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Case Study

AYURVEDIC MANAGEMENT OF *DUSHTA VRANA* (TROPHIC ULCER)

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ABSTRACT

Trophic ulcers are chronic, non-healing wounds resulting from impaired neurovascular supply and are commonly associated with peripheral vascular disease (PVD). Conventional treatment modalities include antibiotics, wound debridement, vascular procedures, and, in advanced cases, amputation. This case report highlights the potential of Ayurvedic management as a holistic, non-invasive, and cost-effective approach in treating trophic ulcers complicated by PVD. A 72-year-old male who is not a known case of diabetes mellitus presented with a non-healing trophic ulcer over the left heel since 1.5 years, associated with lower limb oedema, sensory loss, and difficulty in walking. Further clinical examination and investigations revealed chronic thrombophlebitis with sapheno-femoral and perforator incompetence of bilateral lower limb. The patient underwent Ayurvedic interventions for four months which includes internal medications - *Guggulutiktakam Kashayam, Punarnavadi Kashayam, Triphala Guggulu, Elasheetasivadi Churnam,* and *Guggulutiktaka Ghritam* and external therapies - local application of *Jathyadi Ghritam, Apamarga Ghrita,* and *Shashtika Taila*, along with procedures such as *Guduchyadi Kashaya Dhara, Udwarthanam* with *Kolakulathadi Churnam, Dhanyamla Dhara* and *Paranthyadi Taila Dhara*. Progressive healing of the ulcer was observed with significant reduction in edema, decrease in ulcer size and depth, and development of healthy granulation tissue by the end of the treatment period. This case demonstrates the effectiveness of Ayurvedic management in chronic trophic ulcers complicated by thrombophlebitis. The treatment facilitated *Ama pachana, Srotoshodhana, Shothahara*, and *Vrana Shodhana–Ropana*, addressing both systemic and local disease processes.

INTRODUCTION

The term *trophic* is derived from the Greek word *trophe*, meaning nutrition. An ulcer resulting from impaired nutrition of a tissue is termed a trophic ulcer. Mosby's Medical Dictionary (2009) defines it as a pressure ulcer caused by external trauma in tissues compromised by disease, vascular insufficiency, or loss of afferent nerve supply[1]. A hallmark feature is its marked resistance to healing. The ulcer typically has slightly raised margins, copious serosanguineous discharge, and often remains static for months or years. In some cases, progressive tissue destruction with local spread occurs[2].

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Hence, accurate identification of the underlying aetiology is essential for effective management and prevention of progression[1]. Successful treatment of chronic ulcers depends on identifying the causative factors along with local and systemic contributors to non-healing. Conventional management includes antibiotics, debridement, vascular interventions, and amputation in advanced cases[3]. Surgical reconstruction includes skin grafts and local, regional, or free flaps[1]. In Ayurveda, *Dushta Vrana*[4] is described by Acharya Sushruta as a chronic ulcer caused by *Doshic* imbalance (*Nija Vrana*) or trauma (*Agantuja Vrana*). It is characterized by abnormal texture, temperature, color, shape, discharge, pain, and chronicity[4]. Detailed management principles are described under *Shashtirupakrama*[5] in Sushruta Samhita. This paper applies the principles of *Dushta Vrana Chikitsa* in the diagnosis and management of a chronic trophic ulcer associated with thrombophlebitis, employing procedures such as *Chedana, Lekhana, Parishekam, Shodhana, Ropana,* and

Utsadana, along with internal medications and systemic therapies like *Udwarthana, Dhanyamala Dhara,* and *Taila Dhara*.

Case History

A 72-year-old male farmer presented with a chronic non-healing ulcer over the left heel, persisting for approximately 1.5 years. The patient had no known history of diabetes mellitus, hypertension, dyslipidaemia, or peripheral vascular disease. Six years prior, he had developed ulcers over both lower limbs, involving the left medial malleolus and right lateral malleolus. These lesions were managed with allopathic treatment and healed completely over a period of 1.5 years. Approximately 1.5 years before the current presentation, the patient noticed the onset of an ulcer over the left heel, which gradually increased in size. Despite receiving conventional allopathic treatment for over one year, there was no appreciable improvement in wound healing. Given the chronicity and non-healing nature of the lesion, the patient reported to the Outpatient Department of Shalyatantra, Government Ayurveda College, Kannur, and was subsequently admitted for inpatient management.

Personal History

Bowel: Not regular
Appetite: Reduced
Micturition: With in normal limit
Sleep: Disturbed
Diet: Mixed diet
Allergy: Not yet detected
Height: 172 cm
Weight: 65kg

Ulcer Examination

Inspection

- Site – Left heel
- Number – One
- Size – Length 4cm, width 3cm, depth 5cm
- Shape – Elliptical
- Edge – Undermined
- Margin – Well differentiated from surroundings and no inflammatory changes noted.
- Floor – Slough at the central area, remaining part clean and pale red colour.
- Discharge – Serous discharge
- Surrounding area– No discolouration, callus present.

Palpation

- Tenderness – Grade 1 over wound
- Margin – Well defined
- Base – Movable over calcaneal bone
- Bleeding – Absent on touch
- Relation with deepest structure – Related to muscle and calacaneal bone.
- Surrounding tissue – Callus present, no tenderness, no inflammation

Examination of Lymph Node

Inguinal lymph node examined (b/l)– no lymphadenopathy noted.

Examination of Peripheral Nervous System (B/L Lower Limb and Foot)

- Touch – Superficial and deep intact
- Temperature – To hot and cold- intact
- Pain sensation– Reduced over left lower limb, plantar and dorsal aspect of left foot.
- Ankle jerk – Normal
- Knee jerk – Normal
- Muscle power– Muscles contributing to dorsiflexion and plantar flexion, inversion and eversion show muscle power 5/5.

Examination of the Peripheral Vascular System (B/L Lower Limb and Foot)

Inspection

- Healed ulcer scar over the left medial malleolus and right lateral malleolus
- No erythema
- oedema (Left)
- Absence of hair (b/l)
- Shining appearance (b/l)
- Blackish discolouration over the lower one-third of the lower limbs.

Palpation

- Temperature – Mild temperature rise (Left)
- Capillary refill – Normal refilling time (b/l)
- Pitting oedema – Positive (Left)
- Dorsalis pedis artery pulse – Palpable
- Posterior tibial artery pulse – Palpable
- Popliteal artery pulse – Palpable
- Femoral artery pulse – Palpable

Special tests

Buerger's test – Negative

Investigation

1. **Blood parameters –** All values within normal limit
2. **Arterial doppler of b/l lower limb (23.10.2024)**

   Atheromatous wall plaque in left popliteal artery causing moderate stenosis.

   Mild diffuse atherosclerotic changes in rest of lower limb arteries (no flow limiting stenosis)
3. **Venous doppler of b/l lower limb (23.10.2024)**

- No DVT

- Varicosities of superficial venous system due to b/l sapheno femoral junction and multiple perforator incompetence.
- Features of chronic thrombophlebitis changes involving left short saphenous vein.

4. X-ray left foot (lateral view)

No features of osteomyelitis detected.

Diagnosis

Trophic ulcer of the left heel – *Dushta Vrana*

MATERIALS AND METHODS

Table 1: Internal Medicines

Date	Medicine	Dose	Remarks
21/10/24 to 4/11/24	1. *Gugglutiktakam kashayam* 2. *Punarnavadi kashayam* 3. *Triphala guggulu* 4. *Avipathy choornam*	45ml bd 30ml tds 1 bd 5gm hs with hot water.	Mild reduction in swelling of left lower limb.
5/11/24 to 24/11/24	1. *Gugglutiktakam kashayam* 2. *Punarnavadi kashayam* 3. *Triphala guggulu* 4. *Avipathy choornam* 5. *Ela seetashivadi choornam*[6]	45ml bd 30ml tds 1 bd 5gm hs with hot water 5gm hs with *Saindhavam* (1 pinch) and *Tila tailam* (QS).	Swelling completely reduced.
25/11/24 to 30/11/24	1. *Gugglutiktakam kashayam* 2. *Guggulu panchapala choornam* 3. *Avipathy choornam* 4. *Ela seetashivadi choornam*	45ml bd 5gm bd with honey. 5gm hs with hot water. 5gm with *Saindhavam* (1 pinch) and *Tila tailam* (QS) morning daily.	• Wound floor becomes clear, clean and healthy *(Sudha vranam).* • No formation of healthy granulation tissue noted.
01/12/24 to 31/01/25	1. *Gugglutiktakam kashayam* 2. *Guggulu panchapala choornam* 3. *Avipathy choornam* 4. *Ela seetashivadi choornam* 5. *Guggulutiktakam ghritham*	45ml bd 5gm bd with honey 5gm hs with hot water 5gm with *Saindhavam* (1 pinch) and *Tila tailam* (QS) morning daily. 10 gm bd after food	• Healthy granulation tissue appeared. • Rate of granulation tissue formation increased and wound got completely healed.

Table 2: Operative Procedure and Wound Management

Date	Procedure done	Remarks
22/10/24	▪ *Chedanam* (excision) of callus tissue around wound margin till fresh bleeding area is exposed. ▪ Followed by dressing gauze wrung soaked in betadine.	▪ Callus removed and wound margin become clear
23/10/24 to 30/11/24	▪ *Guluchyadi kshalanam* of wound and dressing with *Jathyadi ghritham*.	▪ Wound floor becomes clear, clean and healthy *(Sudha vranam)* ▪ No formation of healthy granulation tissue noted.
1/12/24 to 31/12/24	▪ *Guluchyadi kshalanam* of wound and dressing with *Apamarga ghritham*.	▪ Healthy granulation tissue appeared ▪ Wound depth reduced with considerable range of elevation of floor *(Utsadanam).*
1/1/25 to 31/1/25	▪ *Guluchyadi kshalanam* of wound and dressing with *Shashtika tailam*	▪ Rate of granulation tissue formation increased and wound got completely healed.

Table 3: Panchakarma Procedures

Date	Procedure	Remarks
24/10/24 to 6/11/24	*Udwarthanam* with *Kolakulathadi Choornam (Adhakayam)*	▪ Pain sensation improved over left lower limb. ▪ Temperature rise persists in left lower limb.
7/11/24 to 13/11/24	*Dhanyamladhara (Adhakayam)*	▪ Temperature sets to normal in left lower limb. ▪ Pain appeared over wound and left foot.
14/11/24 to 30/11/24	*Paranthyadi taila*[7] *Dhara* locally over left foot	▪ Pain reduced over wound and left foot.

RESULT

A 72-year-old male with a 1.5-year-old non-healing trophic ulcer over the left heel (4×3×5cm), associated with slough, foul discharge, local warmth, mild oedema, and reduced sensation, was diagnosed with chronic venous insufficiency due to superficial thrombophlebitis of the short saphenous vein. He received a 100-day integrative treatment protocol including regular wound care and *Panchakarma* therapies. Progressive reduction in slough, discharge, inflammation, and ulcer size was observed, with improvement in local temperature and sensation, culminating in complete healing with healthy epithelialization.

Table 4: Result with Remarks

Day	Remarks
0th (Before Excision)	The wound contained unhealthy tissue with slough and foul-smelling discharge and was surrounded by callus formation.
0th (After excision)	Callous tissue excised. The wound edges become fresh with pinpoint bleeding. 5cm × 3cm × 5cm (length × width × depth)
5th	Wound margin clear with slough in floor. Dimensions of wound remains unchanged.
15th	Reduction in slough and foul discharge. 4.5 cm × 3 cm × 5 cm (length × width × depth)
30th	Healthy granulation tissue was present with mild slough on the wound floor. Foul discharge had completely resolved. 4. cm × 2.5 cm × 4.5 cm (length × width × depth)
45th	Healthy granulation tissue persisted with minimal slough on floor. 3.5 cm × 2.3 cm × 4 cm (length × width × depth)
60th	The wound showed healthy granulation tissue without slough. The wound floor was elevated. 3 cm × 2 cm × 3 cm (length × width × depth)
75th	The wound demonstrated healthy granulation tissue and was approximately 80% healed. 2cm × 1.5cm × 1.5cm (length × width × depth)
90th	Continued satisfactory progression of wound healing was noted. 1cm × .8cm × .5cm (length × width × depth)
100th	Complete wound healing was achieved.

Fig 1 before and after excision

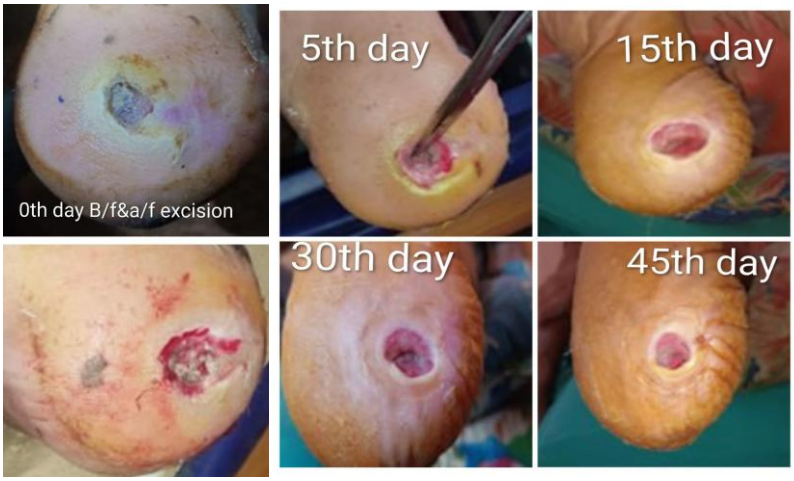

Fig 2 From 5th to 45th day

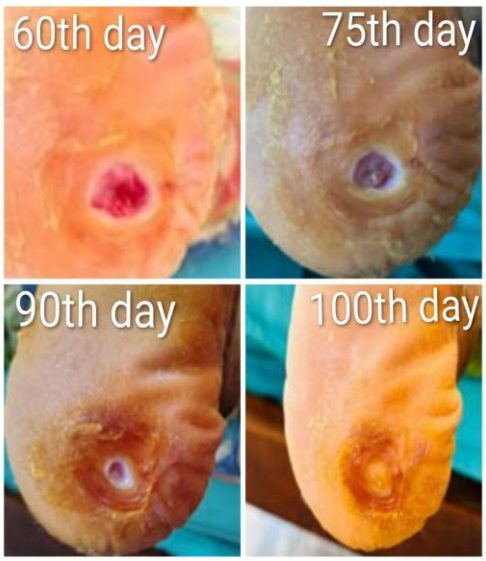

Fig 3 From 60th to 100th day

DISCUSSION

Chronic trophic ulcers are non-healing wounds associated with vascular insufficiency, neuropathy, tissue hypoxia, and venous pathology. In this case, a 1.5-year-old ulcer with chronic thrombophlebitis, venous incompetence, oedema, sensory impairment, slough, callus, foul discharge, and poor granulation correlated well with *Dushta Vrana* described by Acharya Sushruta.

Treatment rationale *(Shashti Upakrama)*

Sushruta advocates *Shodhana*, *Ropana*, and correction of *Dosha* and *Srotas* pathology in *Dushta Vrana*. Accordingly, an integrated protocol of local procedures, *Panchakarma*, and internal medications was adopted.

Role of *Chedana Karma*

Excision of callus tissue removed devitalized tissue and improved local circulation, analogous to surgical debridement.

Role of formulations in wound dressing

- *Guduchyadi Kashaya Kshalana*: Effective *Vrana Shodhana*, reducing slough and foul discharge.
- *Jatyadi Ghrita*: Early-phase cleansing and antimicrobial action with *Lekhana* effect, resulting in a clean wound bed.
- *Apamarga Ghrita*: Promoted *Utsadana* with elevation of the wound floor and ~1.5cm reduction in depth.
- *Shashtika Taila*: Used in the later phase for *Brimhana*, supporting tissue maturation and epithelialization.

Role of *Panchakarma* therapies

- *Udwarthanam*: Improved peripheral circulation and sensory function via *Srotoshodhana*.
- *Dhanyamla Dhara*: Reduced inflammation and local temperature.
- *Paranthyadi Taila Dhara*: Provided analgesia, mild fomentation, and support for healing.

Role of internal medicines

Guggulutiktaka Kashaya, Punarnavadi Kashaya, Triphala Guggulu, and *Guggulu Panchapala Churna* reduced inflammation, corrected venous stasis, and promoted healing. *Avipathy Churna* aided *Anulomana* and metabolism, while *Ela Seetashivadi Churna* supported systemic circulation. In the final phase, *Guggulutiktaka ghritha* was administered as *Vicharana Snehapana* to enhance tissue regeneration and wound maturation.

CONCLUSION

This case demonstrates that chronic trophic ulcers associated with venous insufficiency, oedema, and prolonged tissue hypoxia can be effectively managed using a structured integrative Ayurvedic approach.

Stepwise interventions- *Chedana*, topical *Vrana Shodhana* and *Ropana*, and *Brimhana* therapies- facilitated removal of devitalized tissue, improved granulation, and supported epithelialization. Adjunctive *Panchakarma* procedures enhanced peripheral circulation, reduced local inflammation, and corrected microcirculatory disturbances, while internal medications promoted detoxification, anti-inflammatory action, and tissue regeneration. The observed resolution of slough and oedema with restoration of healthy wound tissue highlights the clinical relevance of classical Ayurvedic principles in managing *Dushta Vrana* and chronic non-healing ulcers as a complementary approach to conventional wound care.

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