

AYURVEDIC MANAGEMENT OF AN INFECTED WOUND: A CASE STUDY

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ABSTRACT

Wound management is an integral component of principles of surgery. Rational wound management involves consideration of multiple factors like type of wound, its extent, site, cause etc. with due consideration of general condition of the patient as well. In Ayurveda not only the wound but patient as a whole is treated. A wide range of formulations for topical and oral administration, diet and lifestyle regimen have been described in ancient Ayurvedic treatises. Wound management is a major thrust area in Ayurvedic surgical practice. This is a single observational innovative case study where a male patient aged 11 years, presented with complaints of pain, blisters formation, discoloration, pus discharge from a wound over dorsal aspect of right foot and ankle. Patient was hypersensitive to local anaesthetic agents. So skin grafting could not be performed despite the wound got healthy and receptive for the same, in the course of treatment. Ayurvedic management culminated in complete wound healing.

KEYWORDS: Dushta Vrana, Vrana Shodhana, Vrana Ropana, Wound, Wound Management.

INTRODUCTION

Wounds are physical injuries resulting from breach in the continuity of skin. Wound healing is a process by which regeneration and repair of the damaged tissues occur.^[1-2]

It is imperative for the restoration of anatomical continuity and functional status of the skin.^[3] Wound healing inhabits complex and multifactorial sequence of events involving several cellular and biochemical processes.^[4] In Ayurveda, an elaborative description of Vrana (wounds) including classification, clinical features, general and specific management principles is available. Ayurvedic approach of wound management intends to assist and promote the pace of wound healing in diverse ways. The holistic approach of Ayurvedic wound management involves a wide range of local as well as systemic measures to promote early and effective healing with minimal complications and sequelae.

CASE REPORT

A male patient, aged 11 years, was brought to hospital in Outdoor Patient Department (OPD) of Shalya Tantra at Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital, Paprola. Distt. Kangra, Himachal Pradesh, India; with the complaints of pain, blisters, discoloration, profuse pus discharge from right foot (dorsal aspect) and right ankle area. Two days back, he

sustained a wound following trauma by a brick. He was taken to the civil hospital, Palampur, Himachal Pradesh. There he was prescribed oral antibiotics and local application of hot water at the affected site. In the course of this treatment, the wound status deteriorated. His attendants brought him to Rajiv Gandhi Government Postgraduate College and Hospital, Paprola, Himachal Pradesh; for management, where the patient was thoroughly examined locally as well as systematically. The local findings revealed a foul smelling deep wound on dorsal part of right foot and right ankle, measuring about 12cm × 7cm; having a large sloughed out area with blisters, discoloration and purulent discharge (Fig. A). Radiographic investigations revealed no bony injury. There was no history of any previous or existing systemic disease or surgical intervention reported by the patient and his attendant. Patient was admitted to Indoor Patient Department of Shalya Tantra (Surgery) of the institute for management.

Local treatment

First treatment regimen (Day 1 – 4) – On the very first day, surgical debridement was done (Fig. B). Wound was covered with the gauze pieces wet with normal saline and bandaging was done. No local application of any antiseptic agent like Betadine was done. No significant

change in the condition of wound was observed till 4th day. Wound was still unhealthy and unclean.

Second treatment regimen (Day 5-10) – On day 5, surgical debridement was again done (Fig. C) and topical application of Kasisadi Tailam was carried out for one week⁷. Daily application of Kasisadi Tailam exerted Vrana Shodhna Karma (cleansing effect) and progressively the wound status got improved (Fig. D).

Skin grafting was planned but the patient was rendered unfit for administration of any type of anaesthesia by the anaesthetist owing to his hypersensitive status for anaesthetic agents and intravenous Ringer Lactate solution. So conservative approach of management was adopted.

Third treatment regimen (Day 11-64) – From 11th day onwards topical application of Jatyadi Tailam was started⁸. Jatyadi Tailam exerted Vrana Shodhana and Vrana Ropna karma (Cleansing & Healing Effect) on wound (Fig. E & Fig. F). In the wound Hypergranulation was observed around 45th day, so local application of



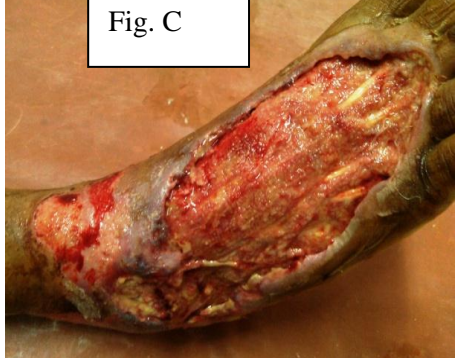
Kasisadi Tailam was re-started in lieu of Jatyadi Tailam. It was continued for 7 days and by this time excessive granulation tissue got disappeared. So again, local application of Jatyadi Tailam was continued till complete healing of wound was achieved.





By 64th day, the wound was completely epithelialized and further treatment was stopped (Fig. G).

Systemic Treatment

First treatment regimen (Day 1-3)- Initial administration of allopathic Anti Microbial Agents, analgesic and anti inflammatory agents was carried out for three days.

Second treatment regimen (Day 4 -64)- From 4th day onwards, oral administration of two Ayurvedic formulations viz. Triphala Guggulu 500 mg BD and Punarnavadi Mandoor 500mg BD, with honey were started. Pathya apathy (Diet and Life style regimen) were prescribed as advocated by Sushrut Samhita⁹. By 64th day, the wound was completely healed and all medications and regimen were stopped.

DAYS	Wound Picture	Wound Status	Local Application	Systemic Treatment
Day-0 Before Surgical Debridement		Wound status – unhealthy. Wound margins - inflamed . Slough – present. Discoloration – present. Smell – foul. Pus discharge – present	-	-
Day 0 After Surgical Debridement		I & D and Surgical debridement was done. Slough – removed. Pus – approximately 25-30 ml purulent discharge. Flexor tendons were exposed.	Wound toileting done with sterile Normal Saline solution.	Systemic Anti microbial Agents, analgesic and inflammatory drugs were started.
Day 4 th		Wound status – improved but still unhealthy. Wound size increased. Wound margins - inflamed . Slough – present, removed. Smell – foul. Pus Discharge – present, approximately 5 – 10 ml. Discoloration – present.	Topical application of Kasisadi Tailam was started. Re-debridement of wound was done.	All the allopathic medicines were stopped and Ayurvedic formulations viz. Triphala Guggulu and Punarnava Mandoor were started.

<p>Day 10th</p>	<p>Fig. D</p> 	<p>Wound status –improved. Wound margins – slightly inflamed. Slough –absent. Discharge – absent. Discoloration around margins – slightly present. Foul Smell- absent Healthy Granulation tissue – present. Tendons were totally covered by granulation tissue.</p>	<p>Topical application of Jatyadi Tailam was started in lieu of Kasisadi Tailam</p>	
<p>Day 20th</p>	<p>Fig. E</p> 	<p>Shudha Vrana. Wound status –healthy. Wound margins – no inflammation. Wound size decreasing. Slough – absent. Discharge – absent. Discoloration around margins– absent. Smell – absent. Healthy Granulation tissue – present.</p>	<p>Topical application of Jatyadi Tailam was continued</p>	
<p>Day 45th</p>	<p>Fig. F</p> 	<p>Rohita Vrana. Hyper granulation tissue present Wound size decreasing with epithilisation</p>	<p>Dressing stopped with Jatyadi Tailam and we used Kasisadi Tailam for Avasadan karma (removal of excessive granulation tissue)</p>	
<p>Day 64th</p>	<p>Fig. G</p> 	<p>Rudha Vrana. Wound was totally epithelialised. Complete anatomical and physiological restoration of the part was achieved.</p>	<p>No further dressing was required.</p>	<p>All oral medicines were stopped</p>

DISCUSSION

The vrana (wound) that is very painful, having foul smell, discolouration, copious purulent discharge has been rendered as Ashuddha vrana or Dushta Vrana (unhealthy wound) and requires Shodhana (cleansing) as per Acharya Charaka.^[10] All these features were present in the wound under management, rendering it unhealthy or Dushta Vrana (Fig. A). There was deep seated yellowish slough which was hard to remove initially and surgical debridement was done (Fig. B). The wound was initially flush cleaned with intravenous fluid viz. injection normal saline to decrease the bacterial or microbial load of the wound and systemic antibiotics were given for three days. Afterwards the wound was managed by topical application of Kasisadi Tailam daily and oral administration of Triphala Guggulu and Punarnava Mandoor with Honey. Triphala Guggulu carries Shodhana (cleanings effect) and Ropana (Healing) properties and Punarnava Mandur has Shoth-hara (antiinflammatory) and krimighana (antimicrobial) properties. This medication did its Shodhana Karma (cleanings effect) on wound.^[11,12] Kasisadi Tailam exerted its local effect by doing chemical debridement and wound status got improved to Shudha Vrana (healthy and clean wound) by day 10th (Fig. D). Pathya apanya were prescribed and followed by the patient as advocated by Sushrut Samhita under Chapter 19 'Vranitopasniya Adhyaya' of Sutra Sthana of Sushruta Samhita. Patient was prepared for skin grafting but he was found to be hypersensitive to the anesthetic agent and intravenous fluid Ringer Lactate. So he was rendered unfit by the anaesthetist. He was left with only one option and that was to get the wound healed by secondary intention.

Unhindered healing takes place in a clean wound. So initially Vrana Shodhana (wound cleansing) was achieved. Afterwards for Vrana Ropana (wound healing) along with Vrana Shodhana (wound cleansing), daily topical application of Jatyadi Tailam was started. Gradually the wound size was reduced and wound margins became bluish showing the stage of Rohita Vrana (healing wound). (Fig. F) In the wound, hypergranulation was observed around 45th day, so local application of Kasisadi Tailam was re-started in lieu of Jatyadi Tailam. Gradually the excess granulation tissue got removed within a week and by 64th day the wound was healed completely with minimum scar tissue formation as described under the features of Rudha Vrana (healed wound).^[14] (Fig. G).

However it took significant time of more than two months but successful healing of a large sized unhealthy wound was achieved following Ayurvedic principles of Vrana Chikitsa (wound management).

CONCLUSION

This case study has highlighted the potential of Ayurvedic doctrines in wound management. The holistic

management strategies of Ayurveda can prove as panacea in the challenging field of wound management.

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