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A CASE REPORT ON AYURVEDIC MANAGEMENT OF CHRONIC NON-HEALING DIABETIC ULCER

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ABSTRACT

Chronic non healing ulcers are major global health challenge and have great impact on personal, professional, and social levels. It can be seen in patients associated with diabetic, auto immune disorder, and various skin diseases In diabetic patients, the wound-healing process is compromised, making conventional treatments less effective. The improper care of ulcer can lead to complication like gangrene and may lead to amputation of that part. This condition significantly impacts the patient's quality of life. In the present scenario the whole class of chronic non healing ulcers can be thus incorporated mainly into *dustavrana* category owing to its striking resemblance. This case study discuss about a 58-year-old male Diabetic patient presented with chronic non healing ulcer on left leg associated with severe burning pain and swelling. Patient was advised with internal medication having *amapachana*, *srothosodhana*, *vranaghna*, *mehahara*, *sothaghna* and *soolahara* properties. Externally *ksheera Dhara* was done with *karaskara* , highly potent Ayurvedic herb classified under *upavisha* . Wound healed within 5 weeks with complete relief of symptoms. This case study focuses on the potency of Ayurvedic medication on treating hopeless non healing diabetic ulcers and the mode of treatment was found to be very cost effective, safe and easy to administer.

INTRODUCTION

The term “wound refers to a break in the continuity of soft tissues in the body caused by violence or trauma of tissue¹.” An ulcer is defined as a localized defect or excavation on the surface of an organ or tissue produced by sloughing of necrotic tissue². The word ulcer is derived from Latin term “ulcus” meaning an open sore or lesion of the skin or mucous membrane accompanied by sloughing or inflamed necrosed tissue³. Ulcer can be seen in patients associated with diabetic, auto immune disorder, and multiple primary skin conditions. In individuals with diabetes mellitus, the wound healing process is often impaired, hence conventional therapeutic intervention might not be effective. The improper care of ulcer can cause gangrene and may lead to amputation. Diabetes mellitus is a group of metabolic disorders characterized by compromised insulin production or function, leading to persistent hyperglycaemia. This condition significantly reduces individual quality of life and life expectancy. Hyperglycaemia also increases the risk of comorbidities affecting multiple organs⁴. One of the main consequences of diabetes is the impairment of self-repairing abilities and healing⁵.

Chronic wounds often occur in individuals with diabetes mellitus due to the impaired wound healing. This condition poses significant challenges for both patients and healthcare systems. With the increasing prevalence of diabetes, it will be a significant medical, social, and economic burden in the near future. Hence, there is a need for new therapeutic alternatives, as existing treatments, despite their variety, do not guarantee a rapid and definite reparative process. The impaired healing associated with diabetes results from a complex pathophysiology of vascular, neuropathic, immune, and biochemical components⁶. Hyperglycaemia correlates with stiffer blood vessels which cause slower circulation and microvascular dysfunction, causing reduced tissue oxygenation⁵. Blood vessel alterations observed in diabetic patients also account for reduced leukocyte migration into the wound, which becomes more vulnerable to chronic infections. In the current scenario, the whole class of chronic non healing ulcers can be brought under the category of *Dushta vrana* owing to its similarities. Any *Vrana* if not treated properly may turn into *Dushta vrana* in long run⁷. Conventional treatment though is effective, may require surgical intervention and may not be always affordable or fruitful to all.

CASE REPORT

A 58-Year-old Male patient presented with a chronic non healing ulcer in the anterior aspect of the lower 2/3rd of left lower limb associated with severe burning pain, purulent discharge, offensive smell, swelling and itching aggravated for 3 weeks. He is known history of diabetic mellitus for 13 years, hypertension for 6 years and dyslipidaemia for 6 years. 5 year back, he noticed multiple coin shaped pus point over the anterior aspect of left shin along with fever. He took an allopathic treatment for 3 weeks and got symptomatic relief. Intermittently ulcer appeared over left lower limb and managed by several allopathic and homeopathic treatment and got considerable relief. Gradually the size increased and became a larger one than before, associated with same complaints with more intensity. The family history was also insignificant with the patient disorder. The patient was admitted in our IPD.

On wound examination wound situated on the anterior aspect of the lower 2/3rd of left lower limb (approximately 8.5*6.5cm) with irregular edges and margins. The floor was reddish yellow in colour. Yellowish purulent discharge present with glossy red oedematous surrounding area. On palpation tenderness (grade 4) present over the centre and surrounding area along with warmth.

Lab Investigation findings are Hb 13.8g%, T.WBC 10530 CELLS/mm, ESR 46mm, FBS 164, PPBS 330, HbA1C 9.5%, Lipid profile RFT LFT and other routine haematological investigations were within normal limit

METHODOLOGY

Formulation of the proper and relevant line of treatment is the main entity in the wound management, which includes external and internal medication in the form of Sodhana and Ropana concept with relation to *Dustavrana* (non healing ulcer). In this case study, treatment also focuses to reduce *prameha*. The wound was cleaned and subjected to *Dhara* (continuous pouring) with the Sigrupunarnavadi Kashaya for 45minutes for 10 days . Then dressing with *Jathyadi ghrta* was applied in adequate quantity with sterile gauze and bandage. After 10 days freshly prepared *karaskara ksheeram* is used for *dhara* over wound for 3 weeks, followed by *jatyadi ghrta* dressing. *Punarnavadi kashayam*, *Nishakathakadi kashaya*, *chandraprabha Gulika* and *Guggulupanchapala choornam* was given internally (as shown below) for a period of 5 weeks. *Nitya Virechana*(purgation) with *Avipathy Choornam* 5 gm

was given during the whole course of the treatment. Table no.1 &2 shows the details of procedure done and the internal medication given

TABLE 1

Sl no	Procedure done	Duration
1.	<i>Dhara with Sigrupunarnavadi kashayam followed by jatyadi ghrta dressing</i>	10 days
2.	<i>Karaskaram Ksheera dhara followed by jatyadi ghrta dressing</i>	4 week

TABLE 2

Sl no:	Medicine	Dose,time	Anupanam	Duration
1	<i>PUNARNAVADI KASHAYA</i>	48 ml bd (6AM,6PM)Before food Orally		5 weeks
2	<i>NISAKATHAKADI KASHAYAM</i>	300 ML <i>MUHURMUHUR</i>		5 weeks
3	<i>CHANDRAPRABHA GULIKA</i>	1 BD ALONG WITH KASHAYA 1		5 weeks
4.	<i>GUGGULU PANCHAPALA CHOORNAM</i>	6GM ORALLY-11 AM,4 PM	HONEY	5 weeks
5.	<i>AVIPATHY CHOORNAM</i>	5 GM HS	HOT WATER	5 weeks

OBSERVATIONS AND RESULT

The clinical features of *Dushta vrana* were relieved at the end of 2nd week and the wound was completely healed by the end of 5th week leaving only a minimal scar. With the follow

up for a period of 3 months, the patient has showed no signs of recurrence. The observations and results are tabulated below.

TABLE 3

Sl no	Symptoms	Before treatment	After treatment
1	Pain(VAS Score)	10	0
2	Burning sensation	severe	Mild
3	Swelling	Grade 2	Grade 0
4	<i>Vrana srava</i>	Mucopurulent	No discharge
5	<i>Vrana Gandha</i>	Bad odour	No odour
6	Itching	Grade 3	Grade 0
7	Measurement of wound	8.5*6.5 cm	Completely healed



Figure 1 :Before treatment



Figure 2 :During treatment(after 10 days)



Figure 3: After treatment(after 5 weeks)

DISCUSSION

Dusta vrana is a commonly encountered problem faced in clinical practice, whereas as a healthy ulcer heals earlier as compared to that of a contaminated one, it is important to keep the ulcer clean during the various stages of healing process. In *Dushta vrana*, the accumulation of *Doshas* leads to its chronicity. Hence it needs both *Shodhana* (purificatory) and *Ropana* (wound healing) *Chikitsa*⁸. *Shodhana chikitsa* improves factors that inhibit healing while *Ropana* promotes the healing process. In diabetic patients, there is impairment in wound healing process. So here selected medication having *vrana ropana sothaghna* and also having *mehahara* properties.

Sigrupunarnavadi yoga is mentioned in the context of *mandali sarpachikitsa* has 10 ingredients, here used in the form of *dhara* to reduce the inflammatory stage. In this case patient complaints about severe intolerable pain and burning sensation along with swelling around the wound. Among them *Sigru*, *Haridra*, *Chandana*, *Pata*, *Eswaramooli*, *Yashti* and *Sireesha* are having *Vishaghna* property. *Punarnava* has *Kapha*, *Vatahara* property may give relief in Pain as well as in oedema. *Yashtimadhu* is having *Vata*, *Pittahara* properties, can alleviate pain and erythema while *Chandana* has *Pitta*, *Kaphahara* properties may give relief in Erythema and oedema. *Sigru* and *Gokshura* have reduce swelling. While analysing the properties, the *Yoga* predominantly has *Tikta Madhura Kashaya Rasa*, *Laghu Tikshna Ruksha Guna*, *Ushna Virya*, *Katu Vipaka* and *Vatakaphagna* in property.

Karaskaraksheera dhara mentioned in *chikitsa manjeri* in the context of *visarpa chikitsa*. Due to its *Ashukaritwa*, *Ushna* and *Teekshna* properties, *Visha dravyas* get spread rapidly in the

body. So, for the quicker action of medicines *Vishadravyas* like *Kupilu* can be utilized judiciously and can be made more effective. *Karaskara* (*Strychnos Nux vomica* L.) – a toxic drug coming under the category of *Upavisha* has *Vranahara*, *Soolahara*, *Kushtahara*, *Sothaghna* properties. It boosts up the peripheral blood circulation, reducing pain, burning sensation and inflammation. Proper circulation to the wound accelerates the wound healing process. Its anti-bacterial, anti-fungal, analgesic and anti-inflammatory properties contribute to healthy granulation tissue formation. Studies revealed that Brucine regulates the inflammatory cytokines and shows significant reduction in wound size^{9,10,11}. *Karaskara ksheera dhara* makes the ulcer clean and speed up the wound healing process.

Jatyadi Ghrita which is mentioned in *Astanga Hridaya* and *Bhaishajya Ratnavali* for the treatment of *Vrana*. In classics *Jatyadi Ghrita* is indicated for *Dushta Vrana* and *Nadi Vrana*. Maximum dravyas of *Jatyadi Ghrita* have *Tikta Rasa*, *Katu*, *Vipaka*, *Laghu Guna*, *Ushna Veerya* and *Ruksha guna pradhanata*. *Tikta rasa* has the property of *twak-mamsa sthireekarana* and *lekhana*. It may help in increasing tensile strength of *Vrana* and removing slough tissue. *Katu vipaka* has *Vrana Shodhana* and *avasadana* properties. Due to *Laghu guna* the *Vrana* gets *laghuta* and *dosha pachana* occurs. *Ushna Veerya* helps to penetrate the drug upto the site of *Vrana*. *Tutha* is one among the ingredients of *Jatyadi Ghrita*. It is having *lekhana karma* properties. So it may help in removal of slough. *Siktha* is *Jantughna*, *Vrana ropana* and *sandhaniya* properties

Punarnavadi kashayam is a good blood purifier with *Sothahara* and is diuretic in action. It increases the vascular permeability with dilatation of vessels allowing neutrophils and monocytes to localize at wound site. *Guggulupanchapala choorna* has anti-inflammatory and anti-microbial activity. *Guggulu and Triphala* have anti-oxidant property that gives a *Rasayana* (rejuvenating) effect and thereby repairs the skin tissue and maintains the integrity. In long standing cases, *nitya Virechana* also plays a better role. For *kosta sodhana* *avipathy choorna* is chosen for its properties like balancing pitta and being effective in neutralizing all types of poisons. In this case diabetics may delay the wound healing so also focusses to reduce the blood glucose level. Combination of *chandraprabha Gulika* and *nishakathakadi kashaya* have *srothosodhana*, *mehahara* and also have anti-inflammatory activities.

Conclusion

Even though healing is a natural process, it can be hindered by several factors. Deranged *Doshas* cannot be treated with a single drug all the times. Therefore number of drugs of different properties is described as *Vrana Shodhaka* and *Vrana Ropaka* in the management of *Dushta Vrana*. As a healthy ulcer heals earlier as compared to that of a contaminated one, it is important to keep the ulcer clean during the various stages of healing. *Dhara* with *sigrupunarnavadi kashaya* followed by *jatyadi ghrta* was found to be very effective in the managing of inflammatory phase of *Dushta vrana*. *Karaskara ksheera dhara* with other medications having *amapachana, srothosodhana, vranaghna, mehahara, sothaghna and soolahara* properties makes the ulcer clean and aseptic thereby hasten up the healing process. The treatment was able to achieved haemostasis and smooth healing process. Wound healed within 5 weeks with complete relief of symptoms. The mode of treatment was found to be very cost effective, safe and easy to administer.

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