

AYURVEDIC TREATMENT IN THE MANAGEMENT OF DIABETIC FOOT ULCER: A CASE STUDY

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ABSTRACT

The most common complication of diabetic mellitus is non healing diabetic foot ulcer (DFU). In Ayurveda, It is correlated with *Madhumehajanya Dushtavrana*. Out of 62 million diabetics in India, 25% people are affected with DFU. Out of which, most of patients had to undergo amputation of lower limb. This case study presents complete healing of DFU in 2 months of local as well as systemic management through Ayurveda. In this case little toe of foot was amputated before 2 years. At the same site DFU was formed in between amputated site and ankle joint. In local management, cleaning of DFU was done by *Triphala qwatha* followed by dressing with *Vranashodhan taila* at morning and dressing with BC-56 cream was done at night. Systemic management was done with *Asanadi quatha*, *Kaishor guggula*, *Triphala guggula*, *Mamejawa ghanawati* and Grab capsule. Some medicines were added according to symptoms. This

case of DFU is completely healed within 2 months, which is very positive outcome in very short time through Ayurved treatment.

KEYWORDS: Diabetic foot ulcer, Ayurveda, *Madhumehajanya Dushtavrana*, *Vrana*.

INTRODUCTION

A diabetic foot ulcer (DFU) is the outcome of peripheral neuropathy, peripheral vascular disease and poor foot care in the chronic diabetic patients. Out of 62 million diabetics in India, 25% people are affected with DFU.^[1] DFU is one of the major complications of DM that usually fail to heal and May it leads to amputation of parts of lower limb. Small injuries like cuts, burns and blisters may lead to DFU. Diabetic patient is unaware of these minor

injuries due to peripheral neuropathy, lack of awareness leads to the development of ulcers and it's enlarged before they are noticed.^[2] The most important goal in these patients is to close the wound as early as possible. According to modern science control of blood sugar, antibiotics for managing infections, wound debridement and appropriate dressings are important components in the management of DFU. Advanced therapy like Negative pressure wound therapy, hyperbaric oxygen therapy, bio engineered skin plays important role in healing of DFU.^[3]

In Ayurveda DFUs are correlated with *Madhumehajanya Dustavrana*. Sushruta stated *shashti Upakrama* for treating different types of wounds on the basis of its clinical presentation.^[4] One of *upkrama* known as *Parisheka* in *Vrana* is very important. *Tripala kwatha* was commonly used for *parisheka* in the *dushta vrana*. Previous studies and clinical experience of *Vranashodhana taila* in non healing ulcer was known. Systemic Ayurvedic treatment was also proven beneficial in DFU. In this case study, management of DFU has been described with the local as well as systemic Ayurvedic treatment.

Patient's information

A 74 year old female patient approached to OPD of Shree Vishwabhairav Ayurved Chikitsalaya with a non healing wound of the left foot. Little toe of the left foot was amputated before 3 months. Current wound was extending from amputated site of little toe to ankle joint laterally. Watery discharge from the wound for 3 months along with swelling on the foot was seen. The patient was known case of diabetes mellitus since last 15 years. Patient was on the oral hypoglycemic medications. For last 3 months patient had taken allopathic medicines and done local dressing with providone iodine. But she noticed no signs of improvement in healing then patient come to Ayurveda clinic.

Clinical Findings

On general examination, the patient was well oriented, conscious and fit with no icterus. There were no enlarged inguinal lymph nodes. Edema was present on the left foot only. All vitals of the patient were observed within normal range.

Local Examination

Location- extending from amputated site of little toe to ankle joint laterally. Size- 15x6 cm, floor- slough, Shape- elliptical, Margin- Not defined, Discharge- watery, Base- muscle, Odor- absent, surrounding skin- edematous and black colored discoloration, Tenderness- absent.

The clinical findings suggested a diabetic foot ulcer with grade II Wagner Maggit classification of the DFU.

Blood investigations

Hb- 9.8gm%, ESR- 118mm/hr, Sr. creatinine- 0.8 mg/dL, HIV-Negative, HBsAg- Negative, BSL(R)- 243 mg/dL.

Therapeutic Plan

Local Treatment

Table I.

	Chikitsa Procedure	Method of Application	Days of Treatment	Mechanism of Action
1)	<i>Vrana dhavana with Triphala qwatha</i>	Douching of ulcer were done with luke warm <i>Triphala qwatha</i>	Initially for 30 days 2 times in a a day and then for once in a day.	Prevents bacterial growth, increase collagen formation and promotes dermal wound healing
2)	Dressing with <i>Vranashodhana taila</i> and then <i>bandhana</i>	Applied with gauze dipped in <i>Vranashodhana taila</i>	On each day at night for 60 days	Useful in cleaning and healing of wound
3)	Dressing with BC 56 cream (L'mar company)	Applied on the wound after douching with <i>tripahala qwatha</i>	On each day at morning for 60 days	antiseptic, antibacterial & antifungal, helps in healing the wound.

Systemic Treatment

Table II.

	Name of the drug used Orally	Dose	Days of treatment	Mechanism of Action
1)	<i>Kaishor guggula</i>	250mg- 2 tab BID after meal	60 days	Anti-inflammatory, antibacterial property
2)	<i>Triphala guggulu</i>	250mg- 2 tab BID after meal	60 days	Anti-inflammatory, immunomodulator, antibacterial property
3)	<i>Mamejava ghanavati</i>	250mg- 2 tab BID after meal	60 days	Antimicrobial, antihelminthic, BSL regulator
4)	<i>Asnadi kwatha</i>	20 ml BID after meal	60 days	BSL regulator, <i>raktaprasadak</i> , Antihelminthic
5)	Capsule Grab (Green remedi)	2 capsules BID after meal	60 days	Useful in wound healing
6)	<i>Punarnavasava</i>	20 ml BID after meal	30 days	Reduce edema

The treatment protocol was established on the basis of Ayurvedic principles for wound management. Along with these medicines, patient was advised to take regular hypoglycemic

drugs. During complete treatment patient was also advised about *Pathya Apathya* to overcome wound healing quickly.

Follow up

After one month of treatment there was healthy granulation formation with clear margins. There was no any discharge from the wound. The size of the wound was decreased with decrease in black discoloration around the wound. But there was swelling around ankle joint and above the wound. So *Punarnavasava* 20 ml for 2 times after both meals was advised. With only this addition above described treatment was repeated.



Fig. I.

Outcome measurements and follow up

After 2 months of treatment wound was totally healed with reduction in wound size. After healing, it was looking like sutured wound and having small scar at the site of wound. The patient was living symptom free for the last 2 months and there was no recurrence of the wound. (Fig. I)

DISCUSSION

In case of DFU, it is very important to give attention towards appropriate treatment and specialized care. The main goal of this patient was to stop further wound degradation and complete wound healing.

Sushruta mentioned *Parisheka* as one of the *Shashti upakrama* in *Vranachikitsa*. *Triphala qwatha* is very proven drug commonly used for *Vrana shodhana* and *Vrana ropana* effect. It is used in this case for *Parisheka*. *Triphala* possesses anti antimicrobial and antifungal property. It also increases collagen formation and dermal wound healing. *Vranashodhana taila* contains *Nirgundi swarasa*, *Karveer swaras*, *Haritaki kwatha*, *Nimbapatra swaras*, *Dhatu swaras* and *karanja taila*. It is the product of Ayurved Rasshala Pune. As its contents proves its efficacy in the treatment of DFU. It is very useful in cleaning and healing the wound. BC-56 cream contains *Yashtimadhu*, *Sal*, *Neem*, *Karanj*, *Chalmogra*, *Malkangani* and *Jasad bhasma* in a cream a base. All contents of the cream are useful as antiseptic, antibacterial and antifungal. It also helps in healing the wound.

Capsule Grab is a proprietary medicine of Green remedies pharmaceuticals. It contains *Vranaphari Rasa*, *Triphala Guggula*, *Gandhaka Rasayana*, *Aarogyavardhini rasa*, *Guduchi* and *Manjistha*. All these contents are very useful in faster wound healing. Other internal medicines like *Kaishor guggula*, *Triphala guggula* are well known for their anti-inflammatory and anti bacterial properties. *Mamejava* has antimicrobial, antihelminthic and anti tumor property. It is also useful to reduce blood sugar level. *Asnandi qwatha* is very useful in diabetes, anemia, eczema, psoriasis. It is also useful as antihelminthic drug.

CONCLUSION

This case study shows a significant effect of systemic and localized Ayurvedic treatment in the management of diabetic foot ulcer. Thus it proved the potential of Ayurvedic principles in the management of wound healing. It also proved that DFU can be healed with strict BSL control and without local and systemic antibiotics.

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