alternative and curative of fever  |
| Leaf                            | Leprosy, eye problem, epistaxis, intestinal worms, anorexia, skin ulcers |

**Matra**

*Nakhotashedha* (*sushruta*)

**Scientific classification**
- Kingdom – *Plantae*
- Order- *Sapindales*
- Family – *Maliaceae*
- Genus – *Azadirachta*
- Species – *Azadirachta Indica*

**Names in other languages**[8]
- Hindi – Nim, Nimb
- Kannada – Bevina mara, Kahihevu, Bevu
- Tamil – Vembu, Veppi
- Malayalam – Veppu, Aruveppu
- English – Margosa tree, Neem tree, Indian Lilac

**Classical Categorization**
- Charaka[9] – *Kandughna, Tikta skandha*
- Sushrutha[10] – *Aragvadhadi, Guduchyadi, Lakshadi*
- Vaghbhatha[11] – *Aragvadhadi, Guduchyadi, Lakshadi*

**Botanical Description**
Azadirachta Indica also known as Neem. It is a tree in the mahogany family Meliaceae.

Table 2: Leaf

| Kind   | Shape   | Feature                                                                 |
|--------|---------|-------------------------------------------------------------------------|
| Simple | Alternate| Leaves alternate, crowded near the end of branches, simply pinnate, 20–40cm long, light green |

Table 3: Flower

| Type          | Size | Color and composition | Stoma | More information     |
|---------------|------|-----------------------|-------|----------------------|
| Unisexual     | 1-2cm| Greenish yellow       | 5-20  | Season is June-August|

Table 4: Fruit

| Size          | Mass            | Appearance | Seeds   |
|---------------|-----------------|------------|---------|
| 7-10mm long prone | Fruit 1(max-2) seeded drape, 1-2cm long, greenish to yellow or purple when ripe | Each about half of the seeds weight | May |

Chemical Composition

It contains Nimbandoil, Immobile, Nimocinol, Quercetin and Beta-sitosterol, and two additional tetracyclic triterpenoids zafaral.

Classical Method of Preparation of Pratisaraneeya Teekshna Kshara \[^{[12]}\]

After reviewing all the classical texts, Sushrutas explanation seems to be ideal regarding the preparation of Pratisaraneeya teekshna kshara.

The physician who prepares the Kshara should have a clean bath early in the morning of Sharad ritu in auspicious day. He fasts that day and go up the hills and look for such plants which are middle aged and free from insects. The Panchangas of such plants are collected, dried up and made into small pieces. Then these are burnt with limestone. While burning the dispersed parts of the plants are kept with the help of Tilanala. When the ash cools down it should be mixed well with six times of water or cow's urine, then filtered twenty one times in a big vessel through a piece of cloth. The residual portion is thrown away and the filtrate (Ksharodaka) should be kept on Mandagni and continuously stirred well until it turns reddish brown and attain Picchilata or get reduced to 1/3rd. If this is heated till get powder form is Mrudukshara. If not then, from the Ksharodaka eight Palas has to be taken and mixed with Shankhanabhi, Shukti and Kata sharkara, each in eight Palas, to make Prativapa. In the meantime, heating should continue Prativapa should be mixed. Care should be taken that it is not too liquid or too dried up. The solution thus obtained is known as Madhyama kshara.

Madhyama kshara should be heated up again by adding some medicinal plants such as Danti, Chitraka with this thick solution is obtained which is known as Teekshna kshara. If Teekshna Kshara losses its potency then it should be mixed with new Kshara and heated again to maintain sufficient concentration.

Table 5: The Physical Characters of Well-Prepared Teekshna Kshara \[^{[13-14]}\]

| S.no | Lakshana                      | Acharya Sushruta | Acharya Vaghbhataka |
|------|-------------------------------|-----------------|---------------------|
| 1.   | Na atiteekshna (not too strong) | +               | +                   |
| 2.   | Na atimrudu (not too mild)    | +               | +                   |
| 3.   | Na atishukla (not too white)  | +               | +                   |
| 4.   | Shlakshna (thin)              | +               | +                   |
| 5.   | Pichhila (slimy)              | +               | +                   |
| 6.   | Abhishyandi (unspreading)     | +               | +                   |
| 7.   | Sheeghrakarita (quick acting) | +               | -                   |
| 8.   | Shiva                         | +               | +                   |
| 9.   | Shikari                       | -               | +                   |
| 10.  | Sukha nirvapya                | -               | +                   |
| 11.  | Alparaktatha                  | -               | +                   |

Table 6: The Physical Properties of Improperly Prepared Kshara \[^{[15-16]}\]

| S.no | Lakshana                  | Acharya Sushruta | Acharya Vaghbhataka |
|------|---------------------------|-----------------|---------------------|
| 1.   | Atimrudu (too mild)       | +               | +                   |
| 2.   | Atiushnata (too hot)      | +               | +                   |
Probable mode of action of Pratisaraneeya kshara

|   |   |
|---|---|
| 1. | It coagulates protein in Haemorrhoidal plexus. |
| 2. | It cauterizes pile mass directly because of its Ksharana guna (corrosive nature). |
| 3. | It coagulates protein in Haemorrhoidal plexus. |
| 4. | It decreases size of pile mass. |
| 5. | Necrosis of tissue with obliteration of Haemorrhoidal radicles. |
| 6. | Necrosed tissue sloughed out 7-8 days. |
| 7. | Fibrosis and scar formation. |
| 8. | Obliteration of haemorrhoidal Vein. |
| 9. | Complete wound healing (30 days). |

**DISCUSSION**

*Kshara karma* that is application of *Pratisaraneeya teekshna kshara* is a non-surgical procedure of Ayurveda indicated for the management of haemorrhoids. The details of preparation of the herbal combination are mentioned in *Sushruta Samhita* and *Astanga Hrudaya*. The superiority of *Kshara* over *Sastras* and *Anushastras* has been mentioned in *Sushruta Samhita*.

As a result of breaking of pus pockets of unhealthy tissue, pus discharge gets reduces. If pus discharge continues to occur *Krimighna* property of *Nimba* is helpful to cure it. The itching is controls by *Kandughna* property of *Nimba* and burning sensation gets reduces by *Sheeta Virya* quality of *Nimba*. Pus discharge disappeared by quality of *Vrana Shodhana* in *Nimba*.

Probable mode of action of Pratisaraneeya teekshna kshara;

*Pratisaraneeya teekshna kshara* acts on haemorrhoids in 2 ways,
effective, very good haemostatic and successful treatment of internal haemorrhoids with less recurrence. Kshara is Pradhanatama among Shastras and Anushastras. Arshas are found from ancient era, many research works shows it is very effective in obliterating the haemorrhoidal mass within 21 days of application. This study shows that a combination of Kshara karma, Shamamoushadhis and Pathya ahara-vihara helps in the management of Ardra arshas.

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