

CASE STUDY

Integrative Approach Ayurvedic Management of Diabetic Foot Ulcer: A Case Study

***Jigar Darji, Parikshit Shirole**

Dept. of Shalyatantra, Parul Institute of Ayurveda, Waghodiya, Vadodara, Gujarat, India.

*Corresponding Author:

Dr. Jigar Darji,

Email ID: jigardarji024@gmail.com

ABSTRACT

This case study suggests how an integrated Ayurvedic approach may effectively treat a diabetic foot ulcer (DFU). With standard therapy, a 60-year-old man with a chronic, non-healing ulcer had treatment with oral Ayurvedic medications, Triphala Kwatha Parisheka, and Apamarga Kshara Taila dressing. Significant wound healing was accomplished in 15 days, and by one month, the wound was completely closed. Granulation was achieved, infection was decreased, and patient outcomes were enhanced by the combination of systemic and local therapy.

Keywords: Apamarga Kshara Taila, Triphala Kwatha, Ayurveda, diabetic foot ulcers

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INTRODUCTION

Diabetes can cause nerve damage (peripheral neuropathy) and poor blood flow (peripheral artery disease), leading to diabetic foot ulcers. In India, about a quarter of the 62 million people with diabetes suffer from these ulcers. Diabetic foot ulcers are one of the most serious complications of diabetes, often leading to amputation. Common causes of these ulcers include calluses, blisters, wounds, burns, and ingrown toenails. People with diabetes may not feel these small injuries due to nerve damage, which can allow ulcers to get bigger before they are noticed.

Studies show that 90% of diabetic foot ulcers are due to nerve damage alone or combined with poor blood flow [1].

Other factors include foot deformities and an unstable walking pattern, which can increase pressure on the feet, leading to calluses and ulcers that won't heal. Managing these ulcers requires addressing all factors that affect healing. Key treatments include cleaning the wound, using the right dressings, reducing pressure on the affected area, controlling blood sugar levels, and treating infections with antibiotics [2, 3]. More advanced treatments, like growth factors, bioengineered skin, negative pressure wound therapy, and hyperbaric oxygen therapy, may also be used to speed up healing. Good foot care and education are essential to prevent ulcers and their complications. In Ayurveda, diabetic foot ulcers are similar to Madhumeha Janya Dushtavrana, and Sushruta suggested specific treatments based on the type of wound.

PATIENT HISTORY

A 60-year-old retired man came to our Shalya Tantra OPD with a non-healing ulcer on the lateral side of his right foot and fluid discharge from the sore, which had been present for four months.

He also had swelling in both feet for the past month. He had been taking oral diabetes medication (Metformin 500 mg, three times daily before meals) and had a known diagnosis of diabetes. Three months ago, he was treated at a government hospital where the wound was surgically cleaned and dressed with povidone-iodine for two and a half months, but there was little improvement. He needs ayurvedic treatment so he came to us.

Clinical findings:

The patient was in good health, well-oriented, and showed no signs of jaundice or anemia. No enlarged lymph nodes were found. Both feet had swelling. His vital signs were normal.

Local examination:

The ulcer was located on the lateral side of the 5th tarsometatarsal joint of the right foot, measuring 2 cm by 2 cm, with a rounded shape.

No discharge or smell was present. The floor had some slough, and the edges were sloped and unclear. The base contained muscle tissue. The surrounding skin was swollen, thickened, and had a dark color. There was no tenderness. The pulses in the dorsalis pedis and posterior tibial arteries were easily felt. There was total loss of feeling in the legs. The clinical findings suggest a grade I Wagner ulcer.

Blood tests are summarized in the table below.

Table 1: Hematological Investigations

Sr no.	Investigations	Before Treatment	After Treatment
1.	HB	13.0gm%	13.9gm%
2.	RBCs	2.20mill/c.mm	2.25mill/c.mm
3.	WBCs	6200/c.mm	6820/c.mm
4.	ESR	57mm	22mm
5.	FBS	226mg/dl	186mg/dl
6.	PPBs	250mg/dl	198mg/dl



Fig 1: A. Diabetic Foot Ulcer B: After treatment, completely recovered and healed

Therapeutic plan:

Parisheka Triphala Kwatha was used as an external therapy for five minutes, and then Apamarga Kshara Taila was applied locally to the wound while it was aseptic. Cleaning the wound, getting rid of dead tissue, and encouraging healing were the goals of the external therapy. Sanivani Vati (125gm), Punarnavashtaka Kwatha (20ml twice day on an empty stomach), Haritaki Churna (5gm before sleep with warm water), and one tablet four times a day after meals with warm water were among the oral Ayurvedic drugs given to patient. After taking all of the Ayurvedic treatments for a month, the patient was permitted to resume using their oral hypertension and hypoglycemic prescriptions. Pathya-Apathya guidelines were given to the patient in order to aid in healing and prevent future issues. Additionally, switching to diabetic microcellular rubber (MCR) shoes was recommend Outcome measurements and follow-up:

After 15 days of therapy, both local and systemic Ayurvedic treatments for diabetic foot ulcers caused by calluses helped the wound heal completely.

The patient had a non-healing callus DFU on the right foot's lateral side when they first came in. After seven days of treatment with Triphala Kwatha Parisheka, Apamarga Kshara Taila dressing, and internal medicine, the exudation stopped completely, and the wound had good granulation. The size of the wound also reduced by up to half compared to the previous treatment. After 15 days of therapy, the wound was fully healed and covered with pinkish skin. [Fig. 1 a, b] By the end of the first month, the patient showed complete relief.

DISCUSSION

DFUs linked to ischemia and neuropathy require specific attention and the right medication. This patient's major objectives were to maintain blood sugar levels and accomplish full wound healing. Due of

diabetes's susceptibility to infections, the second goal was to stop the worsening of wound conditions. Sushruta mentions Parisheka as one of the Shashti Upkramas. In this instance, the Vrana Shodhan and Vrana Ropan effects were achieved by using Triphala Kwatha. With its antibacterial or antifungal properties, Triphala Kwatha is a well-known medication for reducing the microbial burden and stopping more infections. Triphala's medicinal ingredients, which include chelulonic acid, flavonoids, tannins, and polyphenols, stimulate immunity, which aids in the processes that heal wounds [6]. Apamarga Kshara Taila is an oil preparation based on research that may assist promote healthy granulation and may have an impact on autolytic tissue debridement due to its alkaline properties. In summary, Chedan, Lekhana, and Ropan are used in Apamarga Kshara Taila's multi-model activities because of their inherent ability to aid in wound healing [7]. When taken orally, Haritaki Churna promotes cellular development by acting on the body's metabolic level, which can also aid in eliminating harmful catabolites. Once more, phenolic acids and flavonoids, the active ingredients in haritaki, are well-known for their antioxidant properties, which means they boost immunity and aid in wound healing either directly or indirectly [8]. Punarnavashtaka Kwatha's anti-inflammatory, antioxidant, and immunomodulatory properties helps in healing of wounds [9]. Because Sanjivani Vati acts on all Agni, it functions at a metabolic level that aids in the production of high-quality Dhatu formation in the body through cellular anabolic and catabolic activities, increases healthy tissue at the wound site, improves nutrition in the body by systemic effects, and speeds up wound healing.

CONCLUSION

This case report shows an effect of systemic and localized Ayurveda treatment in the management of DFUs.

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