DIABETIC FOOT ULCER (DFU) A COMMON LIFE STYLE CHALLENGE
-A CASE REPORT

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Purpose

- **Lifestyle disease**: A disease associated with the way a person or group of people lives. **Lifestyle diseases** include atherosclerosis, heart disease, stroke, obesity, type 2 diabetes mellitus and diseases associated with smoking, alcohol and drug abuse.

- Increasing urbanisation, industrialisation and changing lifestyles seems to be contributing to increasing prevalence of diabetes & its related complications.
Purpose

• Wound management is a common problem
• Diabetes always presents with an unfavourable environment for wound healing
• It affects the quality of life, prolonged hospital stay, psychological and financial burden.
• As in our classics Vrana Chikitsa is explained in detailed under the Shasti Upakramas along with some unique preparation which will be help full for better healing of Vrana.
• 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.
Method

- Drug review:

✓ Vipareeta Malla Taila was prepared as per the standard technique mentioned in THE AYURVEDIC PHARMACOPOEIA OF INDIA under Taila.
✓ The oil has been standardized at SDM Centre for research in Ayurveda and allied sciences, Laxminarayana nagar, P.O. Kutpady, Udupi, Karnataka, India.
✓ Vipareeta Malla Taila has been standardized as per standard testing protocols mentioned in API. Results of standardization and HPTLC are enclosed in the respective tables above.
Method

• Presentation of case

- **Age** - 46
- **Gender** - male
- **occupation** - owner of a printing press
- **H/O present illness** - complaining of boils on the dorsal aspect of his left foot associated with foul discharge and swelling in the shin region of the same foot with reddish discoloration and no complaints of pain or burning sensation. There was fungal infection in the 3rd and 4th web space.
- **Past history** - medical renal disease, hyper tension and diabetes mellitus
- **On examination** - 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
- **laboratory findings** revealed leukocytosis, a raised ESR, high blood glucose profile and raised RFT
Fungal infection in 3rd and 4th web space

Left lower limb with cellulitis features over shin region.

Left foot with pus laden abscess cavity, partially ruptured with oozing of pus

Fungal infection in 3rd and 4th web space
An abdominal ultrasound 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.

As per the University of Texas Wound Classification System, the above wound can be classified as Grade 1, Stage B.
**Treatment plan**

- 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.
- The same was carried out for 28 days, during which the wound began to respond favourably, initially by clearance of the slough tissue, then by emergence of healthy granulation tissue and finally by wound contraction, epithelialization and scar formation.
• 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.
Discussion

- 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 odour 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

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

- 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 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 fulfils 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.

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.

In day to day all the diabetic patients should be educated for prevention of further complication with life style modification and regular screening.
Prophylactic measures

Lifestyle Management

Regular Checking

Balanced diet

Exercise

Assessment of loss of protective sensation with a monofilament

The 4 Essentials for Preventing DFU

Patient Education

Keys to Prevention

Foot Skin & Toenail Care

Protective Footwear

Protective Surgeries

Well padded inner surface protects foot from injury

Wide toe box for free movement of toes

Strong heel counter for stability in the heel region

Velcro closures help to accommodate deformities

Extra depth footwear accommodate 9 mm insoles

Tough and light outer soles to limit motion of painful joints
References


THANK YOU