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#### ROLE OF KSHARA PICHU AND LEECH THERAPY IN CHRONIC NON HEALING WOUND

#### ANIL KR. TRIPATHI\*, S. J. GUPTA\*\* AND S.C. VARSHNEY\*\*\*

#### Declaration

The Declaration of the authors for publication of Research Paper in The Indian Journal of Research Anvikshiki ISSN 0973-9777 Bi-monthly International Journal of all Research: We, *Anil Kr. Tripathi, S. J. Gupta and S.C. Varshney* the authors of the research paper entitled ROLE OF KSHARA PICHU AND LEECH THERAPY IN CHRONIC NON HEALING WOUND declare that, We take the responsibility of the content and material of our paper as We ourself have written it and also have read the manuscript of our paper carefully. Also, We hereby give our consent to publish our paper in Anvikshiki journal, This research paper is our original work and no part of it or it's similar version is published or has been sent for publication anywhere else.We authorise the Editorial Board of the Journal to modify and edit the manuscript. We also give our consent to the Editor of Anvikshiki Journal to own the copyright of our research paper.

#### Abstract

Wound is a very common problem since early civilisation. Whole surgical practice encountered with term wound every day. Nature provides all the capability to human being for wound healing. There are certain conditions where the normal wound converted in to non healing wound which needs immense care. Infected slough and compromised blood supply are big task to tackle before wound healing. There are many methods to encountered slough i.e. chemical debridement and surgical debridement. In Ayurveda debridement procedure is elaborated under heading of Vrana Shodhana. Kshara is a chemical extracted from different plant's ash. According to Ayurveda Kshara has great power of Vrana Shodhana. Kshara Pichu is a medicated gauze piece soaked with Kshara. Jalauka (leech) is a biomedical device for blood letting. Blood letting by leeches certainly improve blood supply to affected area. Present paper is an experience of combined therapy by Kshara pichu and leech therapy in wound management.

Keywords : Wound, Slough, Debridement, Vrana Shodhana, Kshara Pichu, Leech therapy.

#### Introduction

Man, the superior most of all the species is always remaining in search of One Prime Goal: The perfect health. From Vedic era to this age, all the researches have been directed by the eminent scholars to achieve the same. Wounds have always a big challenge to the medical profession. Normally wounds are healed by primary or secondary intention but some wound are refuse to heal and turns to chronic non healing wounds. Chronic non-healing wounds are still a major health problem encroached every status of society. They create a huge financial burden to health care system. It needs specialized treatment, care and extra attention.

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In *Ayurvedic* text, *Sushruta* & other authors discussed the wound in clear and systematic manner under the heading of *Vrana*. There are detail description of concept of wound, classification, sign & symptoms, complications and the management of the wound (*Vrana*).

Acharyas have classified the Vrana as Nija and Agantuja. In Nija variety they have include all those causes where the systemic involvement of the body found. Where as in Agantuja variety, they have explained about Vrana caused by the external factors mainly by trauma. Acharyas also explains that in due course of time Agantuja Vrana turn to Nija variety. Beside these two gross divisions of Vrana, there is another variety of Vrana which takes special attention of our Acharyas –that is Dusta Vrana (chronic non healing wound).

In management of *Vrana, Acharya Sushruta* has explained *Shasti-Upakrama*, the sixty types of wound management. *Vrana Shodhana* (wound bed preparation) and *Vrana Ropana* (wound healing) are the two main steps of wound management. *Vrana Shodhana* can be achieved by different methods in *Shashti-Upkrama*. *Kshar karma* and *Jalaukawacharana* (leech application) has strong *Shodhana* and *Lekhana* property so it could be a better option for *Vrana Shodhana*. The main aim of *Vrana Shodhana* is to removing the dead tissue, keeping the wound bed free from unwanted and harmful material thus minimise the reactionary inflammation.

The present study intended to explore the new *Ayurvedic* procedures on local administration in chronic non healing wound. Considering the alarming growth of the cases of wound in day to day practice- there is a need of new modalities of wound management especially in the field of Ayurveda.

#### Material and methods

- 1. Selection of Patients : In present study patients of chronic non healing wound will be selected from the OPD & IPD of Department of Shalya Tantra IMS, BHU, after detail clinical history and examinations. After assessment of the wound, necessary initial debridement will be done adopting any of Shasti-Upakrama. Then Palash Kshar Pichu and leech application used for Vrana Shodhana agent.
- *Inclusion criteria* Patients with the history of chronic non healing wound which are moderately to heavily infect and either diabetic or non diabetic but infected, regardless of sex, age or chronicity will be included in the study.

#### Exclusion criteria :

- 1. Anemic patient (Hb < 9 gm%)
- 2. Bleeding disorder
- 3. Malnourish patient
- 4. Malignancy
- 5. Patient in septicemia
- 6. Patient in ARF
- 7. HIV positive Patient
- 2. *Preparation of Kshar*: The all part of dried *Palash* (Butea monosperma) was burnt totally with limestone. The ash part of plant was collected and mixed with water in 1:6 ratios. The mixture was filtered through filter paper for 21 times in a big vessel. Then filtrate was kept on fire at moderate temperature with continuous stirring. After complete evaporation of water whitish dry powder obtained, this is called *Kshar*.
- 3. Preparation of Kshar Pichu : First of all single layer gauze piece mount over spherical hanger.15 layer coating of alcoholic *guggulu* (Comifera mukul) solution and dried after each coating after that 4 layer coating of *Palash Kshar* and 3 layer coating of turmeric powder done and dried after each

coating. After drying the *pichu*, cutted in pieces according to need and packed the *pichu* in humid less packing.

- 4. Application of Kshar Pichu : After culture and sensitivity of the discharge of the Dusta vrana (Chronic non healing wound), the Kshar pichu was used for cleaning of the wound and applied over wound. The dressing was changed daily. Culture of the wound was taken in subsequent stages to assess the bacteriological status of the wound. Surgical debridement was also done in cases of excessive and extensive sloughing and necrosis was present to remove the dead necrosed tissues followed by daily application of trial drug.
- 5. Leech Application : first of all leeches purified by putting in the solution of turmeric powder and normal water for some time (till leeches move here and there- Vigataklama), then rinsed by normal water. Before the application of leech diseased area should be prepared by scrubbing with fresh gauze piece soaked with normal water. Leech should be held with a dry gauge piece. First try to stabilize it with it's posterior sucker then attach it's mouth on target spot. If it does not bite, a few drops of milk, ghee, butter or fresh blood should be poured at that site. If then also it does not bite, perform Pracchana Karma or take a prick with a sterile needle. After knowing that it has started to suck the blood it should be covered with wet gauge except the mouth and the gauge should be kept wet by continuously pouring water on it. When the patient complains of *pricking pain* and *itching* at the site of bite, leech should be removed from the site. Generally leech leaves the site by itself but if it does not, then apply some honey or powder of Saindhava salt at its mouth. When leech fallen away, its body should be massaged by rice and mouth should be bathed with common salt added oil. Its tail should be held by left hand in between thumb and index finger. Then squeeze the leech by opposite hand slowly and gently. Put the leech in storage pot and don't reuse same leech before 7days. If blood-letting is proper – clean the bite site with cold water, apply Shatdhaut ghrita and honey locally.
- 6. Criteria of assessment :
- Linear measurement Length, Width, Depth, Area
- Slough material
- Wound margin
- Granulation tissue
- Unit healing time (UHT) Unit healing time was calculated from the total number of days during treatment divided by initial area last area of wound in sq. cm. so it can be represented as

#### Observation and result

Early observation of this study reveals very enthusiastic results. First of all *Kshar pichu* & leech application is easy to apply over the wound because of its firm shape. Linear management of chronic non healing wound reveals that these wounds are irregular in shape; margins are punched out, whitish or yellowish and rich of tough fibrous tissue, wound floor is rich of slough tissue and discharge. After *Khsar pichu* & leech application margin became soft, sloping type and surrounding become contracting which is good indication of healing ulcer. Slough of non healing wound is cleaned effectively and rapidly. Discharge is also gradually become a smaller amount and less offensive. After few application of *Kshar pichu* & leech floor of wound become full of granulation tissue and become reddish in colour. In this way wound bed prepared very fast and ultimately prepared for spontaneous healing.

#### Discussion

In Ayurveda chronic non healing wound is described under the heading of *Dusta Vrana*. There are many modalities to tackle *Dusta Vrana*. *Kshar Karma* is one of them. *Kshar* has immense power of *Vrana Shodhana* and *Lekhana* (debridment). A normal wound healed spontaneously providing it should be clean. In modern term wound bed should be organized. *Kshar* has all the properties to a high-quality wound bed preparation, these are- *Lekhana*- debridement, *Shodhana*- cleaning, *Vilayana*- resolution and *Shoshana*- absorption of discharge and necrotic material. *Kshar* is obtained from ash of many plants in powder form. *Kshar* application over a large wound is quite difficult and uneven. A definite shape of this particular drug is needed. *Kshar pichu* has this quality along with homogeneous distribution of *Kshar. Kshar pichu* has also quality of sustain release of drug because of its binding agent and multiple coating. Direct application of *Kshar* is very painful but *Kshar pichu* is not much painful - by avoiding direct exposure to body tissue because last few coating was done by turmeric powder which is less irritant. Leech application is also easy to apply and less invasive and painful. Leech debride slough by bioactive alkaloid present in saliva. Leech application also improve local blood supply and help in wound bed preparation.

#### Conclusion

By present study we can conclude that :

- Dusta Vrana (Chronic non healing wound) required great attention to cure.
- Kshar and leech has all the property of Vrana Shodhana.
- *Kshar pichu* is an excellent form of *Kshar* application.
- Leech application is also easy to apply and improve local blood supply.
- With the help of *Kshar pichu* and leech application we can achieve a good quality of wound bed preparation.

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