

KATUPILACHURNA IN THE MANAGEMENT OF *DUSTAVRANA* W.S.R TO *VENOUS ULCER*: A SINGLE CASE REPORT

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ABSTRACT

The *Dustavrana*, a contaminated non-healing ulcer is considered as an unresolved problem faced by health-care professionals nowadays. Especially, venous ulcers do not respond to drug due to lack of enough circulation of affected part and blood stasis, compared to a clean non-contaminated ulcer in normal body. In present case report, a 68-year-old male patient having venous ulcer is treated with ayurvedic internal management and external application of *kalka*, made up of *Katupila* and *Madhu* for 21 days. *Kalka* of *Katupila* and *Madhu* showed *vranashodhana* as well as *vranaropana* effect on the venous ulcer along with internal medication.

KEYWORDS: *Dustavrana*, *Katupila*, *Madhu*, Venous ulcer, *Vranaropana*.

INTRODUCTION

The *Dustavrana*, commonly known as non-healing venous ulcer possess a localization of *dosha vata*, *pita* and *kapha*. The *vrana* having bad smell, abnormal color, profuse discharge, slough and intense pain is generally considered as *chronic* and it takes long time to heal. Such *vrana* most likely possess contamination of pathogens and is known as *dusta vrana*.^[1] For instance, venous ulcer occurring due to venous stasis and be vitiated in *tridosha* through impairment of *raktadosha* is considered as *dustavrana* and takes longer time to be healed. As the medical science advanced, new remedies have been tried for fast healing of wound; however, no considerable positive results have been obtained over traditional remedies. *Acharyasushruta* had mentioned *shasti upkrama* for *vrana karma*, which can be used for all

type of *vrana*.^[2] The *vrashodhana* and *ropana* described by *acharya shushruta* are still considered as one among the best therapy for wound healing. Therefore, management of wound associated abnormalities can be addressed *Ayurvedic* methodology. Newer *Ayurvedic* formulations of natural products is demand of time. In present case report, a formulation of folklore medicine *Katupila*.^[3] (*Securinega Leucopyrus*) with *madhu*⁴ (honey) was tested for efficient *vrashodhana* and *ropana*.

MATERIAL AND METHODS

Patient information: A 68-years old male patient from Baroda, Gujarat, India having complaint of chronic non-healing ulcers (sizes 3.5×2.5cm and 0.5×0.5cm) on medial malleolus of the left ankle joint placed ~3.5 cm apart from each other. Severe pain during walking and redness over the lower limb since 3 months are other added features of the ulcer. As per the history provided by patient, his left leg varicose vein has been treated by sclerotherapy and subsequently patient developed this ulcer gradually in six months. Effort of treating ulcer with antibiotic (by local doctor) was failed to improve healing and patient visited Parul Institute of Ayurveda for the treatment of this ulcers. There was no history of DM, HTN and any other systemic disease. There was absence of any kind of suggestive family history.

Diagnostic assessment of patient

- Routine hematology (Hb, TC, DC, ESR, RBS) and urine investigations were within normal limits
- Doppler findings before sclerotherapy were suggestive of primary incompetence of SFJ and SPJ; incompetence of GSV, SSV in entire course. Post sclerotherapy Doppler was not available as the patient didn't undergo the same.

Clinical assessment of ulcer

The local examination revealed following facts regarding the ulcer of patient.

- Two ulcers of size 3.5×2.5cm and 0.5×0.5cm side by side at medial malleolus of the left ankle joint
- Shape: vertically oval
- Blackish discoloration over ulcer
- serous discharge from ulcer
- Peripheral Redness over medial aspect of left leg

- Varicose and prominent veins on left foot
- Bleeding – absent
- Edge –slopping
- Margin- irregular
- Tenderness present
- Local temperature -Normal

Therapeutic intervention: Formulation of the proper and relevant line of treatment is the main entity in the management, which includes external and internal medicine in the form of *shodhana* and *ropana* concept with relation to *dustavrana*.

Treatment of wound

External treatment: Wound was cleaned by *panchvalkalkwatha* prior to dressing. *kalka* formulation made from *Katupillachurna* and honey was applied at ulcer once in a day for 21 days. After application of *Katupilla* formulation, ulcer was covered with sterile bandage.

Internal treatment

Following Ayurvedic medicine was given to patient with dose mentioned. All the internal medicines were administered for the period of 21 days along with the *katupila* dressing.

Sr. No.	Drug name	Dose	Anupan
1	Guggulu tikta Kashaya	15ml OD	Ushnodak
2	Tab.Manjisthadi ghanavati	2-0-2	Ushnodak
3	Tab. Aarogyavardhini rasa	1-0-1	Ushnodak

Assessment of wound healing

The wound healing was assessed and graded through following three parameters.

1. Vranavarna (Skin=0, Pink=1, Pale pink=2, Blackish=3).
2. Vranavedana (Absent=0, Mild=1, Moderate=2, Severe=3).
3. Vranastrava (Absent=0, Present=1).

RESULTS

Assessment of healing was done weekly on 7th, 14th, 21st day. On 1st day, ulcers were having blackish color with serous discharge (Fig. 1A). De sloughing was observed along with pale pink granulation devoid of discharge by 7th day (Fig. 1B). Pain at wound was also decreased from severe to moderate on 7th day. Size of 0.5 ×0.5 cm ulcer was completely healed by 7th day (Fig. 1B).

The size of ulcer was further decreased on 14th day with pinkish healthy granulation (Fig. 1C). Discharge was absent by 14th day. Ulcer was healed completely by 21st day with minimal scar (Fig. 1D). Peripheral redness was also reduced by local application of katupila and honey kalka. The ulcer was also noticed to improved based on its assessment through *vranavarna*, *vranavedana* and *vranastrava* as shown in Figure 2.



Figure 1: Appearance of ulcer at during the course of treatment. (A) On 1st day, (B) On 7th day, (C) On 14th day, (D) 21st Day.

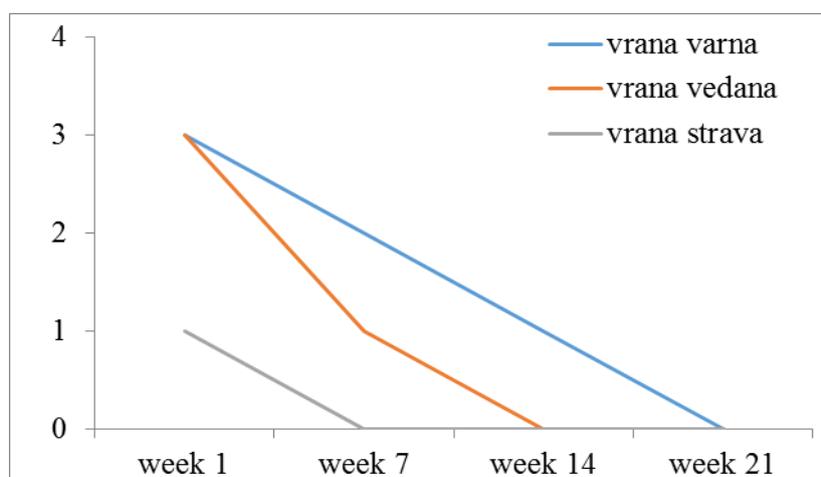


Figure 2: Assessment of wound healing through *Vranavarna* (Skin=0, Pink=1, Pale pink=2, Blackish=3), *Vranavedana* (Absent=0, Mild=1, Moderate=2, Severe=3) and *Vranastrava* (Absent=0, Present=1).

DISCUSSION

- Katupila* showed micro and macro debridement action on ulcers exposing and cleaning the wound base.
- Broad spectrum antimicrobial activity of *Katupila* helped in reducing the pathogens in wounds which intern assisted in the wound healing.^[5]

- Katupila* contains Tannins and flavonoids; which might increase the availability of nitric oxide in hypoxic tissue and warded off the endothelial dysfunction. This triggers neogenesis (regeneration of biological tissue) and vasculogenesis forming neovascularization and resulting in fresh epithelialization, assisted in wound healing.^[6]

- Honey is a hyperosmolar medium, preventing bacterial growth. Because of its high viscosity it forms a physical barrier, and the presence of the enzyme catalase gives honey antioxidant properties.^[7]

- Overall actions of internal medicines were adjuvant systemic effects like *raktaprasadan*, *aampachan*, *agnidipan* and *tridosha shaman* by which *vedana*, and *strava* of *vrana* might have been reduced. Further *prasadan* of *bhrajak* pitta and *dipan* of *rasa*, *rakta*, *mams dhatvagni* might have supported the premier action of *katupila* with respect to neoangiogenesis to improve the granulation and epithelization to cure the wound.

CONCLUSION

Present case study suggests that the incidence of venous ulcer cannot be ruled out even after the sclerotherapy, as the patient developed ulcers on the medial malleolus of treated leg with sclerotherapy before 6 months. There may not be only mechanical/structural etiology for the manifestation of ulcer in this case as ulcer developed after sclerotherapy. Some of the unseen systemic metabolic factors may be vitiated *doshas* must have played major role in the ulcer formation, which can be confirmed because of no improvement by local dressing of wound by means of allopathic medicines. The combine effect of internal medicine along with local application of *katupila* with *madhu* must have played important role in healing the ulcer within 21 days compared to 3-month duration of non-healing intension of ulcer, before application of *katupila*. Moreover, the tolerable properties of the *katupila* compound make it safe and easy to use in the venous ulcers where, burning pain is more predominant. In this case even though wound healing was achieved within 21 days, the pain and discharge subsided well in advance i.e. within 7 days of the application of *katupila* compound. Hence, this can be concluded by this single case study that *katupila* with *madhu* has got definitive effect in *dustavrana* with special reference to venous ulcer.

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