

A COMPREHENSIVE MANAGEMENT OF AN INFECTED VENOUS ULCER – A CASE STUDY

Dr. Prashanth K.¹ and Dr. Anitha A. S.²

¹Associate Professor. Department of Shalya Tantra. Shri Dharmasthala Manjunatheshwara
College of Ayurveda, Udupi.

²Final Year PG Scholar. Department of Shalya Tantra. Shri Dharmasthala Manjunatheshwara
College of Ayurveda, Udupi.

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*Corresponding Author

Dr. Prashanth K.

Associate Professor.

Department of Shalya

Tantra. Shri Dharmasthala

Manjunatheshwara College

of Ayurveda, Udupi.

ABSTRACT

The common chronic ulcers in India are the leg ulcers, among them venous ulcers show an incidence of 34%. They are the most severe form of ulcers which are produced due to the chronic venous insufficiency of the lower limbs. Usual causes such as obesity, long standing can produce sustained abnormal venous hypertension in the lower 3rd of the leg, around ankle, and dorsum of foot leading to venous ulcer formation. With carelessness it can get infected and turns into gangrene. A chronic venous ulcer may turn to malignancy which may requires amputation of the affected limb. The disease has serious impact on one's life, hence early diagnosis and effective management is essential to save the life. In Ayurveda non healing ulcer is diagnosed

as *Dusta Vrana*. Further specific diagnosis is based on its presentation. A male patient with a non-healing chronic venous ulcer for 1 year was admitted as an in-patient and was treated with *Parisheka*, *Jalouka avacharana*, and dressing as per the classics has been presented in this case study.

KEYWORDS: Venous ulcer, *Dusta Vrana*, *Jaloukavacharana*, *Parisheka*.

INTRODUCTION

Venous ulcer being the commonest and recurrent form of leg ulcers accounts about 60-70% in general practice. The major cause includes the incompetency of the valves which results in venous hypertension and later into varicose veins. Venous hypertension can damage the capillaries of the skin and subcutaneous tissues, resulting in capillary proliferation and

inflammation.^[1] This eventually causing deposition of haemosiderin in the subcutaneous plane from the lysed RBC's, leading to eczema, dermatitis and further to lipodermatosclerosis. This causes fibrosis of the tissues, henceforth preventing oxygen and nutrients from reaching the cells, and thus leading to ulcer.^[2] Treatment principles include reduction of oedema, attaining ulcer healing and prevention of recurrence. Conservative management like compression stockings, limb elevation, antibiotics and wound dressings are widely used. Surgical techniques like skin grafting, laser ablation, sclerotherapy, reconstructive surgery are practised in conventional system.^[1] In Ayurveda the condition can be clinically related to *Dusta Vrana*^[3], a non-healing type of wound. Numerous formulations are mentioned in Ayurvedic science for the treatment of ulcers. *Acharya Susrutha* gave detailed description for treating *Vrana* as *Shasti Upakrama*.^[4] The functional efficiency of the veins of lower limbs has to be restored if the venous drainage is not proper. For which the musculature of legs should be strengthened. As per Ayurveda classics *Shodhana* procedures should be carried out for the proper healing.

Here is a case of chronic venous ulcer which was treated by Ayurvedic medications has been detailed.

CASE DETAILS

A 52-year-old male patient who was a known case of varicose veins since 3 years, came to the OPD of SDM Ayurveda Hospital Udupi, (under OPD No: 338117), presented with a non-healing ulcer over medial malleolus of left lower limb associated with severe pain, swelling and itching for past 1 year and fever for 3 days^(FIG 1&2). Earlier ulcer was treated conservatively for 6 months and was advised surgery for the same. The history is not significant for diabetes, hypertension, thyroid disease and weight loss. His bladder and bowel habits were normal, with good appetite and sound sleep pattern.

Physical Examination

On examination patient was found to be well built with a weight of 72kgs and height 183cms (BMI=21.49kg/m²). Vitals were stable – Pulse rate- 84/min, Heart rate- 84/min, Respiratory rate- 20/min, B.P- 110/80mmHg, Temperature- 101.2°F. No pallor, icterus, cyanosis, clubbing, lymphadenopathy were seen.

Local examination

Skin over the left lower limb was hyperpigmented and oedematous with erythematous rash with a well-defined raised border spreading up to knee(erysipelas).

On palpation the area was tender, and temperature was raised.

Ulcer examination

Site of the ulcer: Over medial malleolus of left leg

Number: 01

Shape of the ulcer: Irregular

Size of the ulcer: 4X3X1 cm

Floor: Brownish red granulation tissue

Edge: Sloping

Discharge: Seropurulent

Surrounding skin: Blackish discoloration present

Tenderness: Present+++

Margin: Indurated

Base: Not fixed to underlying structure

Peripheral pulsation

Femoral pulse: palpable

Popliteal pulse: palpable

Posterior tibial: palpable

Dorsalis pedis: palpable

Trendelenburg's test: positive

Cough impulse test: positive

Perthes test: veins remain more distended

No palpable lymph nodes

Investigations

Haematological as well as biochemical investigations were performed for the diagnosis of the case. It helped to assess the efficacy of the treatment both before and after treatment. (Table I).

Intervention

A brief course of antibiotic Inj. Augmentin 1.2 grams IV 12th hourly was given for 5 days until acute infective episode subsided. Meanwhile patient is also treated with

1. *T. Kaishora Guggulu* 1 tablet thrice daily, with lukewarm water after food.
2. *Pancatiktaka Kashaya* 5tsp, along with equal amount of lukewarm water thrice daily after food.
3. *Pancavalkala kwatha parisheka*^(Fig 3) externally over the left lower limb and ulcer twice daily
4. *Yastimadhu ghritha* used topically for the ulcer during dressing.^(Fig 4)
5. *Jalouka avacharana*^(Fig 5) was carried out on day 12. Around 60ml blood was removed.
6. Limb elevation over 2 pillows until oedema subsided.

Patient was discharged with oral medications such as *Kaishora guggulu* 1 tablet thrice daily after food and *Pancatiktaka Kashaya* 5tsp with equal amount of lukewarm water thrice daily after food. Patient was taught the method of dressing with *Yastimadhu ghritha* and advised to visit OPD once a week. Ulcer got fully healed after 40 days of treatment (FIG 5).

RESULTS AND DISCUSSION

Venous ulcer and its complications are common in daily practice. Reducing the venous congestion and enhancing the tissue perfusion will promote good tissue healing. For which, in contemporary science elastic stockings, limb elevation of the affected limb and various exercises for the calf muscles are practised. But still, some ulcers do not respond to those treatment and causes disability. A chronic venous ulcer has the potential to turn into malignancy. Such complicated ulcers may ultimately land up with limb amputation.

In the present case the patient was febrile and was having spreading erythematous rash (erysipelas). To control the systemic infection, a brief course of IV antibiotics was planned. Meanwhile, the patient was also treated with:

Pancatiktaka Kashaya^[5], an Ayurvedic Kashaya formulation which is mentioned in *Jwaradhikarana* was taken as the patient was having fever. The temperature of 101.2 ° F came down to base line in 3 days. As the *Pancatiktaka Kashaya* is *Rakta Sodhaka*, it was very effective in the management of the *Dustavrana* which was predominantly *Pitta Raktaja*.

Kaishora Guggulu^[6], an Ayurvedic *Vati* formulation was selected as though *Vatarakta*, the primary disease for *Dusta vrana*, it possess greater healing rates. In acute cases of infection, long usage of this *Guggulu* preparation will give *Rasayana* property to the patient.

Pancavalkala kwatha^[7], an Ayurvedic formulation prepared from dried powder of 5 herbs, (*Vata*, *Udumbara*, *Ashwatha*, *Parisha*, *Plaksha*). As the patient has spreading infection which matches the resembles the description of *Visarpa*, *Pancavalkala Sheetha Parisheka* to the affected limb was planned. Patient found a great relief with the external treatment, meanwhile the *Vrana* was presenting with the features of *Vata*, *Pitta* and *Rakta Dusti*. It was treated with *Vrana Parisheka* with the same drug and *Yastimadhu Ghrita* applied topically with a light bandage. As the text says bandaging requires to be light when there is *Pitta-Rakta Dusti*; light bandage was applied instead of crepe bandage which is usually applied in case of venous ulcer.

Yastimadhu ghrita^[8], Here in this *Dusta Vrana* with involvement of *Pitta-Rakta* usually usage of *Ghrita* is indicated. Hence *Yastimadhu Ghrita* was selected for the topical usage in *Vrana*. *Go Ghrita*(cow's ghee) has a soothing property, which will form a thin-film layer over the ulcer bed that allows early epithelization of the wound.

Once the acute inflammation settled some amount of tenderness with moderate induration and oedema around the ulcer was present. *Raktamokshana* was planned with *Jalouka* as features of *Pitta* still present. This management reduced symptoms of burning sensation, pain and itching significantly. It was observed that *Jalokavacharana*^[9] helped to improve symptoms effectively.

As the patient required for the discharge, he was discharged on the 14th day and the treatment was continued with above medications and regular dressings.

In about 40 days, ulcer got completely healed without any recurrence till date^(FIG 6).

Patient was advised *Pathya*, like to avoid *Abhisyandi Ahara* and spicy food.

For daily practice, *Sarvagasana* was advised twice daily in the follow up

**Fig. 1: Day 1****Fig. 2: Day 1****Fig. 3: Day 7.****Fig. 4: Day 12.**

**Fig. 5: Day 40.****FIG. 6: After 1 year.****Table I: Biochemical And Hematological Parameters of The Patient.**

DATE	26/02/2020	03/02/2020	07/02/2020
Total Count of Wbc	11,200cells/cu mm	10,000cells/cu mm	8,800cells/ cu mm
Differential Count of Wbc	NEUTROPHILS:78% LYMPHOCYTES:13% EOSINOPHILS:00% MONOCYTES:01% BASOPHILS:00%	NEUTROPHILS:75% LYMPHOCYTES:16% EOSINOPHILS:08% MONOCYTES:01% BASOPHILS:00%	NEUTROPHILS:76% LYMPHOCYTES:20% EOSINOPHILS:03% MONOCYTES:01% BASOPHILS:00%
ESR	98mm/1hr	70mm/1hr	60mm/1hr

CONCLUSION

In conventional practice, treatment for the venous leg ulcers may take long time, often may require surgery, often being costly and not satisfactory. Ayurvedic therapeutic armamentarium offers, many therapeutic options that can be adopted at different stages of ulcers. In the present case, we have employed *Vrana Parisheka*, *Jalokavacharana*, *Vrana Bandhana*, with internal medication to achieve complete healing of the ulcer within 40 days and with no recurrence of the ulcer in a long follow up of 1 year.

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