

**MANAGEMENT OF CHRONIC DIABETIC FOOT ULCER BY ORAL MEDICATION AND VIMLAPANAKARMA WITH JATYADI TAILA - A CASE REPORT****Shekhar B Patil¹, Ramesh Killedar², Pradeep. S Shindhe³, Harishankar P V⁴**

¹M.S.(Ayu). Assistant Professor, Dept of Shalya Tantra, Vasantdada Patil Ayurvedic Medical College, Sangli, Maharashtra, India

²M.S.(Ayu) (Ph.D.) Assistant Professor, Dept of Shalya Tantra, KAHER'S Shri B M Kankanawadi Ayurveda Mahavidhyalaya, Shahapur, Belagavi, Karnataka, India

³M.S. (Ayu) Professor and HOD, Dept of Shalya Tantra, KAHER'S Shri B M Kankanawadi Ayurveda Mahavidhyalaya, Shahapur, Belagavi, Karnataka, India

⁴BAMS, (MS) (Ayu), PG Scholar, Dept of Shalya Tantra, KAHER'S Shri B M Kankanawadi Ayurveda Mahavidhyalaya, Shahapur, Belagavi, Karnataka, India

Corresponding Author: drramesh39@gmail.com<https://doi.org/10.46607/iamj4410102022>**(Published Online: October 2022)****Open Access**

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Article Received: 09/09/2022 - **Peer Reviewed:** 01/10/2022 - **Accepted for Publication:** 04/10/2022**ABSTRACT**

Diabetic foot problems are a major cause of hospitalisation and prolonged hospital stays. *Vimlapana karma* (Gentle massage) is the first treatment modality for *Vrana shopha* (inflammatory swelling), as explained by *Acharya Sushruta*. In Diabetes Mellitus, the normal steps of ulcer healing are hampered, so the inflammatory phase will be prolonged, leading to chronicity. Here we report a diabetic foot ulcer case aged 49 years with an ulcer on the heel of the left foot for 6 months with serous discharge and a foul smell. The case was treated on an OPD basis with oral medication and *Vimlapana karma* with *Jatyadi taila* (Medicated oil), followed by dressing daily for one month and observation was done for two months for complete ulcer healing. The ulcer healed with normal scar formation, and the patient is now able to walk and perform his routine activities. *Vimlapana karma* with *Jatyadi taila* has given promising results by acting on the inflammatory phase and thus enhancing ulcer healing.

Keywords: *Vimlapana Karma*, *Jatyadi taila*, Diabetic foot ulcer, ulcer healing.

INTRODUCTION

A diabetic ulcer is the most common problem in society. 10% of all admissions for diabetes are primarily for foot management. More than 70% required surgical intervention and in more than 40% of those interventions, there is a toe or limb amputation.^[1] A classical triad of neuropathy, ischemia and infection characterizes the diabetic foot, and ulcer healing does not occur due to obstruction in the blood supply and lack of nutrients.^[1] *Vrana* (Ulcer) means *Ghatravichurnana* (disruption in dhatu) if that *Vrana* remains for many days and has signs of infection then it is called *Dushtavrana* (Non healing ulcer).^[2] *Shashti upakrama* (sixty treatment procedures) for *Vrana* is explained by *Acharya Shushruta* and *Vimlapana karma* is one of the procedures and helps in *Vrana shodhana* (ulcer cleansing).^[3] In *Vimlapana karma*, (Gentle massage) in a circular fashion over the surrounding area of the *Vrana* is done with the pulp of fingers or thumb with the application of *Vranaropaka taila* e.g. *Jatyadi taila*.^[3]

Jatyadi taila is an externally applicable pharmaceutical drug combination of 20 ingredients namely *Jatipatra* (*Jasmine officinale* Linn. *Nimbapatra* (*Azadiractaindica* A. Juss), *Patolapatra* (*Trichosanthus dioica* Roxb.), *Karanjapatra* and *Beeja* (*Pongamia pinnata* Pierre.) *Siktha* (Bee wax), *Madhuyasthi* (*Glycyrrhiza glabra* Linn.), *Kustha* (*Saussurea lappa* Clarke.), *Haridra* (*Curcuma longa* Linn.), *Daruharidra* (*Berberis aristata* DC.), *Katukarohini* (*Picrorhiza keuroa* Royle ex Benth.), *Manjistha* (*Rubia cordifolia* Linn.), *Padmaka* (*Prunus-cera soides* D.Don), *Lodhra* (*Symplocos racemosa* Roxb.), *Haritaki* (*Terminalia chebula* Retz.), *Nilot-pala* (*Nelumbo nucifera* Gaertn.), *Tuttha* (Copper sulphate), *Sariva* (*Hemidismus indicus* Linn.), *Tila* (*Sesamum indicum*, Linn.) *taila* (Sesame oil) and water. This medicated oil is indicated in *Dustavrana* by *Acharya Sarangadhara* and *Jatyadi taila* was procured from GMP-certified KLE Ayurveda Pharmacy^[4]. Here we report a case of diabetic foot ulcer treated with oral medication and *Vimlapana karma* with *Jatyadi taila* followed by dressing.

Patient Information and clinical findings

A 49-year-old male diabetic patient presented with a chronic nonhealing ulcer at the left heel with itching and burning sensation in the ulcer area on and off for 4 months. The patient was known case of Diabetes mellitus for 7 years, Hypothyroidism since 3yrs, and on regular medicine i.e., Inj Insulin s/c 10U-15U-10U and Thyroxine Tab. (Thyronorm 25mcg) once a day. The patient gave history of slow progressive onset of initially itching and burning sensation at left heel later with the occurrence of the ulcer. He took conservative management for 2 weeks from the local doctor but didn't get satisfying result. In the due course ulcer area was increased along with itching, foul smell, and watery discharge. The patient was referred to our hospital for further management. The case was treated at Vasantdada Patil Ayurvedic Medical college, Sangli from 09/10/2021 to 25/11/2021. (OPD - 7299/IPD - 608).

On examination ulcer size was 4×3cm, irregularly shaped, punched out edges, floor covered with pale granulation tissue, yellowish discoloration around the ulcer. Palpation revealed a hard callous margin with normal temperature and no tenderness around the ulcer, pitting type of oedema was noted in the left ankle region. Primary blood investigations were performed which showed raised ESR 28mm/hour, WBC count 15000 cells/mcL and RBS of 250 mg/dl rest of the parameters were normal.

Diagnostic assessments and Therapeutic intervention

Clinical diagnosis was based on size, shape, margin, floor, and depth assessment it was diagnosed as a Diabetic foot ulcer with osteomyelitis as per Wagner classification 3 (Grade III) (Fig. 1). Analyzing the *Laxana* (signs) as per Ayurveda principles we came to a diagnosis of *Dushtavrana* and accordingly treatment was planned. i.e., *Aragwadhaadi kashaya*^[5] 10ml three times a day after food, *Kaishora guggulu*^[6] 250mg two times a day after food, *Asanadi Kashaya*^[7] 10ml three times a day after food for a period of 15 days. *Sthanika Chikitsa* (Local manage-

ment) for *Vrana shodhana* and *Ropana* was planned with *Vimplapana karma* for 15 – 20 mins followed by *Jatyadi taila* dressing daily.

Vimplapana karma is a gentle massage around the ulcer area with *Venu* (Bamboo sticks) or fingers in case of a small ulcer and with palm in bigger ulcers. During the observation period of 15 days, the ulcer showed *Shudha Vrana laxana* (Fig no.2,3) like red coloured granulation tissue, soft edges, and serous discharge, and the patient was advised to continue oral medication for 1 month and on an OPD basis, daily *Vimplapana karma* and the dressing was done for a period of 1 month. The ulcer took 45 days for complete epithelisation with good scar formation now the patient is able to perform his routine duties without any discomfort or pain.

Follow-up and Outcome – The patient was assessed for 45 days to assess changes in the ulcer and improvements in healing were observed accordingly. The patient was observed for 8 months to assess for recurrence of the ulcer, but no complications and recurrence were seen. The adopted treatment has given good clinical outcome

DISCUSSION

The ulcer occurs due to ischemia, infection, and neuropathy in chronic diabetes and these ulcers are always a challenge for the surgeon. Infection is a common and major complication of diabetic foot ulcers which leads to the microthrombi formation, causing further ischemia, necrosis, and progressive gangrene. The worst scenario for impaired wound healing or the clearing of infection may be vascular insufficiency.^[1] In *Vimplapana karma* with *Jatyadi taila* uniform pressure is exerted over the ulcer area which increases local temperature and helps to relieve local vasoconstriction thereby improving the micro & macro circulation to the ulcer site, Increased blood circulation provides required oxygen and essential nutrients and combats the anoxic condition of the ulcer and helps in removal of local stagnated toxins and inflammatory mediators thus reducing inflammation and accelerating the healing process.^[8] The procedure mainly acts over the inflammatory phase which is

prolonged in Diabetes leading to its chronicity thus promoting the proliferative and remodeling phase of ulcer healing.

Oral medications like *Kaishora guggulu*, *Aragwadhaadi Kashaya*, and *Asanadi Kashaya* are scientifically established and practiced drugs in the management of *Prameha* (Diabetes) and *Dustavrana*. *Kaishora guggulu* has antibiotic and anti-inflammatory actions which help in the prevention of infection in the ulcers. It controls the increased blood glucose levels and improves the insulin sensitivity of the cells, thereby, reducing the severity of diabetes. Moreover, it also works for the control of the infection, boosting immunity, discharge of the pus from the infected ulcers, and swelling.^[9] *Aragwadhadhi Kashaya* used acts as *Kusthaghna*, *Vishaghna*, and *Shamanam* (pacificatory) properties. It is effective in *Kandu*, and *Prameha* and acts as *Dushta Vrana Vishodhaka* (Cleansing agent).^[10] In various pharmacological studies, done in the last few decades on the drugs of *Asanadigana dravyas*, it has been proved that almost all the constituents of *Asanadigana*, possess antihyperglycemic, hypolipidemic, antioxidant, and other therapeutic properties.^[11] *Jatyadi taila* as a ulcer healing agent is proved and practiced for decades and its ingredients act on the various stages of the ulcer healing process thus reducing inflammation, promoting ulcer contraction, Epithelialization, Granulation tissue formation, and scar remodeling.^[12]

Informed consent

Informed consent regarding documentation and publication of the case was obtained from the patient.

CONCLUSION

In the present case, the non-healing ulcer took 45 days for complete healing with good scar formation. Oral medication and *Vimplapana karma* with *Jatyadi taila* followed by dressing gave a good result minimizing the chances of surgical intervention. *Vimplapana karma* reduced the inflammatory stage and promoted the proliferative phase thus accelerating ulcer healing. The study can be done on a larger population and other non-healing ulcer to see its efficacy and scientifically validate the procedure.

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Source of Support: Nil

Conflict of Interest: None Declared

How to cite this URL: : Shekhar patil, Ramesh S Killedar, Pradeep S Shindhe, Harishankar P V, Management of chronic Diabetic foot ulcer by oral medication and vimlapanakarma with jatyadi taila - A case report. International Ayurvedic Medical Journal {online} 2022 {cited October 2022} Available from: http://www.iamj.in/posts/images/upload/2947_2951.pdf

Figure 1 Nonhealing ulcer on day 1



Fig no. 2 Vimlapana Karma with the pulp of the fingers



Fig no 3. Signs of Shuddhavrana laxana on day 10



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