



An Ayurvedic Approach To The Treatment Of Maggot Infected Non-Healing Wounds: A Case Study

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Abstract

Myiasis is the term for the situation where fly maggots feed on and grow in living things tissues. Maggot infestation occurs when the larvae of the maggot infiltrate the skin and subcutaneous tissue. This case report presents a complete wound healing of a 65-year-old man who was brought with a history of trauma, non-wound healing over his right foot for a month and maggots found in the wound. His post meal and fasting blood sugar levels were elevated, according to the Blood Sugar Level [BSL] test. Complete wound healing was achieved in 7 days with help of local as well as systemic management of Ayurveda. Cleaning of the wound with Betadine followed by dressing with Turpentine oil was done regularly. For systemic management, Arogyavardhini Vati 250mg 2 tab twice a day, Khadiradi Vati 200mg 2 tab twice a day, Chandraprabha Vati 200mg 2 tab twice a day, Capsule Septilin 2 tab twice a day, Capsule crab 2 tab twice a day for 1 month prescribed orally for 7 days. This is a single case report presenting complete healing of a non-healing wound with a positive outcome in short term through Ayurveda management.

Keywords: Non healing wound; Ayurveda; Myiasis; Maggot

Introduction

Non-healing wounds, also called chronic wounds, are those that fail to heal within the usual period of four weeks to three months. These wounds heal at a slow pace and tend to recur. Some common non-healing wounds are diabetic foot ulcers, ischemic wounds, venous leg ulcers, and pressure wounds. There are many causes behind non-healing wounds, such as infections or medical conditions like diabetes¹.

People with diabetes who have peripheral neuropathy and peripheral artery disease develop diabetic wound. In India, diabetic foot ulcers impact 25% of the 62 million diabetics². Diabetic wound is one of the devastating complications of diabetes that usually fail to heal and leads to lower limb amputation. There are various precipitating factors for the development of non-healing wound such as calluses, blisters, cuts, burns, and ingrown toenails. A patient with diabetes may not be aware of these minor injuries due to peripheral neuropathy so, lack of awareness leads to the development of diabetic wound and it's enlarged before they are noticed³. Additionally, it has been demonstrated that foot deformities and gait instability increase plantar pressure, which can result in the development of callosity and corn in the foot letter on they are infected and result in a non-healing wound⁴.

A parasite infestation known as "maggot infestation" or "myiasis" occurs when fly larvae lay their eggs in living things' tissues, where they feed and finish their life cycle.^{5,6} The most prevalent kind of myiasis, known as cutaneous myiasis, affects the Patients with diabetes who have myiasis are classified as injured skin.

Presentation of Case

A 65-year-old male was admitted to an Ayurveda hospital with complaints of a non-healing wound on his left toe that had persisted for one month. The wound was associated with pus formation, burning sensation, and discoloration of the surrounding area. Approximately 20 days prior to admission, the patient noticed the presence of maggots in the wound, which further exacerbated his condition. The patient provided a history of trauma to the left toe one month ago, which was the likely initiating event for the wound. The patient has a known history of diabetes mellitus for the past six years and had been managing his condition with the use of Madhunashak Vati. Despite this, his glycemic control at the time of admission was suboptimal, with a fasting blood sugar (FBS) level of 158 mg/dL and a postprandial blood sugar (PPBS) level of 272 mg/dL. The patient left the wound untreated and this leads to the infestation of maggots at the wound site. The chronic hyperglycaemic state likely contributed to delayed wound healing and increased susceptibility to infection.

Clinical Findings

On general examination, the patient was fit and well oriented with the absence of pallor and icterus. All vitals of the patient were within normal range.

Local examination

Location- Inner lateral aspect of toe of right foot, discharge-present, odour-absent, margin- poorly defined, edge- sloping, surrounding skin- oedematous and thickened with blackish discoloration on dorsal aspect, tenderness-absent, peripheral sensation- completely lost, maggots present and devitalised tissue.

Therapeutic plan

Treatment Plan: Wound Management Based on Ayurvedic Principles by Acharya Sushruta

1. **Foundation of the Treatment:**
 - Principles of wound management outlined by Acharya Sushruta formed the basis of the treatment approach.
2. **Wound Cleaning:**
 - Regular wound cleaning was performed using Betadine to disinfect the wound.
3. **Local Dressing:**
 - Turpentine oil was applied to the wound under strict aseptic precautions.
 - The dressing was continued until complete wound healing and removal of maggots were achieved.
4. **External Treatments:**
 - Wound cleansing to remove debris and contaminants.
 - Debridement to eliminate necrotic tissue and promote a healthy wound bed.
 - Additional measures were taken to enhance wound healing, ensuring optimal recovery.

Table No-1 Treatment Regimen During Hospital Stay

Treatment Type	Medication/ Procedure	Dosage	Duration
Matra Basti	Ashwagandha Ghrita	50ml Once Daily	3 Days
Local Application	Shatadhaut Ghrita	Daily	7 Days
Internal Medication	Chandan Asava	5 ml twice daily after meals	7 Days
Internal Medication	Arogyavardhini Vati 250mg	2 tablets twice daily after meals	1 Month
Internal Medication	Khadiradi Vati 200mg	2 tablets twice daily after meals	1 Month
Internal Medication	Chandraprabha Vati 200mg	2 tablets twice daily after meals	1 Month
Internal Medication	Septilin capsules	2 tablets twice daily after meals	1 Month
Internal Medication	Grab capsules	2 tablets twice daily after meals	1 Month

Post-Hospitalization Care Plan

1. **Continuation of Medications:**

- Ayurvedic medications were continued for one month, alongside the patient's existing oral hypoglycemic medications to manage diabetes.

2. **Dietary and Lifestyle Advice:**

- Pathya-Apathya (dietary and lifestyle modifications) was advised to:
 - Enhance wound healing.
 - Prevent complications such as infection or delayed recovery.

3. **Foot Care Measures:**

- The patient was instructed to replace regular footwear with diabetic microcellular rubber (MCR) footwear to:
 - Prevent further trauma.
 - Reduce pressure on the affected area.

This comprehensive plan aimed to support holistic recovery, address underlying conditions, and minimize the risk of recurrence.



Fig No-1 Before Treatment



Fig No- 2 During Treatment



Fig No-3 After 7 days of Treatment

Discussion

The primary goal of this patient was to achieve complete wound healing along with maintaining the blood sugar level. The second aim was to prevent the further degradation of wound conditions as diabetes is vulnerable to infections. Chandan Asava is used to pacify burning sensation. Shatadhauta Ghrita⁷ is one important formulation emphasized in Ayurveda for external application. It has been emphasized in classics as a very good wound healer⁸. It is also used in daha⁹ (Burning sensation), Shotha¹⁰(Inflammation), Visarpa¹¹(Erysipelas) etc. Acharya Sushruta mentioned the utsadana property of Ashwagandha while explaining about local application of Utsadaniya dravyas. He also mentioned the ropan property of Ashwagandha in mishrakadhyaya¹². As per modern research on the wound-healing property of Withania Somnifera (Ashwagandha), it was found to be a silent wound healer. Arogyavardhini Vati has properties like Deepana, Pachana, Medovinasini (Medohara). Acharya said Arogyavardhini Vati is Sarvaroga Prasamani. Rasa is Tikta so it acts anti-inflammatory and Agnivardhak properties. Khadiradi Vati it has Kandughna and Deepana, Pachana Karma along with other drugs, Raktashodaka and can be used in skin disorders. Chandraprabha Vati possesses properties like Tikta Madhura Rasa, Agni Dipana, Yakrut Vishesha and Rasayana. Chandraprabha Vati due to its Laghu, Ruksha Guna helps in Sodhana of Bahudrava Shleshma and decreases the vitiated Kleda.

Conclusion

This case report highlights the significant efficacy of integrated systemic and localized Ayurvedic treatment in the management of a non-healing wound.

Consent

The author has collected and saved the patient's written consent in accordance with hospital.

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