

AYURVEDIC MANAGEMENT OF DIABETIC FOOT - A CASE REPORT

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ABSTRACT

Diabetic foot is a serious complication of diabetes that is not treated correctly and might lead to serious infection further leading to amputation, risking life. The present study has been carried out to prove the efficacy of *Ayurvedic* drugs i.e., *Shodhan Tail and Ropan Tail* as a local application and *Chandraprabha Vati, Gokshuradi Guggul, Gudmar Ghanavati* and *Arogyavardhini Vati* combination of these drugs are used orally in the management of diabetic foot, which can help reduce the infection and further amputation and increasing the chances of wound healing. Diabetic foot is a specific form of complication of Diabetes Mellitus (DM), a major cause of amputation of the affected area, death, and disability among diabetics. In Ayurveda, we can compare this disease with *Dushtavrana* (infected wound), as the *Lakshanas* (symptoms) of the disease are similar to *Dushtavrana*. The measures are taken to control the sugars of the patient, however, to prevent further aggravation and worsening of the patient's condition, foot amputation is considered the final decision. But Ayurvedic intervention proves to be a silver lining in the dark cloud of diabetic complications. If done with proper medical care and all *Pathya* (do's) followed by the patient, amputation of the foot can be avoided with visible healing of the skin.

Keywords: Diabetic foot, *Dushtavrana*, Amputation, *Shodhan Tail*, *Ropan Tail*, *Chandraprabha Vati*, *Gokshuradi Guggul*, *Gudmar Ghanavati* and *Arogyavardhini Vati*.

INTRODUCTION

Diabetic foot is usually caused by a combination of three factors- ischemia secondary to atheroma, peripheral neuropathy which leads to trophic skin changes, and immunosuppression caused by an excess of sugar in the tissues which predisposes to infection^[1]. Diabetic foot management in contemporary science includes drainage of pus, debridement of dead tissues with local amputation of necrotic digits, and antibiotics. Approximately 8% of diabetic patients have a wound/ ulcer and 1.8% have an amputation done^[2]. In Ayurveda, *Shasti upakrama* (sixty methods) has been mentioned to treat different types of wounds based on their presenting symptoms^[3]. So, the first principle is to treat any infection; the second is to establish whether any associated ischemia is amenable to revascularization; the third is to keep forces applied to the ulcerated part to a minimum; and the fourth is to improve the condition of the wound or ulcer by wound-bed preparation, topical applications, and removal of callus. Once the wound has healed, we should try to prevent ulcers prevention. The present study has been carried out to observe the efficacy of ayurvedic drugs in the management of diabetic foot/wound. *Ayurvedic* formulation of *shodhan tail* and *ropan tail* along with oral formulations given to the patient for the 1-month duration marked improvement was found in the patient's general physical well-being together with a reduction in symptoms.

Aim and Objective: To assess the efficacy of Ayurvedic therapy in the diabetic foot.

Material and Methods

Type of Study: A single observational case study.

Study Centre: Y.M.T. Ayurvedic Medical College and Hospital Kharghar, Navi Mumbai.

Case Presentation: A 47 yr old patient visited the OPD of *Kayachikitsa* with the following complaints

Complaints of:

- weakness
- lethargy

- infected wound at big toe of Lt foot
- Hyperglycemia
- Tingling in B/L foot
- Increased frequency of Micturation
- nocturia

All above complaints were observed for 4-5 months

History of Present Illness:

This 47 yr old patient came to our hospital with complaints of weakness, lethargy, infected wound at big toe of Lt foot, Hyperglycemia, Tingling in B/L foot, and Increased frequency of Micturation, nocturia, etc presented to OPD in YMT Ayurvedic medical college and hospital for the treatment. She was then investigated and diagnosed with Diabetic foot. She was treated as a part of a clinical study (thesis work) for 1 month. She is managed well with *chandraprabha vati*, *gokshuradi guggul*, *Arogyavardhini vati*, *Gudmar Ghanavati*, and dressing with *Vranaropak* and *Vranashodhaka taila* despite high values of HBA1c. Follow-up was taken regularly.

History of Past Illness: The patient was not having any previous medical history.

History & Lifestyle: Religion: Hindu, Education: 10th, Occupation: Housewife, Marital status: Married, Socioeconomic status: Middle class, Associated diseases: nil, Family history: Diabetes mellitus, IHD, Diet: Veg and Non-veg, Type of Ahara: *Adhyashana*, *Madhurasyata*, *Dugdha Janya vikruti adhika Sevan* Dominant Guna in diet: *Guru*, *Snigdha*, Dominant Rasa in diet: *Madhur*, *Lavan*, Sleeping hours: 1 hour in daytime and 7-8 hours in the night

General Examination of Patient: Pulse: 86/min, BP: 140/90 mm of Hg, Height: 148 cm, Weight: 51 kg, Temp: 98.5 °F

Ashtavidha Parikshan: *Nadi:* *Kapha-vataj*, regular, *Mutra:* increased urine frequency, nocturia, *Mala:* Unsatisfactory; Constipated, *Jivha:* *Saam*, *Shabda:* *Spashta*, *Sparsha:* *Anushna*, *Druk:* *Prakrut*, *Aakruti:* *madhyam*

TREATMENT: *Vranaropak* and *Vranashodhaka Taila* for dressings along with ayurvedic formulations like *Chandrabha Vati* ^{[4][5]}, *Gokshuradi Guggul* ^[6], *Gudmar Ghanvati* ^{[7][8]}, *Arogyavardhini Vati* ^[9] for oral medications to control diabetes.

PATHYAPATHYA:

DO's

- 1 warm water for drinking
- 2 salt-restricted diet
- 3 veggies: bottled guard, bitter guard, ridge guard, smooth guard, pumpkin which contains water: easy for digestion.
- 4 Walking 30 min every day
- 5 Strict use of shoes to avoid barefoot contact with the ground

DON'Ts

- 1 spicy oily food
- 2 Fast food
- 3 AC exposure

- 4 Day sleeping and going to bed immediately after just having food
- 5 Barefoot movements


Management and Outcome: Before starting the *Ayurvedic* treatment the patient was examined thoroughly keeping *Ayurvedic* principles of treatment in mind. The patient was given above mention *Ayurvedic* treatment for 1 month. He was advised to follow certain dos and don'ts regarding his diet and routine during the treatment and kept under observation. He had taken all allopathic medication for this, but no marked improvement was observed. He was examined before starting *Ayurvedic* treatment and after treatment, all this c/o was re-evaluated; After 1 month the patient showed very promising results with relief in his complaints and all the data are given in the table at the end of the article.

RESULT: After 1 month treatment

Table 1: Symptomatic Assessment:

Symptom	Before treatment	After treatment
weakness	Present +++	Present +
lethargy	Present+++	Present ++
the infected wound at big toe of Lt foot	Of size around 2 cm diameter	Of size around 1 cm in diameter
Tingling in B/L foot	Present +++	Present +
Increased frequency of micturition	More than 10 times a day	7-8 times a day
nocturia	6-7 times per night	3 times per night

Table 2: Objective Assessment:

INVESTIGATION	1-12-21	1-1-22
HbA1c	13.1	12.5
PICTURE		

DISCUSSION

In diabetic patients, microcirculatory damage is apparent in the skin and subcutaneous tissues, leading to impaired wound healing. An intact microcirculation is required for tissue nutrition, removal of waste products, inflammatory responses, and temperature regulation therefore, logically any defect in microvascular function adversely affects tissue repair. Tissue oxygenation is a prerequisite for the reparative process. So, the local application of *Vranaropaka* and *Vranashodhaka* oils are much helpful in removing congested blood from local lesions quickly and from general circulation also. Due to the process of rubbing, dead cells with a superficial layer get removed from the skin. Moreover, oral medication helps in the regeneration of new vessels with pure blood circulation at the site of the lesion and may clean up the real skin layer. Hence this way Ayurvedic principle provides an effective, easily available method which is having microcirculation restoration effect, for wound healing.

CONCLUSION

Even after following standard treatment, subsequent Diabetic foot ulcers are common, with a high recurrence rate, poor hyperglycemic controlled to vascular and neuropathic deformities and ulceration, several adjuvant therapies have been studied so far to reduce Diabetic foot ulcer healing time and amputation rates, but there is still space for improvement in Diabetic foot ulcer management. Hence by adopting ancient wound management, the risk of ulceration and its associated morbidities can be reduced.

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