

Vipareeta Malla Taila in the management of diabetic ulcer: A case report

Case study

Dhyan Surendranth^{1*}, Prasanna N Rao², Gopikrishna BJ³, Avnish Pathak⁴

1. PG Scholar, 2. Professor and Principal, 3. Professor and H.O.D, 4. Associate Professor,
Department of Shalya Tantra, Sree Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, Hassan.

Abstract

Wound management is a common problem, encountered by medical practitioners all over the globe. The development and progression of a diabetic ulcer is made complex by a wide-range of diabetic complications. Without early and optimal intervention, the wound can rapidly deteriorate, leading to amputation of the affected limb. *Vipareeta Malla Taila* is an oil used in the management of chronic infected wounds mentioned in Ayurveda. A 46 year old Indian man presented with a boil over his left foot with a history of diabetes. After routine examination he underwent incision and drainage followed by daily dressing with gauze impregnated with *Vipareeta Malla Taila* for 28 days during which his wound healed completely. Sushruta (500BC) was the first to elaborately explain the management of wounds, wherein he explained the use of medicated oils in the management of chronic infected ulcers. *Vipareeta Malla Taila* helped in wound healing inspite of raised blood glucose levels throughout the treatment duration. Healing of a diabetic ulcer is a long process requiring constant vigil. With the application of *Vipareeta Malla Taila*, the wound responded by clearance of slough, promotion of healthy granulation and eventual epithelialization in a very short duration.

Keywords: *Dushta Vrana*, Diabetic ulcer, *Vipareeta malla taila*, wound healing, Wound management, Web space fungal infection.

Introduction

An ulcer is defined as the break in the continuity of the surface epithelium.(1)

The diabetic complications in wounds that are commonly encountered include altered neutrophil function, diminished tissue perfusion and defective protein synthesis presents practitioners with specific and unique management challenges.(2) Diabetes always presents with an unfavorable environment for wound healing as the tissues serve as a good culture medium for bacterial growth, hence repeated infections always inhibit the natural healing process.

Micro angiopathy leads to hampering of micro circulation which in turn could lead to hypoxia and ischemia. Other causes for ischemia to develop is diabetic atherosclerosis. Sensory neuropathy causes the bearer to have decreased sensation to minor injuries, which gradually goes unnoticed and leads to infection. Motor neuropathy causes dysfunction of the muscles causing arches to develop in the foot and joint. Furthermore, excessive dryness due to autonomic neuropathy leads to a defective skin barrier.(3)

Vipareeta Malla Taila from *Vangasena Samhita* is a unique formulation made in mustard seed oil base and management of the diabetic ulcer is expected by its mere application.(4)

Presentation of case

A 46 year old Indian man, owner of a printing press by profession, with previous history of medical renal disease, Hypertension and diabetes mellitus presented to the OPD of our hospital complaining of a boil on the dorsal aspect of his left foot (Fig. 1) associated with foul discharge and swelling in the shin region of the same foot with reddish discoloration (Fig. 2) and no complaints of pain or burning sensation. There was fungal infection in the 3rd (Fig. 3) and 4th web space.

On examination, he was febrile and cellulitis features were observed in the left lower limb with raised temperature and pitting edema. On the dorsum of his left foot an abscess was found extending into the 4th web space. His other vital signs were normal and laboratory findings revealed leukocytosis, a raised ESR, high blood glucose profile and raised RFT.

An abdominal ultra sound showed bilateral ectopic kidneys at iliac region.

An arterial Doppler study of left lower limb revealed no evidence of hemodynamically significant stenosis/ occlusion. Atherosclerotic changes in the left lower limb arterial system. Subcutaneous edema of leg and foot were present.

*Corresponding Author:

Dhyan Surendranath

Post Graduate Scholar (MS),
Department of Shalya Tantra,
Sree Dharmasthala Manjunatheshwara College of
Ayurveda & Hospital, Hassan.

Email: dhyan88@gmail.com

Phone no. +91 - 9164353330

Fig. 1: Left foot with pus laden abscess cavity, partially ruptured with oozing of pus



Fig. 2: Left lower limb with cellulitis features over shin region.



Fig. 3: Fungal infection in 3rd and 4th web space



As per the University of Texas Wound Classification System, the above wound can be classified as Grade 1, Stage B.(5)

He was hospitalized and treated with IV antibiotics after culture and sensitivity reports had arrived, followed by incision and drainage for the abscess. For wound dressing a sterile gauze dipped in *Vipareeta Malla Taila* was used and bandaging was done. *Vipareeta Malla Taila* was prepared by *Acconitum ferox* (Wall), *Gloriosa superba* (L), *Saussurea lappa* (Wall) , *Vitex negundo* (L), *Plumbago zeylanica* (L), *Alium sativum* (L), *Tephrosia purpurea* (L) , *Ferula asafetida* (L) processed in mustard oil as per the standard technique mentioned in THE AYURVEDIC PHARMACOPOEIA OF INDIA under *Taila*.(6)



Fig. 4 Day 1



Fig. 5 Day 5



Fig. 6 Day 10



Fig. 7 Day 15



Fig. 8 Day 20



Fig. 9 Day 28

The same (dressing) was carried out for 28 days, during which the wound began to respond favorably, initially by clearance of the slough tissue, then by emergence of healthy granulation tissue and finally by wound contraction, epithelialization and scar formation. (Fig. 4 – 9)



Fig. 10 Fungal infection at 4th webspace



Fig. 11 Fungal infection resolved in 20 days

During the course of treatment, it was also noted that the fungal infection in the 3rd and 4th web space, which was also subjected to *Vipareeta Malla Taila* had subsided in 20 days. (Fig. 14 & Fig. 15).

Discussion

Sushruta in his book *Sushruta Samhita* narrates a detailed account on ulcer. Its etiology, classification, features and prognosis have been elaborately explained. While enumerating the treatment aspect, he explains 60 procedures that are to be followed based on different situations which holds good, in various types of wounds or based on different stages of wound healing or for complications that have arisen after improper healing. (7)

Throughout the treatment period there was poor control in his diabetic profile on account of him not adhering to the recommended diet and exercises. His urine blood sugar was 0.5 – 1.5% (Benedict soln. test) on a daily basis.

The patient on admission had no sensation of pain though tactile sensation was not completely deprived. After 2 weeks of daily application of the oil, he began to experience pain at the site of wound as it healed.

Incidentally the oil also had positive effect on the fungal infection in the web space in a duration of 20 days.

During the course of study, the patient did not report any kind of inconvenience with respect to odor or sensation. Approximately 2 ml of the oil was employed which was sufficient to moisten the gauze and wound site.

There are numerous medicated oils available today, but *Vipareeta Malla Taila* was chosen for this study because of its peculiar indication where it can be used even when the patient isn't following the right diet or regimens as prescribed for proper wound healing.

Conclusion

Vipareeta Malla Taila was found to be effective in diabetic ulcers even with poor control in blood and urine glucose levels. Incidentally, it was also found to be an effective anti-fungal agent.

The oil did not pose any discomfort to the patient as it did not possess any unpleasant odor, which could have prevented the patient from continuing with the treatment.

The nature of the medicament, prevented the gauze to adhere to the wound and hence repeated change of dressing every day did not pose any disturbances to the wound or to the patient.

It is a cheap and cost effective remedy for chronic ulcers.

It fulfills many of the criteria for an ideal dressing, which are it should be free from contaminants, be able to remove excess exudates and toxic components, maintain a moist environment at the

wound-dressing interface, be impermeable to microorganisms, allow gaseous exchange, and, finally, should be easily removed and cost-effective.(8)

Diabetic ulcers are really troublesome if not cared for, leading to amputations hence diabetic ulcer has a major economic impact.(9)

Vipareeta Malla Taila was found to be an ideal formulation that can be adopted for all chronic wounds especially diabetic ulcers.

There is scope for further research work to be carried out in understanding how *Vipareeta Malla Taila* works in clearing the slough as well as promoting the granulation and quickening the rate of wound healing.

References

1. Bhat SM. SRB's Manual of surgery. 4th ed. NewDelhi: Jaypee Brothers; 2013. p.14.
2. NICE. CG119 Diabetic foot problems - inpatient management: full guideline [Internet]. [cited 2014 Apr 1]. Available from: <http://publications.nice.org.uk/diabetic-foot-problems-cg119>
3. Bhat SM. SRB's Manual of surgery. 4th ed. NewDelhi: Jaypee Brothers; 2013. p.213.
4. Tripathi PH. *Agantuka Vrana Adhikara* 79:59-60. *Vangasena Samhita* with "Hari" Hindi Commentary. Varanasi: Chaukhamba Sanskrit Series Office; 2009. p. 851.
5. Oyibo SO, Jude EB, Tarawneh I, Nguyen HC, Harkless LB, Boulton AJ. A comparison of two diabetic foot ulcer classification systems: The Wagner and the University of Texas. *Diabetes Care*. 2001;24:84–8. [PubMed]
6. [ayurvedicfarmocopia.pdf](#) [Internet]. [cited 2015 Sep 26]. Available from: <http://www.ccras.nic.in/pharmacopoeialwork/links/compfom/ayurvedicfarmocopia.pdf>
7. Trikamji A J, Ram A "Kavyatirtha". *Chikitsasthana* 1. *Susruta Samhita* of *Susruta* with the *Nibandhasangrah* Commentary of *Dalhanacharya*. Varanasi: Chaukhamba Surbharati Prakashan; 2008. p.396-408.
8. Harding KG, Jones V, Price P. Topical treatment: which dressing to choose. *Diabetes Metab Res Rev*.2000;16(Suppl. 1):S47–S50. doi: 10.1002/1520-7560(200009/10)16:1+<::AID-DMRR133>3.0.CO;2-Q. [PubMed] [Cross Ref]
9. Ramsey SD, Newton K, Blough D, McCulloch DK, Sandhu N, Reiber GE, et al. Incidence, outcomes, and cost of foot ulcers in patients with diabetes. *Diabetes Care*. 1999 Mar;22(3):382.
