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**A CLINICAL CASE STUDY ON *SINDOORADI MALAHAMA* IN THE  
MANAGEMENT *OF DUSHTA VRANA* (INFECTED PYOGENIC  
WOUND) WITH SPECIAL REFERENCE OF DIABETIC WOUND  
(CLINICAL CASE STUDY OF *SINDOORADI MALAHAMA*)**

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**ABSTRACT**

Infected wounds and non-healing ulcers are very common problem since thousands of years ago. The present modern conservative management includes use of betadine and different others dressing agents for healing of these infected wounds and for debridement purpose there are so many others agents as Debridac ointment, hydrogen peroxide and copper sulphate and others so many agents are used. if these all fails then surgically debridement under spinal or local anesthesia is preferred however all of these are used either for debridement or healing purpose at different times. Through Ayurveda we can incorporate so many dressing agents in woundology for healing and debridement with same formulation without changing the drugs and procedures which are non-invasive procedure without complications which will perform *Shodhana & Ropana Karma*. There are two types of wound explained mainly those are *sudhha vrana* (fresh wound or non infected wounds) and *dushta vrana* (infected and contaminated wounds). Traditionally use of different medicated decoctions for irrigation and so many dressing materials for healing and debridement purpose mentioned there are so many dressing materials as ointment are mentioned in *Bhesaj Samhita*, *13 Krmank*, *Lepa Malaham Prakarana*, in present clinical

study, efficacy of sinduradi malahama in management of Dushta vrana (infected wound) is evaluated.

**Keywords:** *Dushta vrana*, **Infected wound**, *Sindooradi malahama*, **Non healing ulcer**, **Infected pyogenic wound**

## INTRODUCTION

Healing of infected wounds and their debridement is burning problem since human being came in existence. As in modern science due to advancement of science so many debriding and healing formulations are available in market but either they are costly or having their own side effects. Whereas surgical debridement needed either local or spinal Anesthesia and the costly. And in limbs and fingers, condition get worsen which leads either amputation or malformation of that region due to huge scar due to large amount of skin and underneath structure damage and circulatory failure. For all above reasons this study came to in existence.

## Aims and Objectives

- To evaluate the healing and debridement property of the *Sindooradi malahama in dushta vrana* (infected wounds) in this patient.

## Case Report

A 48 year old male came at OPD of *Shalya Tantra* at PAH, presenting complaint since one month. Came in OPD having complain of Difficulty in walking due to non-healing

ulcer on left greater toe and occasionally pus discharge and bleeding and swelling

## EXAMINATION:

### General Examination:

On examination patient's B.P: 130/80mm Hg, Pulse : 86 /min, Respiratory rate : 19/min and Temp:98.8<sup>0</sup>F was noted.

### Systemic examination –

RS – AEBL clear, CVS – S1, S2 heard- np added sound heard , CNS – Conscious and well oriented, P/A no organomegally or tenderness found, Liver, Spleen not palpable, normal bowel sound heard.

### Present Illness

Patient was apparently normal before 1 month gradually he developed a corn on left foot greater toe on lateral side which has excised by himself only and gradually he developed non healing ulcer on this so he came to our hospital for the treatment.

### Past history

Patient was known case of Type 2 Diabetes Mellitus since 2 years and he was on treatment for the same.

### Local examination –

There was single rectangular shaped chronic wound on lateral aspect of greater toe in left foot having yellowish red floor with thick sero – sanguineous thick

discharge, floor was covered with unhealthy yellowish slough, sloping edge and unhealthy margin with surrounding blackish red skin

### Investigation

- blood investigation showed 12.7 mg/dl, ESR – 52mm, Urine routine microscopy showed 4-5 pus cells, JBA1C – 10.70% and Estimated average Blod glucose was 260.39mg/dl on date of admission. Rest of all values were within normal range.

### MATERIALS AND METHOD

- Dose : quantity sufficient malahama used as dressing agent for both healing and debridement purpose

### Diagnosis

The condition was diagnosed as a *DUSHTA VRANA* (Infected non healing wound).

Regime : application of *malahama* for 28 days

- Follow up : after 15 days was taken.

### Procedure of application of Malahama

#### Purvakarma

Informed & written consent was taken before procedure. Patient was advised to lay down in supine position.

Painting & draping of part done. All dressing instruments and materials as Normal saline

### Criteria for Assessment of Therapy

#### Subjective Criteria

- Subjective criteria –

and gauge piece and bandage and Sindooradi malahama were kept ready.

#### Pradhankarma

Wound was cleaned under all aseptic precautions with help of Normal saline, pus removed by Hiltons method with help of Sinus forceps, dead tissues removed by wound scrapping until healthy bleeding was seen, Periphery cleaned with gauge soaked in Spirit and Hydrogen peroxide.

Then Sindooradi malahama was applied and wick prepared and inserted in the hollow cavity.

#### Paschatkarma

Tight bandaging is done.

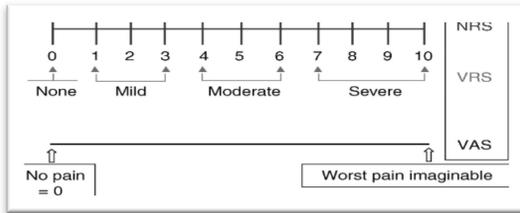
Dressing with sindooradi malahama regularly done for 28 day.

#### Objective parameter

- Odour
- Peri wound skin colour
- Exudate level
- Exudate type
- Wound measurement
- Granulation
- Slough tissue

### RESULT

**A. Pain (VAS scale):-**



**B. Burning:-**

Grade 0	Absent
Grade 1	Present

**C. Itching:-**

Grade 0	Absent
Grade 1	Present

Assesment Scale	0 <sup>th</sup> day	7 <sup>th</sup> day	14 <sup>th</sup> day	21 <sup>th</sup> Day	28 <sup>th</sup> day
<i>Gandh</i> (Odour)	00	00	00	00	00
<i>Varna</i> (Peri wound skin)	01	02	01	00	00
<i>Srava matra</i> (Exudate level)	03	02	01	00	00
<i>Srava bheda</i> (Exudate type)	03	02	00	00	00
<i>Aakruti</i> (Wound measurement)	3.75 cm <sup>2</sup>	2.1 cm <sup>2</sup>	1.17 cm <sup>2</sup>	0.24 cm <sup>2</sup>	0.12 cm <sup>2</sup>
<i>Daha</i> (Burning)	02	02	01	00	00
<i>Kandu</i> (itching)	03	03	02	01	00
<i>Vedana</i> (pain)	03	03	02	00	00
<i>Jihvatalabha</i> (Granulation)	00	02	03	04	04
<i>Puti-Puya Mamsa</i> (Slough tissue)	02	01	00	00	00

**Complication during treatment:**

No complication during treatment found.

**DISCUSSION****Pharmacodynamic Properties of Sindooradi malaha****1. Tila Taila**

Botanical name: *Sesamum indicum* Linn.

Family: *Pedaliaceae*

Rasa: *Madhura*

Anurasa: *Tikta, Kasay,*

Guna: *Snigdha, Guru, Sukshma Vyavayi, Visada, Sara, Vikasi*

Virya: *Ushna*

Vipaka: *Madhura*

Karma: *Balya, Cakshusyaya, Dipana, Garbhasaya Sodhana, Kesya, Medhya, Sandhaniya, Snehana, Stanyajanana, Tvak prasadana, Vatahara, Vrana Ropana, Vrana sodhana, Vrusya.*

**2. Madhu Chhista (bee wax)**

Guna: *Mridu, Snigdha*

Karma: *Vatahara, Vranaropana, Bhagnasandhanakar,*

*Kustha Visarpahara, Bhutaghna* (anti-microbial)

**3. Tankana (Borax)**

Chemical name:  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$

Rasa: *Katu*

Guna: *Ruksha, Tikshna,*

Virya: *Ushna*

Vipaka: *Katu*

Karma: *Hridya, Balya, Saraka, lekhana*

**4. Sindoor (Lead peroxide)**

Rasa: *Tikta, Katu*

Guna: *Sukshma, snigdha, Guru, Mridu.*

Virya: *Ushna*

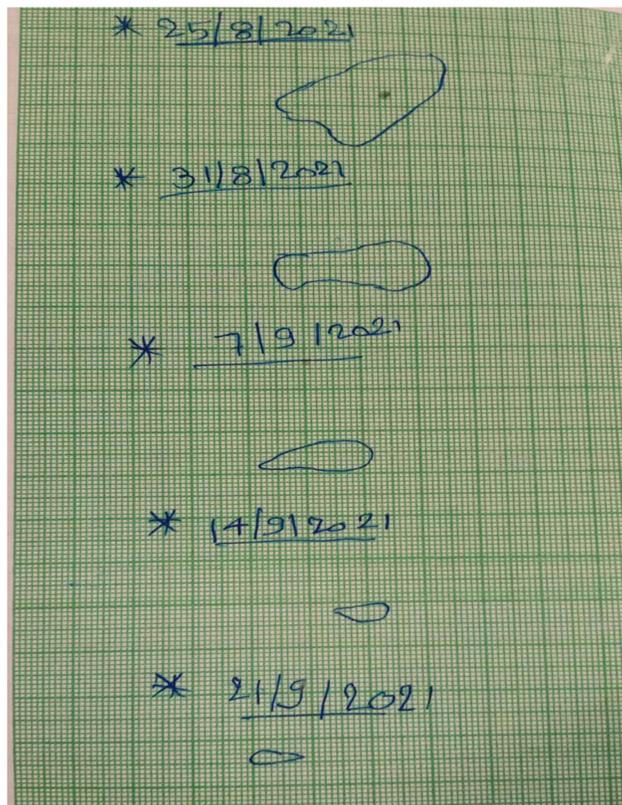
Vipaka: *Katu*

Karma: *Vranaropak, Kushthagna, Raktavikar, Vishjanya Upadrav, Kandughna & Visarpahara.*

**DISCUSSION -**

*Sindooradi malahama* is mentioned in *bhaisajya Samhita* in *lepa* and *malahamaprakarana*, where it has been stated that it is beneficial in *ushta vrana* having pus because of its *puyanirharana* (removing pus and debridement) and *ropana* (healing) property. because it is having so many contents as *til taila* and bee wax which is having antimicrobial and healing property which reduces free radicles promotes wound healing, *Tankana* which is borax having antimicrobial property and scrapping action on slough due to its *ushna, Ruksha, Katu, Guna,* In same way *Naga Sindoor* is havin *Tikta, Katu* and *karma* as *Vranaropak, Kushthagna, Raktavikar, Vishjanya Upadrav, Kandughna & Visarpahara* property.

Size of wound on different day dressing



**CONCLUSION**

The cardinal symptoms and signs like pus formation, foul smelling, exudate and size of wound reduced and made wound to heals.in uncontrolled diabetic condition by action as debriding and healing. There arso many drugs mentioned in classical text which can become choice of dressing agent in modern era. Among them *Sindooradi malahama* is having nice wound healing and debriding property especially in infected pyogenic wounds.

**Conflict of interest:** None

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PARUL AYURVED HOSPITAL  
Teaching Hospital of Parul Institute Of Ayurved  
Parul University Limda, Vadodra, Gujarat 391760

Patient's Name : Rajeshbhai N Shah  
Referred by : Dr. Ekta Patel (s.s)  
Date : 25/08/2021 15:21  
Hospital No : 212442

Ref. No. : 21017952  
Age : 48 Years  
Sex : Male  
IPD :

**HEMOGRAM**

Test Name	Result	Units	Biological Reference Interval
Hemoglobin :	12.7	g/dl	[13.0-18.0]
Total RBC Count :	4.30	mill/cmm	[4.7-6.0]
<b>Blood Indices</b>			
P.C.V. :	37.0	%	[42-52]
M.C.V. :	86.05	femtolitre	[78-100]
M.C.H. :	29.53	pg	[27-31]
M.C.H.C. :	34.3	g/dl	[32-36]
R.D.W. :	17.0	%	[11.5-14.0]
Total WBC Count :	6400	/cmm	[4000-10000]
<b>Differential WBC Count</b>			
Polymorphs :	57	%	[60 - 70]
Lymphocytes :	35	%	[20 - 40]
Eosinophils :	05	%	[1 - 4]
Monocytes :	03	%	[2 - 6]
Basophils :	00	%	[0 - 1]
Platelet Count :	272000	/cmm	150000-450000

F.P.  
Signature.

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Date : 25/08/2021 15:21  
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Ref. No. : 21017952  
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Sex : Male  
IPD :

**URINE EXAMINATION**

**PHYSICAL EXAMINATION:**  
 Volume - 20 ml  
 Colour - Pale Yellow  
 Blood - trace  
 Appearance - Clear  
 Deposit - Absent

**CHEMICAL EXAMINATION:**  
 Sp. Gravity - 1.010  
 Protein - Absent  
 Glucose - Absent  
 Ketone - Absent  
 Urobilinogens - Absent  
 Bile Salts - Absent  
 Bile Pigments - Absent  
 Reaction - S.O

**MICROSCOPIC EXAMINATION:** [After centrifugation at 2000 r.p.m. for 5 minutes]  
 Pus Cells - 45 /H.P.F.  
 Red Cells - 1-2 /H.P.F.  
 Epithelial Cells - 1-2 /H.P.F.  
 Casts - Absent  
 Crystals - Absent  
 Yeast Cells - Absent  
 Trichomonas Vag. - Absent  
 Bacteria - Absent

F.P.  
Signature.

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Parul University Limda, Vadodra, Gujarat 391760

Patient's Name : Rajeshbhai Shah  
Referred by : Dr Ekta  
Hospital No : 31/08/2021 13:35  
Hospital No : 212472

Ref. No. : 21017952  
Age : 48 Years  
Sex : Male  
IPD :

**BIOCHEMICAL TESTS**

Test Name	Result	Units	Biological Reference Interval
Random Blood sugar :	82	mg/dl	70 to 140

Signature: [Signature]

PARUL AYURVED HOSPITAL  
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Parul University Limda, Vadodra, Gujarat 391760

Patient's Name : Rajeshbhai Shah  
Referred by : Dr Ekta  
Hospital No : 31/08/2021 11:01  
Hospital No : 212472

Ref. No. : 2101795  
Age : 48 Years  
Sex : Male  
IPD :

**HBA1C [Glycosylated Haemoglobin]**  
Method: Immunoturbidimetry

Test Name	Result	Units	Biological Reference Interval
Glycosylated Haemoglobin : (HBA1C)	10.70	%	Non Diabetic Level 4 - 6 Therapy Range < 7 Change of Therapy: > 8
Estimated Average glucose :	260.39	mg/dl	

Signature: [Signature]

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Patient's Name : Rajeshbhai Shah  
Referred by : Dr Ekta  
Hospital No : 31/08/2021 13:35  
Hospital No : 212472

Ref. No. : 21017952  
Age : 48 Years  
Sex : Male  
IPD :

**ERYTHROCYTE SEDIMENTATION RATE (ESR)**

Test Name	Result	Units	Biological Reference Interval
After 1 hour :	52	mm	(M: 1 - 7 / F: 3 - 12)

Signature: [Signature]

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Patient's Name : Rajeshbhai Shah  
Referred by : Dr Ekta  
Hospital No : 31/08/2021 11:01  
Hospital No : 212472

Ref. No. : 2101795  
Age : 48 Years  
Sex : Male  
IPD :

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Signature: [Signature]

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Patient's Name : Rajeshbhai N Shah  
Referred by : Dr Ekta Patel (S.S)  
Hospital No : 07/09/2021 13:06  
Hospital No : 21017952

Ref. No. : 212442  
Age : 48 Years  
Sex : Male  
IPD : 212442

**HEMOGRAM**

Test Name	Result	Units	Biological Reference Interval
Hemoglobin :	13.2	g/dl	[13.0-18.0]
Total RBC Count :	4.54	mill/cmm	[4.7-6.0]
<b>Blood Indices</b>			
P.C.V. :	38.8	%	[42-52]
M.C.V. :	85.46	femtolitre	[78-100]
M.C.H. :	29.07	pg	[27-31]
M.C.H.C. :	34	g/dl	[32-36]
R.D.W. :	16.9	%	[11.5-14.0]
Total WBC Count :	6900	/cmm	[4000-10000]
<b>Differential WBC Count</b>			
Polymorphs :	59	%	[60 - 70]
Lymphocytes :	36	%	[20 - 40]
Eosinophils :	02	%	[1 - 4]
Monocytes :	03	%	[2 - 8]
Basophils :	00	%	[0 - 1]
Platelet Count :	220000	/cmm	150000-450000
<b>ERYTHROCYTE SEDIMENTATION RATE (ESR)</b>			
Test Name	Result	Units	Biological Reference Interval
After 1 hour :	30	mm	(M: 1 - 7 / F: 3 - 12)

Signature: [Signature]