

**AYURVEDIC MANAGEMENT OF *DUSHTA VRANA* VIS-À-VIS
DIABETIC FOOT ULCER – A CASE STUDY**

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ABSTRACT

Diabetic foot ulcer has been a challenge to be addressed since there is deficiency of growth factors and impaired immunity, which can lead to amputation if timely intervention is not done. *Ayurveda* has considered such ulcers as *Dushta Vrana* and many modalities like oral medication, blood-letting(*jaloukacharana*), wound debridement etc. have been adopted for their management. Present case study deals with a male patient aged 47years, having a diabetic foot ulcer on the dorsum of left foot with gangrene of the 4th toe. He already had wound debridement due to swelling in left foot under SA. The patient was K/C/O Diabetes mellitus and IHD S/H/O PTCA. We gave him adjuvant Ayurvedic medicines to control his blood glucose level. The wound also managed on Ayurvedic treatment modalities. This treatment resulted in complete wound healing.

KEYWORDS: *Dushta vrana*, *Jaloukacharana*, Diabetic foot ulcer.

INTRODUCTION

Prameha in Ayurveda can be correlated to Diabetes mellitus and Prameha pidaka with Diabetic foot ulcer(DFU). It comes under the category of *Dushta vrana*. DFU is a spectrum of foot disorders ranging from ulceration to gangrene occurring in diabetics as a result of

peripheral neuropathy or ischemia or combination of both.^[1] It is seen in 15-25% of diabetic patients during their lifetime.^[2] It is common in 45-65 years of age.^[3] Patients with diabetes are four times more likely to develop peripheral arterial disease. It is caused due to increased glucose in the tissue which precipitates the infection, Diabetic microangiopathy which affects microcirculation, increased glycosylated hemoglobin decreases the oxygen dissociation, increased glycosylated tissue protein decreases the oxygen utilization, Diabetic neuropathy involving all sensory, motor and autonomous components and associated atherosclerosis.^[4] According to Acharya sushruta, due to weakness of Rasayanis(channels of Rasa) the doshas do not get accumulated in the upper parts of the body, hence Prameha pidaka develops in the lower parts of the body.^[5] So commonest site for Diabetic ulcer to occur is Foot.

Acharya Sushruta has mentioned Shashti upakrama for the management of Vrana.^[6] These upakrama pacify vrana shopha, and prevent further deterioration, does vrana shodhana and vrana ropana. Raktamokshana is one among the treatment modalities for management for Dushtavrana.^[7] Basti is specially indicated in the wounds situated on lower parts of the body.^[8]

CASE REPORT

A gentleman aged 47years, came to our hospital with the complaints of swelling, foul smell and non-healing wound over the dorsum of the left foot and 4th toe dry gangrene since 20 days.

History of presenting illness

As per statement of the patient he was apparently normal 20 days ago. Then he noticed small wound over the left foot and swelling. For this he underwent wound debridement in private hospital 15 days back. But ulcer wasn't showing any tendency towards healing. The patient is K/C/O DM type2, and IHD under regular medication since 5 years. Now he got admitted for wound management. No history of amputation.

Family History- No relevant history.

Personal History

Sleep-disturbed, Appetite- reduced, Bowel- regular, Habits- no addictions
BP-140/80. PR-78bpm, weight-72kgs, Height-170cms

His laboratory investigations are as follows

HB%-10.2 mg/dl, WBC-11000, Urea-24mg/dl, Creatinine-0.7mg/dl, Urine routine – albumin-nil, sugar-nil, pus cells-3to4, CRP-1:16).

Systemic Examination

CVS: S1 S2 heard CNS: Conscious and oriented time, place and person RS: NVBS

PA : Soft and non tender

Local Examination**1) Left Lower Limb**

- a) Inspection: No skin colour change / hair loss noted below the knee joint / no erythema, swelling-present, 4th toe gangrene noted which is Dry in Nature with clear line of Demarcation
- b) Palpation: Raise of temperature; dorsalis pedis, posterior tibial pulse-present, Anterior Tibial pulse - present, Popliteal pulse - present, Femoral pulse - present
- c) Sensation: Monofilament test- diminished sensation. Vibration (tuning fork)- diminished., Proprioception-impaired ankle jerk reflex- diminished.

2) Ulcer Examination**Inspection**

Site – Dorsal aspect of left foot, Size & shape- 14.5x5.5cm, irregular in shape, 3mm depth, number -1 Onset- spontaneous, Edge and margin- inflamed, irregular border with sloping edge, Floor – pale, slough, Base-exudate present with no fixity to the underlying tissues with Induration, Discharge- purulent.

According to **wagner's ulcer classification system, grade 2**

Palpation

Skin temperature – Cold

Capillary filling time -2 sec

Tenderness-nil

Induration : Seen in the skin surrounding the ulcer

Samprapti Ghataka

Hetu – Abhigata, uncontrolled glucose level

Purva Rupa- Daaha, Gouravam, Ruja

Dosha - Vata (Vyana, Apana, Samana), Pitta (Pachaka), Kapha (Avalambaka)

Dushya - Rasa, Rakta, Mamsa, Meda, Kleda

Srotas - Annavaaha, Medovaha, Rasavaha, Raktavaha

Roga Marga -Bahya

Rogibala – Avara Hetubala - madhyama Agni -Vishama

Koshta-Mridu

Chikitsa

Initial plan of treatment was to disarticulate the gangrenous 4th Toe but as the patient was Anaemic, we did 2 Pints of PRBC Transfusion. Later, After two days of admission he underwent 4th toe disarticulation under local anesthesia (ankle block).

Then wound was treated with Ayurvedic line of management mentioned by Acharya Sushruta. Treatment protocol includes Jaloukacharana (raktamokshan), Manjishtadi Kshara Basti was given to convert Dushtavrana into Shuddha vrana. Oral medications and daily wound dressing with vranaharini taila and removal of slough tissue on alternate days. Kshara Lepa was used for Vrana Shodhana and Ropana whenever we noticed excess slough in the ulcer. Kshara lepa was also done to control the growth of Hypergranulation tissue wherever it was noted, we did ksharalepa on that Hypergranulated area.

Follow up after treatment

After treatment, the patient was called for follow-up after discharge on every alternate day for wound management, with continuation of maha manjishtadi kashayam and Triphala guggulu as internal medicine. The patient was thoroughly educated for hygiene, to follow Pathya Ahara and Vihara and proper glycaemic control. By the end of 76 days, now the pt is having healthy and healing status and reduced wound size is almost on the verge of complete healing. This was a case managed completely on Classical Ayurveda treatment modality which prevented the patient into going from Below Knee Amputation and thus saving patients limb.

DISCUSSION

Chedana(Disarticulation) is the line of treatment for kotha(Gangrene) to prevent further development of gangrene.^[9] So here disarticulation of 4th toe with wound debridement was done. Next goal of treatment was to convert the Dushtavrana into Shuddhavrana by adopting Sushrutokta vrana chikitsa i.e, Shashti upakrama (principles of wound management) like

Chedana, Raktamokshana, Manjishtadi ksharabasti, Kshara lepa and Jaloukavacharana. Since Acharya Sushruta considers Rakta as Chathurtha Dosha and gives prime importance to Rakta in the treatment of Vrana. We had opted the same principle for the correction of this Anaemic status by 2PRBC transfusion and followed by Raktavardhaka aushadha, which helped a lot in wound healing in this case. This same principle is also told in contemporary science of medicine, where they consider anaemia as one of the key factors which delays wound healing. Correction of circulatory deficit by Jaloukavacharana and Manjishtadi ksharabasti. Ksharalepa to remove slough and hypergranulation tissue and some oral medicines for glycemic control.

CONCLUSION

Diabetic foot ulcer patient as a complication loses his limb. But by adopting Ayurvedic management can save limb and prevents patient going Amputation. These shasthti upakramas adopted at appropriate time can save the limb from being amputated and it will have a huge impact on patient's day today living.



Fig 1. At the time of admission



Fig 2. After disarticulation and debridement



Fig 3. After 1 month of treatment.



Fig 4. After 2 months of treatment.

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