



Clinical study of Hamsapadi (*Adiantum lunulatum*) Patra kalka aalepa in the management of Dushta Vrana

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Abstract:

Dushta Vrana is long standing ulcer with profuse discharge and slough, where removing the debris and enabling drug to reach the healthy tissue is more important. *Hamsapadi* is advised by *Nighantukaras* in the treatment of Wound. The same is been followed by folklore practitioners for the management of wounds. The study is taken to evaluate the therapeutic efficacy of the drug *Hamsapadi patra kalka alepa* in the management of *Dushta Vrana vis a vis* Non Healing Ulcer.

Subjective parameter like pain, itching, burning sensation and Objective parameter like size of wound, Discharge, tenderness, smell and granulation tissue and floor, length, depth and width were observed in Control and Trial groups. Above all

criteria were statistically significant in trial group except itching, discharge and smell. The leaves of *Hamsapadi (Adiantum lunulatum)* in the form of Paste for the management of the *Dushta Vrana* showed Statistical significant results.

Keyword: *Hamsapadi, Adiantum lunulatum, Dushtavrana, Non healing Ulcers, Aalepa*

Introduction:
Vrana-

“The destruction / break / rupture / discontinuity of body tissue / part of body, is called as *Vrana*.”^[1]

When an individual develops an open wound, nature attempts to cover the wound to prevent infection by the growth and migration of epithelial cells. Unfortunately, there is also a limit as to how far cells can

migrate; some wounds are not able to heal naturally.

Present time is evident of the fact that the medical management has becoming very expensive. Most of the drugs are having side effects. Non healing ulcers are not exception for the same. This is the reason for the need of safe and cost effective management, so that most of the patients gets benefited. In this regard a fern *Adiantum lunulatum*, a freely and abundantly available drug has been selected for the study to explore the effectiveness in non healing ulcers.

Almost all the *Acharyas* have classified *Vrana* into two categories i.e. *Nija* and *Aagantuja* depending upon the causative factors^[2]

Dushta is one in which there is localization of *Doshas* or *Dushta* means getting vitiated by *Doshas*. *Vrana* which smells badly (foul odour) has abnormal color with profuse discharge, intense pain and takes long period to heal is said to be *Dushta*. The features of *Dushta Vrana* will vary according to the predominant *Dosha* present in it.^[3]

Dushta Vrana is such long standing ulcer with profuse discharge and slough, where removing the debris and enabling drug to reach the healthy tissue is more important. *Sushruta* has used various techniques to achieve wound healing. For the *Shodhana* and *Ropana* of *Vrana* both local and oral treatments are explained by *Acharya Sushruta*.

Wounds which are covered with foul smelling muscles and which have great aggravation of *Doshas*, should be cleansed by placing paste of cleansing drugs^[4]

If proper treatment is not done *saadhya vrana* becomes *yaapya*, *yaapya* becomes *asaadhya* and *asaadhya* may kill the person^[5]

Lepa –

The one which is used for anointing is *Lepa*^[6]

According to *Dravaguna Vijnana* by *Acharya Yadavji Trikamji*, medicines intended for external application are termed as *Lepa*^[7]

Types of Lepa:

Following are types of *Lepa* according to *Acharya Sushruta*^[8]

1. **Pralepa:** - *Lepa* which is and applied thin, cold and made endued with absorbing or non-absorbing property.
2. **Pradeha:** - It is thick or thin, warm or cold, acts as non-absorbent.
3. **Alepa:** - Midway between *Pralepa* and *Pradeha* is *Alepa*.

Alepa normalizes *Rakta* and *Pitta* while *Pradeha* pacifies *Vata* and *Kapha*, cleanses, heals and alleviates inflammatory swellings and pain. It is used in both open and closed wounds; that which is used in open wound is known as '*Kalka*' or '*Nirudhaalepana*'. It checks the discharges, softens, eliminates sloughing flesh, removes inside pus and cleans wound. *Dalhana* commenting on this opines that it can also be called as '*Nirodhaalepana*'

General Method of preparation of Lepa:

As the drugs are available in two states, i.e. wet and dry, *Lepa* can be prepared in two ways, with or without liquid. The wet drug or drugs specified are to be pounded or grinded in *Khalwa Yantra*, to get a

homogenous, soft paste like consistency and applied as specified. In case of dry drugs the drug/s will be taken and powdered in *Khalwa yantra* to a fine state and filtered through cloth. A suitable liquid medium mentioned in the preparation or useful to break *Samprapti* of the disease will be added and mixed well to get soft paste. Water, Ghee, Oil, Cow urine, *Kashaya*, *Swarasa* etc are some of the liquid media for mixing.

While explaining the efficacy of *Lepa*, it is mentioned that by pouring water over a burning house, how the fire gets extinguished, in the same manner by application of *Lepa*, provoked *Doshas* of *Vrana* will get subsided. Even after the interior of the body is cleansed by *Pancha Karma* therapies, the residual *Doshas* remain in the exterior of the body, i.e. in the skin and muscle tissue or in the beginning only *Doshas* are seated in small quantity, to remove this morbidity of *Doshas*, external therapies should be administered.^[9]

Hamsapadi-

Hamsapadi is a fern traditionally been used for various disorders since long time. It is been advised by *Nighantukaras* in the treatment of Wound. From *Shodhal Nighantu* it is evident that the *Kalka*, *Kashaya* or *Taila* are beneficial in *Pootigandha*, *Vrana*, *Nadivrana* etc. ^[10] *Bhavprakash nighantu*, *Kaiyyadev nighantu*, *Madanpalnighantu* also states the use of *Hamsapadi* in *Vrana*. The same is been followed by folklore practitioners for the management of wounds. In the modern times it has become an essential to work out the rationality of its use in Modern terms.

Aims_and_Objects:

The study was carried out to evaluate the therapeutic efficacy of *Hamsapadi* (*Adiantum lunulatum*) *patra kalka aalepa* in the management of *Dushtavrana* (Non healing Ulcers)

Materials_and_Methods

Detailed information regarding drug *Hamsapadi* and its drug source *Adiantum lunulatum*, *Dushta Vrana* and Nonhealing Ulcer is collected from various Ayurvedic texts and Modern literature. Various considerations regarding *Lepa* is collected from Ayurvedic *samhita*.

Patients suffering from *Dushta Vrana* in the age group of 20 – 70 were selected. Number of patients were 20. Two groups were made for the study as Control group and Trial group.

Inclusion criteria:

- Patients aged between 20 -70 years.
- Either of sexes.
- Patients suffering from *Dushta Vrana*

Exclusion criteria:

- Tuberculous Ulcers.
- Ulcers with gangrenous changes.
- Malignant Ulcers.
- Pregnant Women.

Intervention-

Control group:

The dressing was done with Hydrogen Peroxide and Normal saline for cleaning the wound and dressed the wound with dry, sterile gauze.

Trial group:

The *Kalka* of leaves was made by adding water as per requirement (so as to make it semisolid) which was boiled and cooled to maintain Aseptic precautions. The *Khalwa Yantra* used after boiling it for 10

minutes. The dressing was done by Hydrogen Peroxide and Normal saline to clean the wound. The *Kalka* was applied afterwards on whole wound of 0.5cm thickness and kept for about 2 hours without bandaging. Then *Kalka* was removed and dressed the wound with dry, sterile gauze. The time period for the observation of the study was 14 days. All patients were continued their oral treatment in both groups as per the diagnosis of disease.

Observation:

Parameters were observed on the grading as follows:

Subjective parameters:

(1) Pain

0-No pain.

1-Mild (localized feeling of pain during movement but tolerable).

2-Moderate (localized feeling of pain not disturbing sleep).

3-Severe (continuous localized feeling of pain which disturbs sleep).

(2) Itching

0-No itching.

1-Mild (slight localized itching sensation).

2-Moderate (moderate localized itching sensation with out sleep disturbance).

3-Severe (continuous localized itching which disturbs sleep).

(3) Burning sensation

0- No burning sensation.

1- Mild (slight localized burning sensation).

2- Moderate (moderate localized burning sensation without sleep disturbance).

3- Severe (continuous burning sensation which disturbs sleep).

Objective parameters:

(1) Size:

It was recorded by using a sterile blotting paper or using thread method which was placed over the ulcer and pressed with uniform pressure. The impression was measured directly.

(2) Tenderness

0 - No tenderness.

1 - Mild (tenderness after squeezing).

2 - Moderate (tenderness after touching with pressure).

3 - Severe (tenderness just touching with soft object).

(3) Discharge

0-No discharge.

1-Mild (the gauze is slightly moist).

2-Moderate (the gauze becomes wet completely after opening bandage).

3-Copious (bandage moist completely in 24 hrs & bandage is changed).

(4) Surrounding area of ulcer

0-No blackish discoloration and swelling.

1-Blackish discoloration without swelling.

2-Swelling without blackish discoloration.

3-Blackish discoloration with swelling.

(5) Floor and granulation tissue

0-Smooth, regular floor with healthy granulation tissue.

1-Smooth, pale granulation tissue, slight discharge, without slough.

2-Irregular floor with less granulation tissue and slough.

3-Rough, irregular floor with more slough and no evidence of granulation tissue.

Result:

After collecting data from observations, study showed statistical significant result in

pain, burning sensation, tenderness, floor and granulation tissue, length and width in *Hamsapadi* treated group whereas parameters like itching, discharge and smell showed insignificant result.

Discussion:

The reduction in the amount of Discharge could be due to *Kleda Upashoshana*, *Pooya upashoshana* property of the *Kashya rasa*. The *Kashya rasa* could also be helpful for the *Stambhana* of the blood and discharges.

Tikta has *Srotoshodhana* property due to which it helps to clear the channels and thus enhances the blood circulation to the part. Reduction in the intensity of the burning sensation could be due to *Dahaprashamana* by *Sheet virya*. Patients felt cool sensation after the application of the *Kalka* might be due to the same.

The *Guru Guna* could be helpful for the regeneration providing local nutrition of the cells causing *Roopana* of the wound.

Conclusion:

The leaves of *Hamsapadi* (*Adiantum lunulatum*) in the form of Paste for the management of the *Dushta Vrana* showed Statistical significant results and is very cost effective . The study is carried on limited number of patients. This study can be taken on more number of patients.

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