



Review Article

NIMBA (AZADIRACHTA INDICA) PRATISARANEYYA TEEKSHNA KSHARA: A COMPREHENSIVE REVIEW

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Article info

Article History:

Received: 01-10-2021

Revised: 15-10-2021

Accepted: 02-11-2021

KEYWORDS:

Arshas, Haemorrhoids, Pratisaraneeya teekshna kshara.

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 vericosities 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

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<https://doi.org/10.47070/ijapr.v9i11.2176>

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Teekshna Kshara guna and coagulates protein in haemorrhoidal plexus.

The present therapeutic modalities like sclerotherapy, cryosurgery, rubber band ligation, infra red 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, Sutika, Niyamana, Puyari, Chardana, Sukapriya, Neta, Malaka, Prabhadrā, Kakaphala, Varatikta,*

Varatwacha. Nimba^[6] is available in different varieties like *Nimba (Azadirachta Indica), Maha nimba (Melia azadirach), Parvata Nimba (Alanthus 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, Madhumeahghna.*

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*

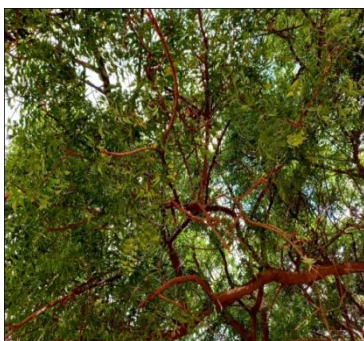
Names in Other Languages^[8]

- Hindi - Nim, Nimb
- Kannada - Bevina mara, Kahibevu, Bevu
- Tamil - Vembu, Veppi
- Malayalam - Veppu, Aruveppu
- English - Margosa tree, Neem tree, Indian Lilac

Classical Categorization

- Charaka^[9] – *Kandughna, Tikta skandha*
- Sushruta^[10] – *Aragvadhadi, Guduchyadi, Lakshadi*
- Vaghbata^[11] – *Aragvadhadi, Guduchyadi, Lakshadi*

Botanical Description



Azadirachta Indica also known as *Nem*. 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 ripens	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 goes up the hills and looks 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]

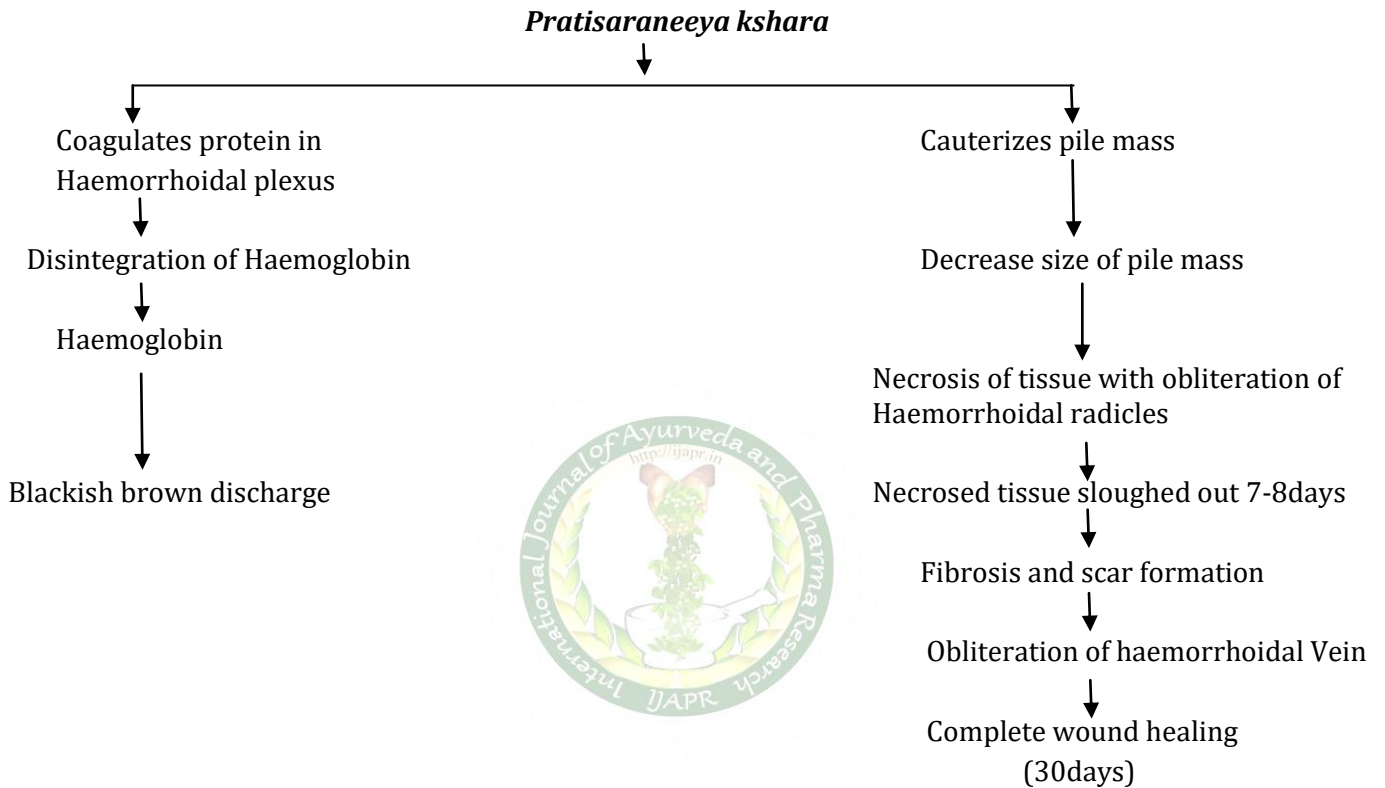
S.no	Lakshana	Acharya Sushruta	Acharya Vaghhbata
1.	<i>Na atiteekshna</i> (not too strong)	+	+
2.	<i>Na atimrudu</i> (not too mild)	+	+
3.	<i>Na atishukla</i> (not too white)	+	+
4.	<i>Shlakshna</i> (thin)	+	+
5.	<i>Pichhila</i> (slimy)	+	+
6.	<i>Abhishyandi</i> (unspreading)	+	+
7.	<i>Sheeghrakarita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

Table 6: The Physical Properties of Improperly Prepared *Kshara* [15-16]

S.no	Lakshana	Acharya Sushruta	Acharya Vaghhbata
1.	<i>Atimrudu</i> (too mild)	+	+
2.	<i>Atiushnata</i> (too hot)	+	+

3.	<i>Atishwetha</i> (too white)	+	+
4.	<i>Atiteekshna</i> (too sharp)	+	+
5.	<i>Atipichhila</i> (too Slimy)	+	+
6.	<i>Ativisarpita</i> (too spreading)	+	+
7.	<i>Atisandrata</i> (too thick)	+	+
8.	<i>Apakwata</i> (uncooked)	+	+
9.	<i>Heenadravyata</i> (with less potency)	+	+
10.	<i>Atitanu</i> (too thin)	-	+

Probable mode of action of *Pratisaraneeya kshara*



DISCUSSION

Kshara karma 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,

1. It cauterizes the pile mass directly because of its *Ksharana guna* (corrosive nature)
2. It coagulates protein in Haemorrhoidal plexus.

CONCLUSION

In Ayurveda, *Nimba* plays a very important role as a medicine and it plays a very good role in the treatment of ailments and maintaining the health by its anti-inflammatory, anti-arthritic, anti-microbial, Anti-fungal, anti-bacterial, anti-fertility, immunostimulant activity and exhibits systemic effects also. Ayurveda understands *Arshas* as a local manifestation of systemic derangement of *Doshas* and *Agni*. Therefore almost all the Ayurvedic text books have devoted separate chapter on treatment of the *Arshas* mostly with the help of different approaches especially para medical procedure like *Kshara karma*. *Nimba* is having properties like *Sheeta Virya*, *Tikta* and *Katu rasa*. It is having functions like *Chedana*, *Bhedana* and *Lekhana* can be useful in the management of *Ardra arshas*. *Nimba Pratisaraneeya Teekshna Kshara* is safe, cost

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*, *Shamanoushadhis* and *Pathya ahara-vihara* helps in the management of *Ardra arshas*.

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Cite this article as:

Manjunath.C.M, M.N.Hiremath, Raghuv eer. Nimba (Azadirachta Indica) Pratisaraneeeya Teekshna Kshara: A Comprehensive Review. International Journal of Ayurveda and Pharma Research. 2021;9(11):83-87.
<https://doi.org/10.47070/ijapr.v9i11.2176>

Source of support: Nil, Conflict of interest: None Declared

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