

THE EFFECT OF NIMBA KSHAR IN MANAGEMENT OF DUSHTA VRANA

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<https://doi.org/10.46607/iamj12p6052022>

(Published Online: July 2022)

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Article Received: 04/07/2022 - Peer Reviewed: 22/07/2022 - Accepted for Publication: 26/07/2022



ABSTRACT

The science of *Ayurveda* is one of the most promising branches of the health care system. *Sushruta Samhita* is the pioneer textbook of ancient Indian surgery, which is also known as *Vrana Pradhana Tantra*¹ (Textbook of traumatology). According to *Acharya Sushruta* *Vrana* is a condition that causes a break in the continuity of epithelium, consumes the tissue, and exposes the underlining structures resulting in a lifelong scar of the affected part even after healing. The medicinal value of *Neem* (*Azadirachta indica* *Juss*) was reported in *Arthashastra* of *Kautilya* as early as in the 4th century B.C. *Kshara* i.e caustic alkali is considered superior among *shastra* and *Anushastra* because it does the functions like excision, cutting, and scraping. It also mitigates all the *Tridosh*. Therefore, a clinical study on the efficacy of *Nimba kshar* in the management of *Dushta Vrana* is an approach to re-evaluate an effective and minimally invasive *Ayurvedic* dressing material. It also helps in the improvement of floor and granulation tissue formation.

Key words: *Dushta Vrana*, Wound, *Nimba kshar*

INTRODUCTION

Ayurveda the indigenous system of medicine is an integral part of Indian culture. The ancient *acharyas* from centuries had used polyherbal and herbo- miner-

al formulations for the prevention and treatment of various ailments. In the present era, there is noted insurgence demand among the consumers because of

a holistic approach. *Dushta vrana* (chronic ulcer) is a common condition that we see in current surgical practice, which is raising problems and challenges for practicing surgeons, "*Kshara*" means any substance possessing the property of destroying or hurting body tissue and pacifying the lesion. It is of two kinds *Paneeeya Kshara* (internal administration) and *Pratisaraniya Kshara* (for external application)². *Acharya Sushruta*, in the chapter *Dwivraneeya chikitsa*, explains *kshara karma* as one of the *Shasti upakrama* (sixty procedures for the management of ulcers) and describes that *kshara* is applied in the condition of chronic ulcers other way known as *Pratisarneeya kshara* with symptoms like indurations, and itching, which is hard to clean and have raised hypertrophied granulation tissue³ hence, these features are very much similar to *Dusta vrana*. *Acharya Sushruta* described the definite process in order to access the best clinical result by adopting specifically processed *kshara*. *Neem* is one of the drugs which give *Kshara* in sufficient quantity. At present time it has been found in studies that *neem* has a beneficial effect on wound healing in experiment models. A systematic scientific study on the action of such drugs in Wound Bed Preparation enhancing the formation of granulation tissue, effect on epithelization, and wound contraction based on research is needed in the present era. Considering these facts, the present work "Role of *nimba Kshara* in the Management of *Dusta Vrana* "initiated to explore the new Ayurvedic procedures on local administration in infected/ chronic nonhealing wounds.

AIM AND OBJECTIVE

AIM- To Study the effect of *Nimba Kshar* in the management of *Dushta Vrana*. OBJECTIVE-

1. To study the efficacy of *Nimba Kshar* in *Dushta Vrana*.
2. To study the adverse effect of *Nimba Kshar* in *Dushta Vrana*
3. To check *Nimba* has Desloughing action in *Dushta Vrana*.
4. To study the ayurvedic aspect of *Dushta Vrana*

NEED TO STUDY

In Ayurveda, *Vrana* (wound) has been stated as tissue destruction and discoloration of viable tissue due to various etiology. In *Sushruta Samhita*, *Sushruta* described *Vrana* as the main subject. Much clinical research is carried out in the management of *Dusta vrana*. *Kshara* (caustics alkali) is deemed among the instruments because of specific properties like *chedana*, *bhedana* (incision), *lekhana* (scraping), and the ability to alleviate vitiated three *doshas*. Among the various drugs mentioned for *Dushta Vrana*, one of them is *Neem* (*Azadirachta indica* A. Juss). Hence there is a need to study the effect of *kshara karma* along with *nimba patra* in the management of *dushta vrana*.

MATERIAL AND METHODOLOGY

Information sources and Searches-

A search was conducted for various herbal drugs like *neem* and their effect on *dushta vrana*. The search strategy used the keywords "dushta vrana", wound", "Nimba kshar". Informative sources were identified from Google scholar, Pub Med, WHO including additional manual research. Based on quality evaluations, the content was summarized and assessed. For Each research paper, we extracted the following information: Title of the guideline, author, development institute, example social organization, year of publication, guideline type, methodological quality, and relevant recommendation.

LITERATURE REVIEW

Ayurveda, the Indian traditional system of medicine, is based on empirical knowledge of observations and experiences over millennia. More than 1200 diseases are mentioned in different classical Ayurvedic texts. Management in various forms of these diseases is made with more than 1000 medicinal plants (89.93%); 58 minerals, metals, or ores (5.24%); and 54 animal and marine products (4.86%). Healing of wounds is one of the important areas of clinical medicines explained in many Ayurvedic texts under the heading "Vranaropaka" (wound healing agent). One among them is *Nimba*. *Kshara* application is a unique para-surgical procedure among them and it works as a potent debriding agent that enhances the formation of healthy granulation tissue and proper healing. *Neem*

is one of the medicinal plants for the preparation of *Kshara* mentioned in the classics. The advantage of *kshar karma* is that it has less rate of recurrence, is cost-effective, is less painful has fewer chances of bleeding, anal incontinence, and requires minimal hospitalization during treatment. Kshara is a caustic, alkaline in nature obtained from the ashes of medicinal plants. It is a milder procedure compared to surgery and thermal cautery. It is superior most among the sharp and subsidiary instruments because of performing excision, incision, and scraping. It is versatile because even such places that are difficult to approach by ordinary measures can be treated by Kshara Karma. Kshara Karma is useful as a substitute for surgical instruments because they can be used safely on patients who are afraid of surgery.

Classification of *kshar*

- Pratisarneeya Kshar* – External application
- Paneeeya Kshar* - Internal administration

The standard method of preparation of *kshar*

The drug is cut into small pieces and dried well. The pieces are put in an earthen pot and burnt into ash. First, a few pieces are put on fire and ignited. As they burn more and more pieces are added, when all the pieces are burnt and converted to ash then leave it for self-cooling. Water is added to the ash in the ratio of 6:1 and mixed well. This is then filtered through a piece of cloth. This process of filtration may be done two to three times till a clear liquid is obtained. This liquid is then put in an earthen or iron vessel and heated over a moderate fire till the water evaporates, leaving a solid salty white substance which is collected.

Pharmacological action of *Nimba Kshar*:

Nimba kshar is having *Tridosh Nashana*, *Chhedana* (excision), *Bhedana*⁴(cutting), *Pachana*(ripening) *Vilayana* (liquification), *Shoshana* (fluids absorbing), *Lekhana* (scraping), *Krimi Nashana* (antimicrobial), *Shodhana* (purification) and *Ropana*⁵ (healing) properties. *Kshar* also has *Ksharana*⁶ (destroying) quality.

Table 1: Pharmacokinetics of *nimba*

Contents	Latin name and Family	Guna	Rasa	Vipaka	Veerya	Doshagnata	Rogagnata	Karma
<i>Neem</i>	<i>Azadiracta indica</i> Meliaceae	<i>Laghu</i>	<i>Tikta kashaya</i>	<i>Katu</i>	<i>Sheeta</i>	<i>Tridosh shamak</i>	<i>Vrana Naadivrana Twakdosha Grahani Krimi, kushtha Shotha, madhumeha kandu.</i>	<i>Vrana Pachan Vranashodhan Shothagna Jantughna Vednasthapan Raktsohdhak Kaphaghna Amapachana Pootihara Stan-yajanana</i>

VRANA

Vrana is characterized by the splitting or tearing of body Tissues⁷. *Vrana* is probably the first surgical problem faced ever since the origin of the human being. Healing of *Vrana* is a natural process but the various condition may convert it into *Dushta Vrana* (non-healing ulcer)

Management of *Dushta Vrana*:

In modern surgical practice, *Dushta vrana* is managed by debridement, antiseptic solutions, administration of antibiotics (in superimposed infection), analgesics, and anti-inflammatory drugs. Wound dressing is done with foam, hydrogels, hydrocolloids, silver, iodine, etc. Skin grafting is also indicated when the wound is deep and large in size. Although this standard treatment is used successfully in the management

of wounds, it is having few drawbacks e.g., surgical excision of dead and devitalized tissues may lead to injury of healthy tissues. Local irritation and sensitivity may occur after the application of antiseptic solutions. Repeated and improper use of antibiotics may lead to drug resistance. Side effects of antibiotics, analgesics may worsen the condition. To achieve good approximation, early healing, and acceptable scar without complications Acharya Sushruta has elaborately explained sixty types of procedures (Shashtiupakrama). Shashtiupakrama not only treats the wound (Shudhha as well as Dushta) but also prevents the conversion of Shudhha Vrana into Dushta Vrana. Shashtiupakrama includes medical treatment (Aptarpana, Alepa, etc.), surgical treatment (Chhedana, Bhedana, etc.), external Shodhana (Kashaya, etc.) internal Shodhana (Vaman, Basti, etc.) Vaikratakapham (Utsadan, Avsadan etc.) He also mentioned the use of Kshar among these Shashtiupakrama.

Use of Nimba kshar on dushta vrana:

Acharya Sushruta clearly indicated the use of Pratisaraniya Kshara in DushtaVrana⁸. The wound which are having features like elevated muscular growth, hard, itching, chronic, and difficult to clean (purify) should be treated with Kshara⁹.

DISCUSSION

Although healing of a wound is a natural process, yet it is inhibited by various factors and leads to Dushtavrana. Acharya Sushruta has clearly mentioned that a wound in a person who is not disciplined or treated by ignored surgeon led to the vitiation of Doshas and produces complications like Dushta Vrana. Dushta Vrana requires specific treatments like Shodhana, Chhedana, Bhedana, Ropana, balancing of vitiated Doshas, etc. for its healing. All these qualities are present in Pratisaraniya Kshara along with neem. It balances vitiated Doshas due to its Tridosh Nashak properties as it is made up of a combination of many drugs. Chhedana and Bhedana properties are due to Prabhava. Since it is predominantly made up of Agneya (firy nature) drugs, so causes Pachana, Vilayana, Shoshana, Lekhana, Krimi Nashana, Shodhana,

and Ropana of DushtaVrana¹⁰ Kshara has a significant role in wound healing, after kshara karma there was fast epithelization, increase collagen deposition and hydroxyproline in granulation tissue, increase the tensile strength of wound, hence there was reduced exudates of the wound and decreased edema and kshara reduces excessive exudates, necrotic tissues, local discharge and facilitates granulation tissue formation which is necessary for wound healing. Neem possesses properties like kashaya, Tikta ras, Laghu guna, and Katu vipaka hence acts as wound debridement and it's known for antioxidant properties and antimicrobial activitie¹¹. All these properties of the drug and formulation help in the faster healing of wounds. But its application appears to be most effective in a prepared wound bed, which essentially is provided by debridement. Hence, it can be said that Kshar is a very effective deriding agent as there was a significant reduction in discharge and slough tissue of wound which was observed during a clinical study. Healing after debridement by neem Pratisarneeya kshara karma can also be seen by a significant reduction in surface area and faster unit healing time of the wound.

CONCLUSION

Dushta Vrana is one of the common surgical problems in the present era. Dushta Vrana causes high mortality or morbidity if not healed. In modern practice, Dushta Vrana is managed by various methods but many times they fail. In Ayurveda, treatment methods like oral, topical drugs, etc. are used to effectively treat Dushta Vrana. Pratisarniya Kshara is one of such drugs described by Acharya Sushruta. Pratisaraniya Kshara made up of nimba is having properties like Tridoshnashana, Chhedana, Bhedana, Pachana, Vilyana, Shoshana, Lekhana, Kriminashana, Shodhana, and Ropana which cures Dushta Vrana Hence it can be used as an alternative medicine for dushta vrana

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: Ankit Mishra & Amit Paliwal: The Effect of Nimba Kshar in Management of Dushta Vrana.. International Ayurvedic Medical Journal {online} 2022 {cited July 2022} Available from: http://www.iamj.in/posts/images/upload/3602_3606.pdf