



JALAUKA VCHARAN IN THE MANAGEMENT OF DUSHTA VRANA (NON-HEALING ULCER)

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ABSTRACT :

Chronic wounds have failed to proceed through an orderly and timely process to produce anatomic and functional integrity. Wounds form a very extensive and important class of the disease. *Dushta vrana* (non-healing ulcer) remains a major clinical challenge to the medical faculty throughout the world. Ayurveda the age old and holistic system of medicine offers various tools for management of *Dushta vrana*. In Ayurveda *Acharya Sushruta*, pioneer surgeon, have mentioned various types of wound and its management. To achieve good approximation, early healing and acceptable scar, without complications *Acharya Sushruta* has elaborately explained *shashti upakrama*. *Rakta mokshana* is one of them. Based on this reference, a clinical study was done with patients having clinical features of *Dushta vrana*. So the present study is planned to evaluate the efficacy of *Jalaukavacharan* in the management of *Dushta Vrana*. For this 15 patients were selected from O.P.D/ I.P.D of *Shalya Tantra*, N.I.A., Jaipur. The treatment was accessed with observation and results for a period of eight weeks. After this therapy, significant result was observed. It was observed that the results achieved are effective and stable during follow up period.

Key words: *Dushta Vrana*, Non-healing ulcer, *Shashti upakrama*, *Rakta mokshana*, *Jalaukavacharan*.

INTRODUCTION: The knowledge of wound is known since antiquity. From Vedic age to modern era, man has been suffering from various ailments. Although much advancement had taken place in modern medicine to solve the problem, still they are unable to find proper solution to the utmost satisfaction¹. A wound which refuses to heal or heals very slowly in spite of best efforts is known as *Dushta vrana*. *Dushta vrana* a typical non-healing chronic ulcer conglomerated with various sign and symptoms is a problem to the patient and surgeon.

Amount of tissue injury and degree of contamination influences the speed and quality of healing. The major part of the wound management in present days

include, prevention of sepsis, various types of bandages etc. Usually parental, oral and external application of antibiotics and antiseptics are used in the treatment of ulcer which is expensive and becomes occasional reactive to the patient.

There are so many factors responsible to make healing process delayed. Some of them are dead tissue, insufficient blood supply, protein deficiency, the disease like diabetes mellitus, tuberculosis etc. In case of delayed healing, it is more likely to be local than general which clarifies the magnitude of the problem of study. Sometimes massive ulceration requires skin grafting by the modern surgeons which either accepted or rejected by the

body of the individuals. Even after development of different techniques and methods for the treatment of wound, still problems are persisting in the management. With review and references of ancient approaches to *vrana* treatment, it is convinced that the Ayurvedic approaches to the treatment of *vrana* can be better supplementation to satisfy all the above problems.

Ayurveda the age old and holistic system of medicine offers various tools for management of *Dushta vrana*. In Ayurveda *Acharya Sushruta*, pioneer surgeon, have mentioned various types of wound and its management². To achieve good approximation, early healing and acceptable scar, without complications *Acharya Susruta* has elaborately explained *shashti upakrama*³. Rakta mokshana is one of them.

AIMS AND OBJECTIVES: The main aim of the study is to evaluate the efficacy of *Jalaukavacharana* in the management of the *Dushta vrana*.

MATERIALS AND METHODS: For the study, total 15 subjects with the classical signs and symptoms of *Dushtavrana* were selected randomly from O.P.D/I.P.D, Department of *Shalya tantra*, N.I.A, Jaipur, ages ranging from 15- 70 yrs., irrespective gender, religion and socioeconomic status. The study was clearly explained to the subjects, written informed consent was taken before starting the trial. Routine blood investigations (Hb gm%, TLC, DLC, BT, CT, ESR, RBS, HIV & HBsAg.) was done to every patient before starting the trial. Total time frame of the study was 12 weeks, with trial period for 8 weeks and a follow up for 4 weeks.

The protocol was approved by the Institutional Ethics committee at National

Institute of Ayurveda, Jaipur and the ethical approval letter's ref. number is F10 (5)/EC/2014/7217, dated: 7/11/2014.

SELECTION CRITERIA:

Inclusion criteria:

Patients having clinical features of *Dushta Vrana* between age 15 - 70 years and those were ready to give written informed consent

Exclusion criteria:

Malignancy, Tubercular ulcers, Syphilitic ulcers, Soft sores, Actinomycosis, Meleney's ulcers, Immuno compromised or unstable patients, HIV, immune deficiency syndrome, Immunosuppressive medications users.

Materials used for the treatment procedure:

- *Jalauka*, *haridra* powder, *shuddha-sphatika bhasma*.
- Sterilized Gauze pieces, dressing pad, cotton, gloves.
- Disposable syringe, kidney tray, distilled water, normal saline, needle.
- Sterilized non-toothed forceps, scissors.
- Container of sterile water, for placing leeches after they have been fed. (This container must be labeled with patient's name)

Treatment

Procedure:

Jalaukavacharana

vidhi:

Jalaukavacharana was done in a standard protocol as described by *Acharya Susruta*⁴.

ASSESSMENT CRITERIA: Effect of therapy was evaluated before, during & after the course of treatment by using parameters as stated below with standard grading.

a) Primary Outcome Measures:

- Circumference of the wound (Length, Width & Depth)
- Exudate quantity

- Pain (VAS scale)
- Odour
- Granulation Tissue

b) Secondary Outcome Measures:

- **Recurrence:** Subjects were assessed for above said variables, were recorded and stored in specific case record proforma. Privacy and confidentiality of the patients was maintained. The collected data was subjected to statistical analysis by using Stat Graph Pad 3 software (Trial version), Wilcoxon matched-pairs signed ranks test, One Way ANOVA test, were used to bring out the level of significance i.e. P value.

Photographs were taken before starting the trial, during and on 8th week follow up or after complete healing of the wound, whichever is the earlier.

RESULTS:

Effect of therapy in individual parameters:

Exudate: The mean Score before treatment was 1.67 which lowered down to 0.27 after treatment, with $SD\pm 0.6172$ giving a relief of 83.83% and the value of **P<0.0001** which is statistically **highly significant**.

Odour: The mean Score before treatment was 0.4 which lowered down to 0.067 after treatment, with $SD\pm 0.4880$ giving a relief of 83.25% and is statistically **significant** with **P<0.05**

Granulation: The mean Score before treatment was 2.07 which lowered down to 0.47 after treatment, with $SD\pm 0.7368$ giving a relief of 77.29% and is statistically **highly significant** with **P<0.0001**

Pain: The mean Score before treatment was 6.46, with $SEM\pm 0.59$ which lowered down to 0.46 after treatment, with

$SEM\pm 0.29$ giving a relief of 92.72% and is statistically **highly significant** with **P<0.0001**

Circumference of wound: The mean Score before treatment was 28.60, with $SEM\pm 12.71$ which lowered down to 3.05 after treatment, with $SEM\pm 1.94$ giving a relief of 89.33% and is statistically **non significant** with **P>0.05**

RECURRENCE: The patients who got cured completely didn't have a recurrence after a follow up for one month after the trial.

DISCUSSION: The patients treated with *Jalaukavacharana* had yielded better outcome with more percentage of relief in exudate, odour, granulation and circumference of the wound with highly significant p values in each parameter.

Jalaukavacharana has a comprehensive therapeutic influence in reducing *srava*/ exudate by pacifying the vitiated *doshas* and it also pacifies pitta and *rakta dosha* as they are the causative factors for *gandha*. *Jalaukavacharana* had stimulated granulation tissue in the wound bed and this implies that it has good wound healing properties or *vrana shodhana* and *ropana* properties.

At the end, by assessing the P value and percentage of relief in different variables shown better result in wound healing where in circumference of wound decreased tremendously in a period of eight weeks trial, which confers that the rate of healing is faster with leech therapy

PROBABLE MODE OF ACTION OF JALAUKAVACHARANA:

Jalaukavacharana is a biological intervention where in during blood sucking different biological secretions intervene in the healing process. This is clear from the facts that different components in the salivary secretion of the leech like

Hirudin, Serotonin & Enkephalin, Histamine like substance, Tryptase inhibitor etc have marked effects as anticoagulation, anesthetic, vasodilatation & anti-inflammatory effects respectively which ultimately aid in the procedure by allowing painless, free flow of blood without any after effects as inflammation. The effect of the procedure prolongs for a considerable length due to biological secretions, till it restores the microcirculation and *doshic* equilibrium and also the mechanical sucking action helps in flushing out the metabolic wastes and toxins loaded static blood from the wound bed and also from the surrounding area, which enables increase in perfusion

of fresh oxygenated blood and triggers wound healing by proliferation.

CONCLUSION: The patients treated with *jalaukavacharana* had yielded better outcome with more percentage of relief in exudate, odour, granulation and circumference of the wound.

Jalaukavacharana has a comprehensive therapeutic influence in reducing *srava*/exudate by pacifying the vitiated *doshas* and it also pacifies *pitta* and *rakta dosha* as they are the causative factors for *gandha*. *Jalaukavacharana* had stimulated granulation tissue in the wound bed and this implies that it has good wound healing properties or *vrana shodhana* and *ropana* properties.

JALAUKAVACHARANA VIDHI



Required Materials for Jalaukavacharana Vidhi Haridra



Activation of Jalauka with



Jalauka Vacharan



Vaman



BEFORE TREATMENT



DURING TREATMENT



AFTER TREATMENT

REFERENCES:

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Source of support: Nil

Conflict of interest: None

Declared