



SARPA NIRMOKHA MASI FILM A BOON FOR NON-HEALING ULCERS – A CASE REPORT

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ABSTRACT:

Ecdysis of Indian cobra means the process of shedding the old skin. It is topically used in the form of film for treating the Dusta vrana (chronic wound). The aim of this study is to evaluate the role of sarpa masi film in the treatment of Dushta Vrana (chronic wound). It is a single observational innovative case study. A male aged 52 years presented with a non-healing wounds on his bilateral sole with a history of 10 years and by go through the clinical examination, diagnosed it as pressure ulcer. The routine laboratory investigations were within normal limit. This case study showed effective wound healing by topical application of sarpa masi film in 21 days.

Keywords: Shed skin of Indian cobra, Wound, Delayed wound healing, Sarpa nirmokha masi, Pressure ulcer, Dusta vrana.

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INTRODUCTION

Delayed wound healing is nightmare for both the surgeon and the sufferer. *Sushruta* mentioned the *Dushta Vrana* (chronic wounds), which is difficult to heal. *Dushta* is one in which there is localization of three *Dosha*. *Vrana*(wound), which had a bad odor, has abnormal color, with discharge, intense pain and takes a long period to heal^[1]. *Dushta Vrana*(chronic wound) is a long standing ulcer where removing debris enabling drug to reach healthy tissue is more important.

Sushruta has described *shasti upakramas* (60 measures) for the comprehensive management of *Vrana* (wound), which includes local as well as the internal use of different drugs and treatment modalities under a dedicated chapter of his treatise^[2]. Lack of specific application of the *shasti upakramas* (60 measures), difficulty to get most of the essential drugs for the *shasti upakramas* (60 measures) and sterile or antibiotic resistant wound sepsis makes an uphill task of management of wound healing. The healing process becomes diminished in chronic wounds due to reduced tissue regeneration, angiogenesis and neurological problem. There are so many research works have been carried out for the management of chronic and non-

healing wounds, but still it is a big confront for the medical professionals to deal this problem comprehensively. Hence one such unique attempt of *sarpa nirmokha masi film* is attempted to make vast usage of *masi* in the wound management.

The ulcers of sole may present with mixed property of necrotic floor with foul discharge and hard with dry punched out edges. So the Management should be a perfect blend of moist and dry properties. *Avachurnana*(dusting), *rasakriya*(pastery), *utkarika* (pan cake), *utsadana*(smearing ghee with boiled drugs) and *patradana*(covering with leaves) are the properties mentioned for moist and dry wounds as per the requirement separately^[3]. *Sarpa nirmokha masi* when used as *avachurnana* (dusting) helps for *kleda nirharana* (demoisturising) and *lekha*(scraping) inducing the dryness and chemical desloughectomy for the necrotic floor. But dry edges of the sole wound may further dry up because of *masi avachurnana* (dusting).To avoid excessive drying of the ulcer edges and to provide the required moisture for the edges considering the concept of *utkarika* (pan cake), *rasakriya*(pastery), *utsadana* (smearing ghee with boiled drugs) and *patradana* (covering with leaves), *sarpa nirmokha masi* is prepared into film. The

efficacy of such film is assessed in single case of chronic sole ulcers in this study.

CASE REPORT:

Study centre- Parul Ayurved Hospital, Parul university, Vadodara, Gujarat

Case History

A 52 years old male came to our OPD having the complaints of painless ulcer at bilateral soul with foul smell since 10 years.

History of present illness

The patient was apparently normal before 10 years then he noticed small multiple ulcers formed on right sole then after within 1 week another ulcer formed on left sole. Then he took allopathic medicines (details not available) and he didn't get relived for past 10 years. So he came here for further management.

Past history

Patient is k/c/o leprosy since 25 years ago.

General examination

B.P: 120/80 mmHg

Pulse: 78 bts/min

Heart rate: 78 bts/min

Respiratory rate: 18/min

Pallor: present

Odema: nil

Lymph node: no any lymph node enlargement

Icterus: present

Erythema: no

Local examination

On examination the ulcers at right lateral aspect of sole was 2x2 cm, right medial aspect of sole was 3x2 cm and at left medial aspect of left sole was 4x3 cm with dry hard punched out edges and necrotic floor with foul smell and also disfigurement was noticed, were 2nd toe of right leg and 3rd toe of left leg are found absent due to leprosy.



Fig.1 Non-healing Ulcer

Table 1 shows the Vrana Pareeksha/ Wound examination

PARTICULARS	VRANA PAREEKSHA	WOUND EXAMINATION
<i>Varna / Colour</i>	<i>Shyava aruna</i>	Reddish brown
<i>Gandha / Odour</i>	<i>Puti gandha</i>	Foul smell
<i>Srava / Discharge</i>	<i>Alpa sravi</i>	Serous discharge
<i>Vedana / Pain</i>	<i>Avedana</i>	No pain
<i>Akriti / Shape</i>	<i>Vritta</i>	Round
<i>Other Lakshana / Symptoms</i>	<i>Supta</i>	Loss of sensation

MATERIALS AND METHODS

Materials for Treatment:

Externally- *Sarpa nirmokha masi film* was topically applied for 15 days.



Internally- *Tab. Amlaki rasayan 2-0-2* was given for 7 days.

RESULTS

The wound size was assessed with **Pick's formula^[4]** throughout the study.

Table 2. Measurement of ulcer from Day 0 to Day 21

DAYS	RIGHT LATERAL ASPECT OF SOLE (ULCER A)	RIGHT MEDIAL ASPECT OF SOLE (ULCER B)	LEFT MEDIAL ASPECT OF SOLE (ULCER C)
Before application	2cm	3cm	4cm
On 3 rd day	2cm	3cm	4cm
On 7 th day	0.75cm	1.5cm	2cm
On 11 th day	0	0.80cm	1cm
On 15 th day	0	0.35cm	0.5cm
On 21 st day	0	0	0

1. Before application of *Sarpa nirmokha masi film*, the wound were measured about 2x2cm, 3x2cm and 4x3cm with dry hard punched out edges and necrotic floor with foul smell.
2. Post application of film, 1st day the edges appeared moist and partial sloughectomy seen.
3. On 3rd day totally free from slough and pale granulation started with moist edges amounting 10% granulation noticed.

4. On 7th day, healthy granulation covering more than 50% of the wound floor with soften edges with wound contraction to the more than 75% to the earlier size was noticed.
5. On 11th day, right lateral aspect of sole is completely healed and other wounds are further improves towards healing.
6. On 15th day, total wound was fill with healthy granulation and more than 90% wound contraction with epithelization noticed.
7. On 21st day, wound was healed with complete epithelization.

RESULT



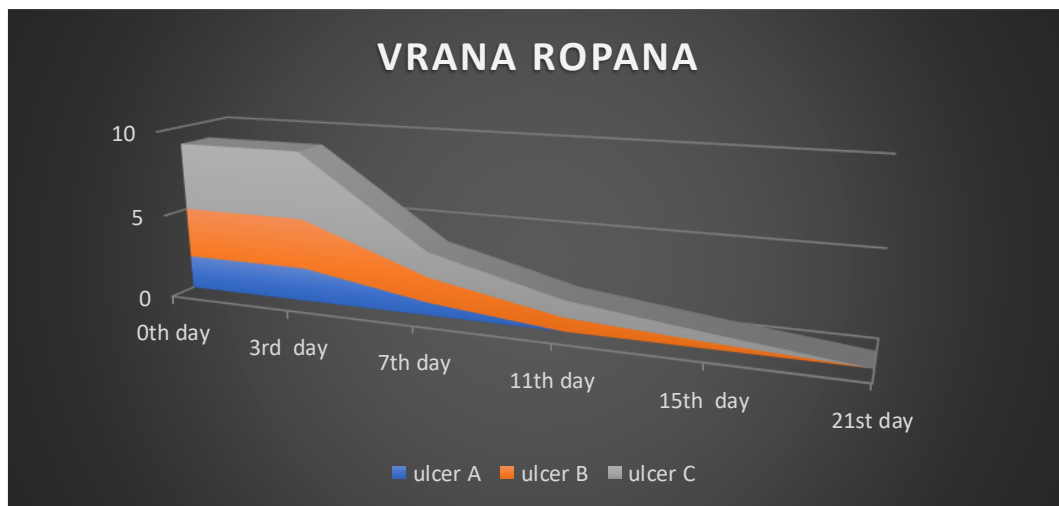


Fig. 2 Wound healing from 3rd day to 21st Day

DISCUSSION

The mission of the wound healing is to increase our basic understanding of the molecular and cellular events of the cellular repair and wound healing processes. In order to describe the complex cascade of events that follows injury, it is convenient to look at this process as a number of overlapping phases: i.e. Inflammation, formation of granulation tissue with angiogenesis, and scar formation (extracellular matrix remodeling). Injury to tissue leads to loss of structural integrity, instigating the coagulation cascade to prevent localized hemorrhage. In skin, mucosa, and gut especially, injury is also complicated by the invasion of microorganisms. These events play an important role in initiating the defense and repair mechanisms by sealing off served vessels and transferring blood constituents,

circulating cells, and bioactive substances to the site of the wound. This transferal and the ensuring defense processes constitute the early aspect of wound healing, commonly referred to as the inflammatory phase. The inflammatory reaction in soft tissue, which begins literally second after injury, is the same whether caused by a surgeon's sterile blade or by invading bacteria after a street injury. Qualitatively, inflammation is the same, but it is likely to be more prolonged in the latter case. More specifically, the mechanism of leukocyte adhesion to the vascular wall after injury followed by diapedesis, a major part of the inflammatory response, is essentially the same in all wounds whether resulting from surgery or trauma^[5].

Factors which affecting for delayed wound healing are disease like long-term effects of Diabetes impair, Aneamia, Uraemia, Jaundice,

then regular usage of Steroids and Cytotoxic drugs are also one among the reason for delayed wound healing. Same as Nutritional problems also cause delayed wound healing by Protein-calorie malnutrition and deficiencies of vitamins A, C, and zinc impair normal wound-healing mechanisms. Last but not least Temperature also plays a vital role in delayed wound healing i.e., The relatively low tissue temperature in the distal aspects of the upper and lower extremities (a reduction of 1-1.5°C [2-3°F] from normal core body temperature) is responsible for slower healing of wounds at these sites^[6].

Reported case of presented with the multiple ulcers similar to gummatous^[7] with lack of sensation and punched out edges. As a ayurvedic perspective this reported case is *vata-rakta*^[8] predominance signs and symptoms like floor with necrotic tissue deficing *shyava(brown)* *aruna(red)* and foul discharge was consider which is counter acted by *sarpa nirmokha masi* because of its probable combined properties like *visada(clear)*, *laghu(light)* and *snigdha(unctuousness)* of *sarpa nirmokha masi film*.

Effect on Vrana Vedana:

sensation was regained completely at the end of treatment. At the beginning painless or loss of sensation was completely reduced at the

end of 7th day. This is due to systemic action of *amlaki rasayan* and local action of *sarpa masi film*.

Effect on Vrana Varna:

At the end of 3rd day, slough was completely reduced and floor was covered with pale, healthy granulation tissue. This is due to *laghu(light)*^[9] and *snigdha(unctuousness)*^[10] property of the *sarpa masi film*.

Effect on Vrana Srava:

No discharges were present at the end of treatment. At the end of 3rd day, slight serous discharge from the wound was noticed. This may due to the *visada(clear)*^[11] properties of *sarpa masi film*.

Effect on Vrana Gandha:

Foul odor present at the beginning of treatment was completely reduced by the end of 3rd day. *Laghu(light)* property of the formulation is the reason.

Effect on Vrana Aakriti:

At the end of the treatment, Vrana was completely healed with minimal scar. This is *Vrana Shodhan(cleansing)* & *Ropana(healing)* properties of *sarpa masi film*, which provided ideal environment for healing.

Probable mode of action of Sarpa masi film:

Sarpa masi film has overall *laghu(light)*, *visada(clear)* and *snigdha(unctuousness)*. It acts as *Lekhana(scraping)*^{[12](a)}, *ropana(healing)*^{[12](b)}, *kleda*

aachushana(demositurising)^[13], *bala(strength)*^{[14](a)} and *varna(colour)*^{[14](b)} respectively. Thus, it helps in *Shodhan(cleansing)* and *Ropana(healing)* of *Vrana*. Moreover, *sarpa masi* is documented as having a special property of increasing the potency of the constituent ingredients (*Yogvahi*). It helps in reaching the minute channels by means of its *Sukshma(minute)*, *ruksha(dry)*.

Probable mode of action of Amalaki rasayan:

Tab.Amalaki rasayan possesses *Tridoshagna(reduces 3 doshas)*, *Rasayana(rejuvenating)*^[15] and antioxidant^[16] properties which might have enhanced healing of wound.

CONCLUSION

1. The shed skin of snake has been seen to have keratin which helps in epithelization^[17].
2. *Sarpa nirmokha masi film* is found effective in *vata-rakta dusta vrana* by means of cost effectiveness and no adverse reaction.
3. As the *Masi* also have *sookshma(minute)* property, they tends to go into minute affected area of the infected wound and helps in *vrana ropana(wound healing)*.

4. *Masi Kalpana* that are mentioned for wound healing can be best utilized by film technique.
5. *sarpa nirmokha masi film* can encourage new era of application of *shastiupakrama(60 measures)*.

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CITE THIS ARTICLE AS

Krishnadev C.P. Eveena Stephen. Sarpa Nirmokha Masi film a boon for non-healing ulcers – a case report. *J of Ayurveda and Hol Med (JAHM)*. 2023;11(1):108-116

Conflict of interest: None

Source of support: None