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Assessment of Efficacy *Shigru (Moringa Oleifera Lam) Patra Lepa* as *Vrana Ropana* in Comparison with Betadine Ointment in Management of *Sadyovrana*-A Clinico-Comparative Trial

¹Amit Pundpal and ^{*2}Ramesh R Khandare

¹PG Scholar, Shalya Tantra, L.K.R. Ayurvedic Collage, Gadhinglaj Kolhapur, Maharashtra, India.

^{*2}Guide, Associate Professor, Shalya Tantra, L.K.R. Ayurvedic Collage, Gadhinglaj Kolhapur, Maharashtra, India.

Abstract

Ayurveda is the most ancient medical science. Its antiquity goes back to the 'Vedas.' *Ayurveda* is a *upang of "Atharva Veda"*. Ancient Indian Surgery was a highly skilled branch of *Ayurvedic* medicine known as *Shalya Tantra*. Surgery is the field, which basically deals with different types of wounds, injuries and wound healing. *Acharya Sushruta* the great Indian Surgeon who had given a complete account on wound healing and various techniques of wound healing used for various types of wounds.

Acharya Sushruta, "The father of surgery" and *Lord Dhanvantari*- "The God of surgery" are accepted by all the systems of medicine.

Acharya Sushruta documented different types of *vrana*. The word "Vrana" is derived from the root "Vriya" having the meaning "to recover". *Varna* mainly classified into two groups *Nijavrana* i.e. *Shariravrana* are due to vitiated *Dosha* and *Agantuja vrana* i.e. *Sadyo Vrana* which caused due to trauma

The medicinal virtues of this plant are mentioned in most of the *Ayurvedic* literature viz. *Charak Samhita*, *Sushruta Samhita*, *Ashtanga Sangraha* and *Ashtanga Hridaya*, *Bhel Samhita*, *Harita Samhita*, *Bhavprakash* etc. As per *Bhavprakash Nighantu*, there are three types of *Shigru on the basis of their gunas* i.e. *Shyama Shigru*, *Shweta Shigru*, *Rakta Shigru*. *Out of that Shweta Shigru Can be used as vranaropan chikitsa*.

The researchers are thriving hard to find out the solution of healing of wound in less duration of time with minimal or no complication. The Medical practitioners are using number of wound dressings to heal such wounds, namely absorptive, collagen, anti-microbial, foams, wound filters, composites, contact layers, hydrogels etc. but *Sushrut acharya* already mentioned in *sushruta samhita* that any type of *vrana*(wound) can be treated by *Shasti Upakramas* method. *Lepana* being one of them.

Keywords: *Sadhya vrana*, *shodhana*, *shigru patra lep*

Introduction

Vrana is the phenomenon that consumes the tissue and on healing leaves '*vrana vastu*' i.e., permanent scar tissue. This definition is not limited to the cutaneous lesion but destructive lesions occurring in any tissue localization of *doshas* or getting vitiated by *doshas*. *Vrana* which has a foul smell, continuously flowing putrefied pus along with blood, abnormal colour, intense pain, for a long time and has smell etc. Wound healing is a natural process. The defence mechanism of the body like phagocytosis and its local enzymatic action on dead tissue help to keep the wound clear but factors like a slough, infections, foreign body affects the process of normal healing. *Shudha vrana* is one of the *varnas* which needs treatment for healing, it is necessary to remove maximum *dushti* by virtue of *shodhana*, *Krumighna*, *stravahara*, *dahaprashmana* and *vranaropaka* drugs. Alleviating these inhibitory factors are the goal of *varan ropan chikitsa* *Acharya Sushruta* has described '*Shashti Upakrama*' i.e., sixty measures for the management of wound

to achieve goal approximation early healing without complication and acceptable scars [4]. *Vrana ropan* is one of them [5]. These lep herbs contain paste when *ropann dravyas* are provided healing, the volatile ingredients are liberated out to produce lepan. An attempt has been made by *vrana ropana of shigru patra lep*. This research study based on reconciling the wound, principle laid by *Acharya Bhavprakashin* concern to *Vrana Ropana Karma* i.e. wound healing.

Aim and Objectives

To compare efficacy of *Shigru (Moringa Oleifera Lam) Patra Lepa* as *vranaropan* versus *Betadine ointment* in management of *sadyovrana*.

Materials and Methods

Type of Study: A comparative clinical study.

Study Centre: L.K.R. Ayurvedic collage, gadhinglaj kolhapur, Maharashtra, India

Materials

Table 1: Table shows Dravya, Virya, Guna, Karma, Prayojyaga

| Sr. No. | Dravya | Latin Name | Virya | Guna | Karma | Prayojyaga | Quantity |
|---------|-------------|-----------------------|-------|--------------|--|------------|----------|
| 1 | Shwetshigru | Moringa Oleifera Lam) | Ushna | Laghu Ruksha | Vedanasthapak Vranashodha Vranaropak Jantughna | Patra | 1 Part |

Case Report

A 25 years male patient came to L.K.R Ayurvedic collage, gadhinglaj Kolhapur, and Hospital with complaints of the fresh wound associated with pain, discharge, at the wound site.

Investigation

Hb-10.2gm%, TLC-12200 cu/mm, DLC-P-53%, L-42%, E+M-4%, BSL (Random)-120mg/Dl, Triple H-Negative

Treatment

- Firstly, informed written consent was taken.
- The churna mix with lukewarm water made into the paste i.e. lepa and applied externally on the sadyo vrana with applying sterile gauze piece and roller bandaging.

This procedure was done for 10 days, and assessment was done on 0, 7th, 14th, 21st days [8].

Results

Table 2: Table shows Criteria

| Sr. No. | Criteria | 1 st Day | 7 th Day | 14 th Day | 21 st Day |
|---------|---------------------|---------------------|---------------------|----------------------|----------------------|
| 1 | Shool (Pain) | 2 | 1 | 0 | 0 |
| 2 | Strava (Discharge) | 3 | 2 | 1 | 0 |
| 3 | Skin ground | 2 | 1 | 0 | 0 |
| 4 | Floor of wound | 2 | 1 | 0 | 0 |
| 5 | Tenderness of wound | 3 | 2 | 1 | 0 |
| 6 | margins | 3 | 2 | 1 | 0 |
| 7 | size | 3 | 2 | 1 | 0 |

Table 3: Table shows Parameters

| Sr. No | Parameters | Grade | Description |
|--------|----------------|-------|--|
| 1 | Shoola (pain) | 0 | No pain |
| | | 1 | Mild |
| | | 2 | Moderate |
| | | 3 | Severe |
| 2 | Strava | 0 | No discharge |
| | | 1 | Scanty serous discharge & little wet dressing. |
| | | 2 | Often discharge and pus on dressing |
| | | 3 | Profuse pus discharge which needs frequent dressing. |
| 3 | Skin ground | 0 | Brown |
| | | 1 | Purple bluish |
| | | 2 | Blacish scale formation |
| 4 | Floor of wound | 3 | Mild |
| | | 2 | Moderate |
| 5 | Size of wound | 1 | severe |
| | | 0 | 1 Sq.cm.to 2cm |
| | | 1 | 2 Sq.cm to 3cm |
| | | 2 | 3 Sq.cm to 4cm |
| 6 | Tenderness | 3 | 4 Sq.cm to 5cm |
| | | 0 | No tenderness |
| | | 1 | Mild tenderness |
| | | 2 | Moderate tenderness |
| 7 | Margins | 3 | Severe tenderness |
| | | 0 | No Tenderness |
| | | 1 | Mild Tenderness |
| | | 2 | Moderate tenderness |
| | | 3 | Severe tenderness |
| | | 0 | No Tenderness |

Final Result

Trail Group A: Comparing Means of after treatment and before treatment, they are significantly differ from each other, hence treatment is effective Test: Wilcoxon matched pair test (Paired-nonparametric)

Control Group B: Comparing Means of after treatment and before treatment, they are significantly differ from each other,

hence treatment is effective Test: Wilcoxon matched pair test (Paired-nonparametric)

Discussion

Present study was planned to evaluate the wound healing property of the trial drug *Shigru Patra lep*. While comparing the result of the experiment, *Shigru* showed highly significant wound healing property in comparison with the control group.

In the excision wound model two parameters were assessed, Percent contraction of original wound area and Period of epithelization. Whenever a breach occurs in the continuity of tissue the surrounding connective tissue and capillaries grows to cover up the area damaged, to achieve the contraction of wound. *Shigru* possesses *Katu* (Pungent), *Tikta* (bitter) and *Kashaya rasas* (astringent tastes), *Laghu* (light), *Ushna* (hot) and *Teekshna gunas* (penetrating property), *Ushna virya* (hot in potency), *Katu vipaka* (Pungent post digestion effect). *Katu rasa* (Pungent taste), is mentioned as *Vranam Avasadayati* (eschars the wound) in the major *ayurvedic* classics along with the properties like *Mamsa Lekhana* (scraping of the wound), *Shodana* (cleansing of the wound), *Chedana* (cuts off the unhealthy tissue). *Katu rasa* (pungent taste) removes the unhealthy tissue formed at the site of *Vrana* (wound) and removes the sluff formation.

Tikta rasa (bitter taste) does the *shoshana* (drying up) of *Kapha*, *Puya srava* (pus) & *Kleda* (moisture). *Twak mamsa Sthirakarana* (brings stability in the tissue) property mentioned for *Tikta rasa* (bitter taste) helps in providing strength to the tissues. *Kashaya rasa* (Astringent taste) helps in *Sthambana* (styptic action) & both *Tikta* (bitter) and *Kashaya rasas* (astringent taste) does *Shoshana* (dries up) thus maintaining a dry locality at the site of *Vrana* (wound), which prevents the invasion of *Krimis* (microbes). *Sandhaniya karma* (holding together of the tissue) of *Kashaya rasa* (Astringent taste) enhances the process of contraction and *Ropana karma* (healing process) helps in formation of healthy granulation tissue thus facilitating the Wound healing Process. The leaves of *Moringa* are rich with the contents like proteins, Vit. A & C, Iron, Copper etc. As far as the wound healing is concerned Copper is involved in collagen synthesis, iron is a cofactor, Vit. C has an important role in collagen synthesis, in the formation of bonds between strands of collagen fiber, helping to provide extra strength and stability. Vit. A is also involved in cross-linking of collagen and the proliferation of epithelial cells. Collagen is the main protein synthesized during the healing process and the strength of the collagen determines wound strength

Conclusion

Comparing means and SD of group A and group B, they are not significantly differ from each other hence it is concluded that Group A and Group B are equally effective test: Man-Whitney t test.

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