



Case Study

A COMPREHENSIVE MANAGEMENT OF *DUSHTA VRANA* VIS-A-VIS DIABETIC ULCER - A CASE STUDY

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ABSTRACT

Vrana is a clinical condition which occupies the area of skin and remains till body survives. *Dushta Vrana* is the *Vrana* having the features of *Durgandha* (bad smell), *Pooyayukta* (pus filled), *Utsangi* (elevated), *Chirakali* (chronic), *Dooshita* (afflicted by *Tridosha* vitiation), *Atigandha Varna Srava* (discharge with excessive odour and coloured), *Vedanayukta* (painful) and opposite to *Shuddha Vrana* (healing wound). Diabetic foot ulcer global prevalence is 6.3% with male predominancy and higher in type 2 diabetic patients (6.4%) than in type 1 diabetics (5.5%).

In this report, a 70-year-old who was diagnosed with chronic non-healing diabetic wound treated with comprehensive Ayurvedic medicines based on the observations made on the nature of the wound. The main cause for the wound was uncontrolled type 2 diabetes mellitus, which was managed with both Ayurveda and conventional drugs. Patient gradually showed improvement. Total healing required 6 months.

INTRODUCTION

Vrana means discontinuity in the skin and other tissues^[1]. *Dushta Vrana* has the features such as *Durgandha* (bad smell), *Pooyayukta* (pus filled), *Utsangi* (elevated), *Chirakali* (chronic), *Dooshita* (afflicted by *Tridosha* vitiation), *Atigandha Varna Srava* (discharge with excessive odour and coloured), *Vedanayukta* (painful) and opposite to *Shuddha Vrana* (healing wound). There are many varieties of *Vrana* mentioned by various authors, among them *Sushruta* has quoted mainly 2 varieties namely *Nija Vrana* and *Agantuja Vrana* based on the cause. The *Nija Vrana* caused by the aggravation of the *Dosha* by various reasons. Whereas, the *Agantuja Vrana* caused by assault by humans, animals, falling from heights, pressing and squeezing, hit, fire injury, alkalies, poison, strong penetrating drugs, splints of wood, potsherd, horns of animals, disc, arrow, axe, trident, mace and other weapons^[2].

Dushta Vrana is nothing but the non-healing ulcer. Where, the features depend upon the cause and the area of location of the ulcer. But usually has the features of spreading nature, surrounding active inflammation, purulent discharge, foul smelling, slough, and also necrotization of skin usually in arterial ulcer.

Management of *Dushta Vrana* includes *Shodhana* (cleaning) both external and internal and *Ropana chikitsa* (wound healing). For *Antah Shodhana*, all types of *Panchakarma* help depending upon the *Dosha* involvement. *Bahya Shodhana* means cleaning of wound by using *Kashaya* of *Shodhanaga Dravyas*, *Varti*, *Kalka*, *Ghruta*, *Taila*, *Churna* and *Rasakriya*. *Vrana Ropana* should be done using drugs having healing properties^[3].

Case Presentation

A 70-year-old male who is a known case of type 2 diabetes mellitus since 4 years, presented small water filled lesions over left dorsum of ankle. Within 2 days multiple water filled lesions (blebs) developed. Wound developed after the rupture of blebs, and was not healing. The wound spread widely, also involved the right ankle and lower leg within two days of onset with a usual initial bleb. The wound gradually turned into blackish discoloration with increased foul smelling

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and discharges which are watery, serous and pus for which he consulted a clinic, where he was started with antibiotics, and was referred to Tapovana Ayurveda Hospital for further wound management. It was 4 weeks of onset when he approached.

He is not a known case of hypertension/ ischemic heart disease/bronchial asthma/drug allergy. Family history is not contributory.

On examination, subject was conscious and oriented. He was well-built and moderately nourished. His vitals were stable with pulse rate 98 beats per minute, blood pressure 140/90mm of Hg, temperature 98.2degree Fahrenheit and respiratory rate 20 per minute.

Local Examination

Inspection

Ulcer Distribution: multiple ulcers: dorsum of left foot extending to medial aspect of ankle, lateral and medial aspect of lower one third of right leg.

Intervention

Shape: Irregular

Floor: Unhealthy granulation tissue and slough.

Edges and margins: spreading with surrounding inflammation with irregular margin.

Base: Soft tissue

Discharge: Watery discharge from bullae. Foul smelling

Ischemic skin covering the ulcer.

Other Features: Mild cellulitis of both lower limbs was present.



Palpation:

Tenderness was present surrounding the ulcer area. Base is slightly indurated.



No bleed on touch.

Pulsations: Dorsalis pedis, posterior tibial artery well felt on both legs.

Investigations: RBS- 320 mg/dl on 18/12/2020.

S.no.	Day	Intervention	Observations with photos
1.	Day 1 (24/12/2020) till day 12 (20/01/2021)	Tab. <i>Shivagutika</i> 1-0-1 before food Tab. <i>Chitrakadi vati</i> 1-1-1 before food <i>Manjistadi Kashaya</i> 20ml 1-0-1 after food with water. Wound debridement: <i>Triphala Kashaya parisheka</i> <i>Jatyadi taila</i> application and bandaging. <i>Vrana dhupana</i> with <i>Nimba twak</i> and <i>Haridra</i> .	
2.	Day 13 (22/01/2021) till day 25 (22/02/2021)	Tab. <i>Triphala guggulu</i> 2-2-2 after food Tab. <i>Shivagutika</i> 1-0-1 before food Wound debridement: <i>Triphala Kashaya parisheka</i> Application of WH 5 ointment and bandaging.	Ischemic skin was removed and slough present, swelling and pain in the area of wound observed. 

<p>3.</p>	<p>Day 26 (24/02/2021) till day 34 (12/03/2021)</p>	<p><i>Triphala Kashaya parisheka</i> <i>Patradana (Udumbara, Ashwatta</i> <i>and Vata patra)</i></p>	
<p>4.</p>	<p>Day 35 (14/03/2021) till day 45 (01/04/2021)</p>	<p><i>Triphala Kashaya parisheka</i> Honey dressing and bandaging.</p>	
<p>5.</p>	<p>Day 46 (03/04/2021)till day 56 (23/04/2021)</p>	<p><i>Triphala Kashaya parisheka</i> <i>Churna (Triphala + Haridra+</i> <i>Nimba)</i> was applied and bandaged</p>	
<p>6.</p>	<p>Day 57 (25/04/2021) till day 78 (03/07/2021)</p>	<p><i>Triphala Kashaya parisheka,</i> <i>Jatyadi taila</i> application at home</p>	<p>Reduction in the wound size and was showing the healing properties.</p> 
<p>7.</p>	<p>Day 79 (04/07/2021) till day 86 (11/07/2021)</p>	<p><i>Dashamoola niruha basti</i> Wound management (<i>Triphala</i> <i>Kashaya parisheka,</i> <i>Jatyadi taila</i> application) Tab. <i>Triphala guggulu</i> 1-1-1 after food Tab. <i>Chandraprabha vati</i> 1-0-1 before food</p>	<p>Mild swelling and pain around the wound were observed. Wound was showing healing properties.</p> 

8.	Day 87 (12/07/2021) till day 96 (21/07/2021)	<i>Triphala Kashaya parisheka</i> <i>Jatyadi taila</i> application at home Tab. <i>Triphala guggulu</i> 1-1-1 after food Tab. <i>Chandraprabha vati</i> 1-0-1 before food	The area of the wound was reduced. 
9.	Day 97 till day 170	Every 2 days once wound cleaning with <i>Triphala Kashaya</i> and dressing with <i>Jatyadi taila</i> was advised. Tab. <i>Triphala guggulu</i> 2 SOS	

DISCUSSION

Dustha Vrana, the non-healing ulcer requires a series of management protocols from *Nidana parivarjana* till *Vrana Ropana*. In this case study, diagnosis was non-healing diabetic ulcer with uncontrolled diabetes mellitus. Diabetes mellitus type 2 was treated with both Ayurveda and conventional system of medicine. Taking diabetes under control, we started managing ulcer. The treatment protocol was varied depending upon the features of ulcer. Classically we have a reference of ulcer management, with that reference whichever medicine is useful for the patient and also for the ulcer at that particular season, we used. The management of the wound was started in the month of December which is cold season and treatment started with wound debridement and *Triphala Kashaya* wash, bandaging with *Jatyadi Taila* followed by fumigation with *Nimba* and *Haridra*. *Triphala* scavenges the free radicals and decreases the oxidative stress^[4], thus it helped in preventing up of infection and also helped in wound healing. *Jatyadi Taila* has its main indication in wound healing, the ingredients are also having the property of *Rakta Shodhaka*, as *Taila* contains more of *Tikta Dravyas* which also helped in reducing the infection and helped early healing^[5]. In between WH5 ointment which is a proprietary medicine was also used as it contains aloe vera, turmeric extract, honey, cow ghee, *Karanja* oil, excipients, as observations made, WH5 ointment was reducing the slough and making wound healthier by increasing the blood circulation. *Nimba* has the main property of *Tikta* (bitter), *Agni Vatakrut* (decreases *Pitta* and *Vata*)^[6] whereas, *Haridra* removes the blocks in the channels created by *Pitta* and *Kapha*, this helps

to reduce the inflammation. *Dhupana* has the property of disinfection and also by *Nimba* and *Haridra* added the efficacy on disinfection and thus keeping the wound clean and non-infected^[7].

For the covering up of the wound spots *Patradana* was used, the ingredients were *Udumbara*, *Ashwatta* and *Vata Patra* which are the 3 of *Panchavalkalas*, these are having the property of wound healing which also added their efficacy in this case.

Triphala + Haridra+ Nimba Churna was also applied for bandaging, whenever we required the dryness in the wound, as the ingredients were also having dry in nature.

Dashamoola Niruha Basti was administered from the day 79, to obtain channel clearance and to control *Vata Dosha* mainly.

Oral medications such as *Chitrakadi Vati* given in the initial days to clear *Ama*. *Shivagutika* was given as it has wide range of indications in all systems and specially used to control diabetes and to improve vascular patency. *Manjistadi Kashaya* was given as blood purifier. *Chandraprabha Vati* was given mainly in view of controlling diabetes as its main indication in diabetes and urinary disorder. *Triphala Guggulu* was given to reduce the pain from the wound. The planning and changing of the treatment are purely based on the patient's symptoms at that point of time.

The general observation showed the initial healing time was longer when compared to the latter, the reason might be the variation in the season. Initially started in the month of December, which is a cold

season usually have the tendency of vasoconstriction, whereas during the summer the wound healing was little faster as the patency of the vessels were increased such that the blood to the wound was rushing and thus making it to heal faster.

CONCLUSION

Dushta Vrana has the features such as *Durgandha* (bad smell), *Pooyayukta* (pus filled), *Utsangi* (elevated), *Chirakali* (chronic), *Dooshita* (afflicted by *Tridosha* vitiation), *Atigandha Varna Srava* (discharge with excessive odour and coloured), *Vedanayukta* (painful) and opposite to *Shuddha Vrana* (healing wound).

In this case study, the initial stage of the wound was showing non-healing nature such as necrotized tissue, foul smelling and watery pus discharge. Management started with both internal and external therapies mainly concentration on wound healing. Diabetes was controlled before starting the management of wound by both conventional and Ayurveda medicines. The therapies were taken from the classical reference and indicated according to the condition of the patient as well as the condition of the wound. The complete healing process required 6 months of duration. The healing occurred mainly by controlling the cause as the ulcer was secondary to or complication of diabetes. Thus, diabetic ulcer can be cured only under the control of diabetes. Wound management after the main disease control has to be

planned according to the variations in the wound and patient's condition, otherwise the ulcer may increase and cause burden to the patient. Thus, there is no fixed protocol for the management of non-healing ulcer.

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