



ISSN 2456-3110

Vol 9 · Issue 3

March 2024

Journal of
**Ayurveda and Integrated
Medical Sciences**

www.jaims.in

JAIMS

An International Journal for Researches in Ayurveda and Allied Sciences



Maharshi Charaka
Ayurveda

Indexed

Management of *Dushtavrana* (Non-Healing Ulcer) through Ayurveda - A Case Report

Priyanka Biradar¹, Prasadshakti G. Gannur², A. M. Madni³

¹Final Year Post Graduate Scholar, Department of PG studies in Shalya Tantra, BLDEA's AVS Ayurveda Mahavidyalaya, Vijayapura, Karnataka, India.

²Professor & HOD, Department of PG studies in Shalya Tantra, BLDEA's AVS Ayurveda Mahavidyalaya, Vijayapura, Karnataka, India.

³Associate Professor, Department of PG studies in Shalya Tantra, BLDEA's AVS Ayurveda Mahavidyalaya, Vijayapura, Karnataka, India.

ABSTRACT

Shalyatantra is one among the *Astang Ayurveda*, the branch of *Shalyatantra* refers to surgical and parasurgical procedures in *Ayurveda*. *Dusthavrana* (non healing ulcer) are a frequently encountered problem in present era produced commonly as a complication of trauma or pathologic insult and it causes long term agony to the patient. The issue of non-healing ulcers management with *Ayurvedic* remedy is one of the major areas of the research and has come under increased study. This is a case report of 40-year-old female, who had an episode of *Dushtavrana* (non healing ulcer) and presented to the outpatient department with complaints of severe pain, itching and ulcer over right ankle region. The first line of management for *Dushtavrana* is *Shodhana*. *Kalka* is the specific treatment for *Dusthavrana* which is mentioned under *Shodhana* and *Ropana Kriya* of *Saptopakrama*. *Yavadi Kalka* is one of the formulations mentioned in *Dwivraniya Chikitsa Adhyaya*. *Yavadi Kalka* is simple, very cost-effective procedure. In the present case, *Yavadi Kalka* after *Jaloukavacharana* has shown assuring results in the management of *Dushtavrana*.

Key words: *Yavadi Kalka, Jaloukavacharana, Dushtavrana, Non healing ulcer*

INTRODUCTION

The break/loss/rupture of continuity of body tissue or part of body is called *Vrana* (Wound). The scar of the wound never disappears even after healing and remains till the body survives is called *Vrana*. Normally wounds are healed by it if kept clean. So *Vrana* (wound) and its *Shodhana* (cleaning) are the two sides of

surgical coin on which an expert surgeon has to play his role sincerely. Contamination of wound by bacteria, insufficient blood supply, tissue tension and radiation are the local factors for delay in wound healing. Whereas general factors include malnutrition, malignant disease, diabetes and long-term consumption of steroids and cytotoxic drugs.^[1] *Acharya* Sushruta given detailed description about *Vrana*. Generally, *Vrana* classified into two types i.e., *Sharira* are due to vitiated *Dosha* and *Agantuja* i.e., *Sadhyovrana* (wound) which is caused by trauma. If the *Vrana* (wound) gets infected and take long time to heal then it is called *Dusthavrana* (Infected wound or non-healing ulcer).^[2]

Surgeons deal with Non healing ulcer with debridement and use Betadine, silver nitrate, H₂O₂, Eusol to cleansing purpose and internally antibiotics, and at last lifesaving procedure like amputation these have their own limitations,^[3] *Acharya Sushruta*

Address for correspondence:

Dr. Priyanka Biradar

Final Year Post Graduate Scholar, Department of PG studies in Shalya Tantra, BLDEA's AVS Ayurveda Mahavidyalaya, Vijayapura, Karnataka, India.

E-mail: pb28121996@gmail.com

Submission Date: 12/01/2024 Accepted Date: 18/02/2024

Access this article online

Quick Response Code



Website: www.jaims.in

DOI: [10.21760/jaims.9.3.34](https://doi.org/10.21760/jaims.9.3.34)

elaboratively mentioned *Shasti Upakrama* to treat all kinds of *Vrana*. The principal of management runs through- *Vedana Shamaka, Shothahara, Rakta Stambhak, Aushadi Prayoga, Shodhana* and *Ropana Karma* with *Pathy Apathya Prayoga*.^[4] So to prove these treatment modalities as evidence-based medicine, we adopted *Kalka* application in the management of *Dusthavrana* (Non healing ulcer) healing delayed with anemia-A case report on basis of OPD level.

PATIENT INFORMATION

A 40-years-old female patient came to outpatient department No.31298 of BLDEA’s AVS Ayurveda Mahavidyalaya Hospital and Research Centre, with the complaints of Painful wound at lateral malleolus of right leg since 1year [Figure 1]. An interrogation with the patient revealed the history of trauma and repeated ulcer since 2-3years. The history of sickle cell anemia was revealed 4yrs back when she had ulcer over the same site and she took treatment for the same in Sri Sri Ayurvedic medical college and hospital Bangalore in the year of 2019.

Clinical findings

On examination the wound was 2x1x1 cm (Length x Width x Depth) situated on lateral malleolus of right leg involving skin and muscle with everted, inflamed edges, purulent discharge, floor was covered with slough, tenderness, itching, burning sensation were present, which is oval shape, pale margin with mild foul smell. Patient was k/c/o sickle cell anemia.

Investigations

WBC count - 25700/L, RBC count - 2.75 million/c.mm, HB - 7.9 gm/dL, PCV - 22.4%, MCV - 81.5 fL, MCH - 28.7pg, MCHC - 35.3 g/dL, Platelet count - 42,10,000/c.mm, RDW - 20.2, Random blood sugar - 87.8 mg/dl, Serum creatinine - 0.86 mg/dl. CT - 3min 40sec, BT - 1min 33sec. Patient was non diabetic, non hypertensive, no vascular changes on Doppler study. USG findings - No appearance of spleen (Auto splenectomy).

Diagnostic assessment

The diagnosis was made on the basis of clinical features like *Atee Samvrutta, Atee Vedana, Atee Ushna, Utsadana, Deergha Kaleen, Dushtarakta Srava, Raga, Paaka, Vividha Varna* and *Vividha Srava*.

Therapeutic intervention

The patient was treated with *Kalka* application externally and internally with medications.

Table 1: Timeline

Date	Event	Treatment
28/12/2022 (1 st day)	The symptoms like pain, itching, burning sensation, foul smell, discharge, tenderness, size and floor of the ulcer all are present.	<i>Raktamokshana</i> by <i>Jalouka</i> over ulcer for 45mins, <i>Haridra</i> and <i>Yashtimadhu churna</i> sprinkled over site of leech bite, pressure bandage applied for 24hrs to avoid further bleeding from the bite site.
30/12/2022 (3 rd day)	Pain bit reduced & itching, moderate in discharge, foul smell, size and floor of ulcer, mild in itching and tenderness around ulcer.	On 3 rd day Bandage removed, wound washed with normal saline, <i>Yavadi Kalka</i> application, with a thickness of approx. 0.5 cm started daily once along with internal medications.
06/01/2023 (10 th day)	Pain, burning sensation, discharge, foul smell, size of ulcer are remained same, reduction in severity of itching, tenderness and floor of ulcer.	<i>Yavadi Kalka</i> application continued with internal medications.
13/01/2023 (17 th day)	Reduction in severity of pain, size and discharge, foul smell became absent, itching, burning sensation and floor of the ulcer remain as on 10 th day.	<i>Yavadi Kalka</i> application continued with internal medications.

20/01/2023 (24 th day)	Mild pain, itching, size and floor of the ulcer other parameters like burning sensation, discharge, tenderness, foul smell became absent.	<i>Yavadi Kalka</i> application continued with internal medications.
28/01/2023 (31 st day)	Pain became negligible, size reduced, floor improved.	<i>Kalka</i> application stopped, internal medications continued along with dressing by <i>Jatyadi Taila</i> after washing with NS to avoid infection and trauma, all medicines stopped except <i>Dhatri Loha</i> .
28/02/2023 (Follow up)	The patient was asymptomatic. Ulcer completely healed with scar mark.	Only <i>Dhatri Loha</i> continued.

Method of preparation: *Nimba Patras* pounded in *Khalva Yantra* along with *Madhu* and *Ghritha* after *Kalka* formed *Yava* powder mixed in *Kalka*.^[5]

Table 2: Showing the internal medicines

SN	Medicines	Dosage
1.	<i>Dhatri Loha</i>	1-0-1 x 2 months
2.	<i>Manjistadi Kashaya</i>	10ml-0-10ml x 1 month
3.	<i>Arogyavardhini Vati</i>	1-0-1 x 1 month
4.	<i>Triphala Guggulu</i>	1-0-1 x 1 month

Table 3: Showing ingredients of *Yavadi Kalka*

Drug	Botanical name	Part used	Quantity in parts
<i>Yava</i>	<i>Hordeum vulgare</i> Linn	Fruit	1
<i>Nimba</i>	<i>Azadirachta indica</i>	Leave	1
<i>Ghritha</i>	<i>Ghritha</i>		2
<i>Madhu</i>	<i>Madhu</i>		2

Follow-up and outcome

After 1 month [Fig. 8] the patient had a noticeable improvement in the symptoms such as size and floor of the ulcer. She was advised to continue with the *Dhatri Loha* for anemia other all medicines were stopped. The last visit of patient was on Jan 28, 2023 and her wound was completely healed with less scar mark and no any recurrence. After 6 months also there was no recurrence of wound and scar mark was reduced [Fig. 9].

Fig. 1: Before treatment



Fig. 2: Jaloukavacharana on 1st day



Fig. 3: *Kalka* on 3rd day



Fig 4: On 10th day



Fig 5: On 17th day



Fig 6: On 24th day



Fig 7: On 31st day



Fig 8: On follow up

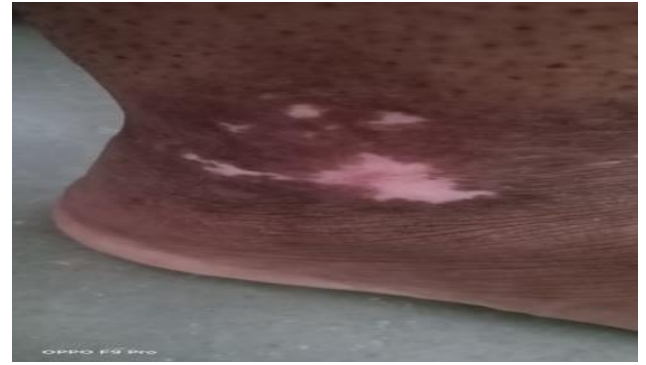
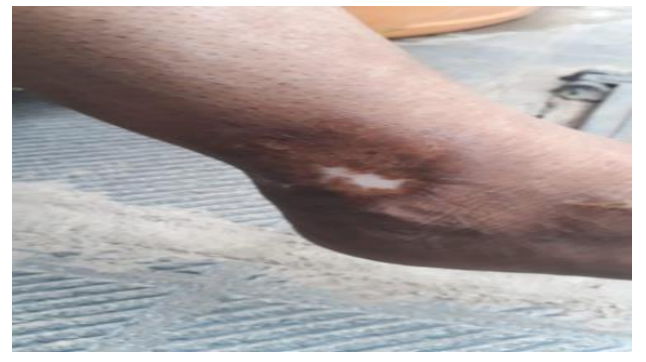


Fig 9: After 6 months



DISCUSSION

The one-year-old *Dusthavrana* which was reluctant to heal even after proper management of anemia and the wound by contemporary science, shown encouraging result by the Ayurvedic medicines within 28 days. Sickle cell anemia is hereditary haemolytic anemia seen commonly in blacks where in HbA is replaced by HbS leading to formation of crescent shaped red cells which is deformed and more prone for trapping in spleen and destruction. HbS undergoes crystallization causing elongated and deformed red cells. It increases the blood viscosity and causes stasis in circulation. It causes anemia, pain in abdomen, leg ulcers are usual features.^[6] The probable mode of action the internal medication as well as external application can be drawn as below. 1st day *Jaloukavcharana* was done as *Sthanika shodana*. Leech saliva contains Hirudin, Fibrin, Hirustatin, Bdelins, Hyaluronidase, Tryptase inhibitor, Eglins, Factor- X a inhibitor, Carboxypeptidase A-inhibitor, Histamine and Acetylcholine. Bdelin B-3 is found to have anti-inflammatory action at the wound site. Hyaluronidase is found to have antimicrobial

property over the tissues. Carboxy peptidase A-inhibitors increase the blood flow at the wound site. Histamin and Acetylcholine like substances present in saliva of *Jalouka* are found to act as Vasodilatation on the smaller vessels over the site of application. All the properties like anti-inflammatory, antimicrobial, vasodilatation increase blood flow and are very much helpful to heal a wound. All these properties are present in the saliva of leech which helps in proper nourishment, oxygen supply and removing the toxic substances from the site of wound. Neem leaves (*Azadirachta indica*) have active ingredients such as nimbidin and sodium nimbidate which processes anti-inflammatory, antibacterial, antifungal and antiviral properties that help in healing process and also contain an excellent nutrition which plays vital role in formation of collagen and new capillaries. So, it is clear that it might be helpful in the phases of wound healing process.^[7] *Yava* powder (*Hordeum vulgure*) is rich fibres and vitamins. Hence it acts as a natural antioxidant. It also contains carbohydrates, proteins, calories, Niacin, Vit B6, Thiamine riboflavin, flavanoids, manganese, phosphorous, polyphenols, caffeic acid, ferculic acid etc. these all vitamins are highly helpful in wound healing by giving the vitamins at the phases of wound healing. *Yava* has *Kapha Pitta Hara* properties and acts as *Lekhana Karma*. Barley contains component called beta glucan that helps in increase cell migration and promotes wound closer. It also has anti-inflammatory, antibacterial, anti-hypertensive, anti-diabetic, lowering cholesterol level and reduces blood sugar also.^[8] *Ghrita* forms a thin film over them and that allows early epithelization of wound. It also protects wound from invasion of any microbe. Good emulsifier effect of ghee which facilitate penetration of drug into tissue. It acts as anti-oxidant, anti-infective, anti-inflammatory, blood purifier these all helps in reduction of wound size and scar mark. *Madhu* is *Vrana Shodhaka*, does disloughing of the wound by *Lekhana* property. It has antibacterial effect, anti-oxidant, promotes healing by promoting epithelialization, reducing inflammation by eliminating *Tikshna Guna* of *Pitta* and relieving pain, reducing wound contracture, by keeping the edges soft by reducing *Rukshata* of

Vayu, it reduces the risk of secondary infection and *Kapha* is counteracted by *Madhu*.

Internally

Arogyavardhini Vati 1BD for 2months given as it does *Yakritpleeha Vikara*, *Tridosahara* properties, *Shothahara*, *Raktashodhaka*, reduces body weight by reducing *Ama* due to its *Deepana and Pachana* effect, improves *Agni*, pacifies *Pitta* and *Kapha* and also helps to manage anemia due to its balancing properties.^[9] along that *Mahamanjistadi Kashaya* 10ml BD as it has *Vata Kapha Shamaka* properties, does the *Rakta Shodana*, anti-inflammatory, obesity, hypercholesterolemia^[10] and also given *Dhatri Loha* does *Pandughna*, *Prerana*, *Raktaprasadana* properties as patient had sickle cell anemia since so many years. *Dhatri Loha* having *Tridosahara*, *Rasayana* and *Rasa Poshaka* properties may considered as best to maintain the aggravated *Pitta*.^[11] *Triphala Guggulu* helps in wound healing and also reduces *Paaka*, *Kleda*, *Shotha* along with remarkable reduction of pain in the wound. It acts as anti-inflammatory, anti-oxidant and immunomodulatory activity which aids in the healing and pain reduction. Hypolipidemic activity of *Guggulu* makes it useful in the treatment of obesity.^[12] All medicines were given with warm water. On 7th day (from the day of application of *Kalka*) *Vrana* was changed into *Ruhiyamanavrana* (healing wound), which has the colour of pigeon inside, with moderate discharge has minimally covered with slough was to be considered *Shuddha Vrana*. So, within this less time above mentioned drugs showed progressive results in wound cleaning. On 17th day edges of *Vrana* were in blue color, which has developed eruptions having mild pain and exudation said to be wound was being in *Shuddha Vrana* which means healthy wound. On 24th day & 31st day *Vrana Lakshanas* were almost subsided, which has no eruptions, swelling or pain, itching, discharge, burning sensation, floor was filled with sloping edge, almost reduction in size of ulcer considered as healing wound. On follow up there were no any symptoms, the wound was completely healed, has the same color as of the skin and which is even of one level considered it as healed wound.

CONCLUSION

Even though there is explanation in relation to *Dushtavrana* in the classics, the cause does not directly attribute to the anemia, it is one of the factors for delay in wound healing. The sequel of *Dushtavrana* is similar to Non healing ulcer. Most of the *Dushtavrana* are the result of vitiation of all the 3 *Doshas* with one of the *dosha* dominance. The indication of *Jalouka* is also there in *Shashti Upakramas as Raktamokshana*. It does the *Sthanik Shodhana* and improves the blood circulation which helps to heal the wound earlier. The *Kalka* of *Yava*, *Nimba Patra Kalka* with *Madhu* and *Ghritha* mentioned for *Shodhana* and *Ropana* whereas this *Yavadi Kalka* mentioned in *Vrana Chikitsa* both by *Acharya Sushrut* and *Charak*. The internal medications with *Arogyavardhini Vati*, *Maha Manjistadi Kashaya*, *Dhatrilo Loha* helped for the wound healing by systemic control of the vitiated *Doshas* and anemia. *Jatyadi Taila* helped in closure of wound as *Ropana*. The *Tridoshashamaka* effect of this *Kalka* can be used in all types of *Dushtavrana* even secondary to any systemic disorders also. So, this was the case of Non healing ulcer with underlined disease sickle cell anemia caused by the trauma. Here *Yavadi Kalka* has shown very good *Vrana Shodhana* effect.

Declaration of patient consent

Authors certify that they have obtained patient consent form, where the patient has given her consent for reporting the case along with the images and other clinical information in the journal. The patient has understood that her name and initials will not publish and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

REFERENCES

1. Sri Ram Bhat M, SRB's Manual of surgery, 7th edition, reprint on 2012, chapter 1st P 1-7.

2. Acharya Sushruta, Sushruta Samhita, translator by prof.k.r.sreekanthamurthy, published by chaukambha orientalia, reprint edition, 2010; chikitsa sthana 1st chapter, 3rd shloka P-3.
3. S Das, A concise textbook of surgery, 7th edition, reprint on, 2012; chapter 1st, P 7-8.
4. Acharya Sushruta, Sushruta Samhita, translator by prof.k.r.sreekanthamurthy, published by chaukambha orientalia, reprint edition, 2010; chikitsa sthana 1st chapter, 7,8 & 17th shloka P-3.
5. Acharya Sharangadhara, Sharangadhara Samhita of Pandit, edited by Pandit Parashurama Shashtri Vidyasagar, with Dipika commentary of Adhamalla and the Gudantha Dipika of Shri Kashirama:Chaukhambha Orientalia Varanasi; reprint 2013.Madhyama khanda Kalka Kalpana 5/2, P 397, P 174.
6. Sri Ram Bhat M, SRB's Manual of surgery, 7th edition, reprint on 2012, chapter 13, P 674.
7. Naveen Kumar Chundran, Ike Rostikawati Husen, Irra Rubianti. Effect of Neem Leaves Extract (Azadirachta Indica) on Wound Healing. Althea Medical Journal. 2015;2(2)199-203.
8. <http://www.ayurline.in> sited on 27/6/2023
9. Vrushali Dipak Ghule et al: Conceptual Study Of Arogyavardhini Vati. International Ayurvedic Medical Journal {online} 2021 {cited December 2021} Available from: http://www.iamj.in/posts/images/upload/3098_3101.pdf
10. Sruthi CV, Sindhu A. A comparison of the antioxidant property of five Ayurvedic formulatins commonly used in the management of Vatavyadhis. J Ayurveda Integr Med 2012;3:29-32. Downloaded on 18/10/2023.
11. Lariya Neelam, Bhadrawat Anand, Role of Dhatri Lauha in management of Garbhini pandu roga (Iron deficiency Anaemia in pregnant women),2023,9(8), 224-227. Downloaded on 18/10/2023.

How to cite this article: Priyanka Biradar, Prasadshakti G. Gannur, A. M. Madni. Management of Dushtavrana (Non-Healing Ulcer) through Ayurveda - A Case Report. J Ayurveda Integr Med Sci 2024;3:216-221. <http://dx.doi.org/10.21760/jaims.9.3.34>

Source of Support: Nil, **Conflict of Interest:** None declared.
