

Ayurvedic Management of Post Burn Sequel

Sathish HS*, Rashmi TM**, Mithun B***, Narmada MG****, Nilesh J*****

Indian Institute of Ayurveda Research and Hospital, Rajkot, Gujarat

Abstract

Burn wounds are distressing to patient and their relatives as it has negative impact on psychological wellbeing. Disfigurement, wound contraction, restricted movements are the common post burn sequel and are best managed by employing Ayurvedic management such as *Chedana* [surgical excision], *Lekhana* [debridement], *Ropana* [wound healing therapies], *Snehana* [oleation] and *Swedana* [sudation]. Administration of wound cleansing and healing medications along with Ayurvedic rehabilitative regimen corrects the pathology and restores the normalcy.

Key word: Burn wound, Ayurveda

Introduction

Wounds are inseparable topic in surgical science, as proper healing of wound has become goal of all surgeons. Every human being from birth to death will experience wound and its repairing process many times. Since antiquity, scientists and medical professionals are thriving hard to master the art of healing. Voluminous details of wound are traceable in Ayurvedic treatises denoting the earliest records of Medical Science in Ancient India.

Dagdha Vrana [burn wound] caused by dry or moist heat is well managed by Ayurvedic surgical management.¹ An ocean of wound healing methods and formulations are cited in Ayurvedic Treatises inspiring many aspirants to carry out research studies on it.² Research studies have proved exquisite potentials of various wound healing formulations of Ayurveda^{3,4,5}.

Burn wound causes serious health consequences to mortality, the burn survivors usually pass through various physical and psychological disturbances.^{6,7,8} Physical disturbances mainly include disfigurement, non-healing, post burn contracture and pain. Apart from these factors, a significant impact applies to socio economic life of an individual and quality of life.^{9,10}

Case Presentation

A male patient aged 52 years had some chemical burn injury 3 months back [details of the chemical burn are not reported] presented with non-healing wound over right forearm and palm with mild pain, watery discharge. Patient didn't had any other medical or surgical illness history and he was not on any medications. Clinical examination revealed 2.5 × 4 cm sized wound over palmar surface of right hand. The surrounding skin had blackish discoloration with sloping wound edge and regular margin. Floor of the wound was covered with thick Escher. Base of the wound slightly indurated. Movements of forearm was unaffected while movements of hand had some restrictions. On palpation slight tenderness at the wound edges was present. Peripheral vessels were assessed for circulation and drainage, it was found to be functioning normally. Haematological and biochemical investigations were within the normal limits.

Treatment planned

Chedana [Excision] and *Lekhana* [debridement] was planned followed by topical application of medicated ghee for healing. Under aseptic precautions, unhealthy tissue was surgically excised and debridement was done wherever necessary. Wound was freshened and cleaned thoroughly through wound lavage using *Panchavalkala Kashaya*. After cleaning, the *Panchatikta ghrta* was applied on the wound surface and dressed. On the consecutive days, wound was cleaned with *kashaya* and dressed by using the medicated ghee till complete healing. The wound over the forearm healed in 14 days whereas the wound on palm took 30 days to heal. On complete healing, slight wound contracture was observed in palmar surface restricting the movements of hand. To restore the normal functioning of the hand, topical application of *Tila taila* followed by immersion hand in Luke warm water was advised to the patient. Patient was also told to carry out active finger and hand movements. The gradual improvement in the functioning of hand was observed. Reduction of blackish discoloration in surrounding skin was easily perceivable feature.

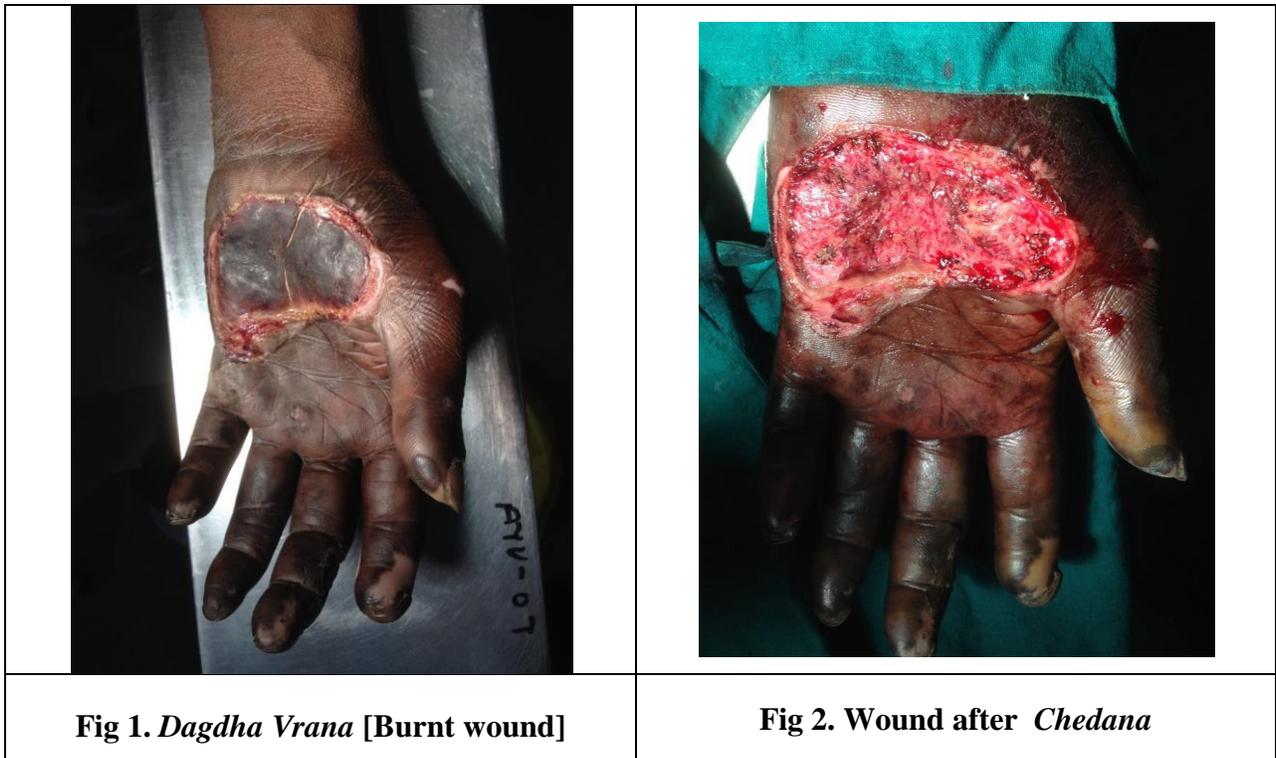
Discussion

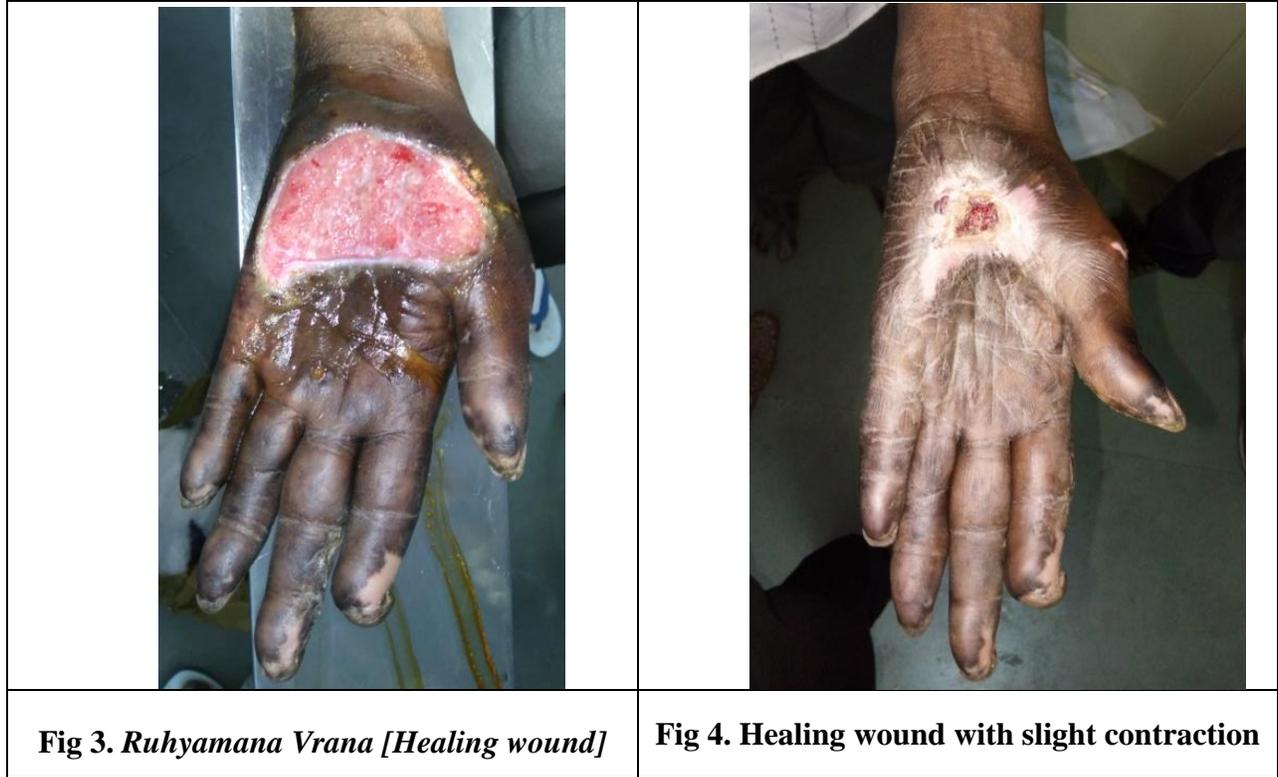
Post burn sequel presents with disfigurement due to wound contracture, ugly scar, restriction of the movements of the part affected and imbalance in psychological wellbeing of an individual. The magnitude of socio-economical burden on patient and his relatives is profound. Post burn wound should be treated by following guidelines elaborated for *dushtavrana* [infective ulcer].^{11,12,13} The principle management of burn wound is to correct the local pathology and improve the general nourishment to promote early healing. In this post burn case, the unhealthy tissue has to be severed to pave way for the granulation tissue formation. *Chedana* is first and foremost procedure among the eight surgical procedures specified by *Sushruta*^{14,15}. Unhealthy

tissues and tumors are eligible for excision based on this principle; unhealthy tissue on the wound surface was excised. The procedure is followed by wound management with Medicated ghee formulation, *Panchatikta Ghrita*. The reason behind this is many ghee formulations have been cited in the treatises and are found to possess significant wound healing potentials especially in burn wounds.^{16,17} Subsequent to healing Ayurvedic rehabilitation methods like *snehana* and *swedana* gives beneficial results in restricted movements. The degree of wound contraction is minimal in wounds healed by employing Ayurvedic principles and medications. The discoloration in the surrounding skin has profoundly reduced.

Conclusion

Ayurveda contains an ocean of information on wound and its management. Disfigurement and wound contraction poised to affect the burn survivors. Application of Ayurvedic surgical principles in such cases yields significant results. In Post healing phase utilizing *snehana* and *swedana* karma facilitate restoration of normal functioning of the part.





*Associate Professor, Dept. of *Shalya Tantra*, Indian Institute of *Ayurveda* Research and Hospital, Rajkot.

** Assistant Professor, Dept. of *Kayachikitsa*, Indian Institute of *Ayurveda* Research and Hospital, Rajkot.

***Associate Professor, Dept of *Shalakyia Tantra*, ALN Rao Memorial Ayurvedic Medical College, Koppa.

****Professor & Head, Dept of *Shalya Tantra*, Govt Ayurvedic Medical College, Bangalore.

*****Associate Professor, Dept. of *Shalya Tantra*, Parul Institute of Ayurved, Vadodara.

References:

¹ Dev SV, Sharada BS, Sharma V, Shailaja SV, Mishra B. Surgical procedures in Sushruta Samhita and its relevance in modern surgery. AYUSHDHARA. 2015 Dec 7;1(1).

² Mehra R. Historical survey of wound healing. Bull Indian Inst Hist Med Hyderabad. 2002 Jul 29;32(2):159-75.

³ Sathish HS, Dudhamal TS, Gupta SK, Bhuyan C, Baghel MS. Overview of Academic Researches on Vranaropan (Tissue Healing) Properties of Ayurvedic Drugs. Indian Journal of Ancient Medicine and Yoga. 2014 Jan 1;7(1):33-47.

⁴ Sathish HS, Rashmi TM, Thirunavukkarasu MS, Mithun B, Narmada MG. Sushruta's eight pearls for Infective Ulcer. J Ayurveda Integr Med Sci 2017;5:9-13.<http://dx.doi.org/10.21760/>

⁵ KH KK, Kumar TP, Murthy G. MANAGEMENT OF BURN WOUNDS BY COMPOUND AYURVEDIC PREPERATION CHANDANADI YAMAKAM. International Journal of Ayurvedic Medicine. 2010 Oct 3;1(2).

-
- ⁶ Askay SW, Patterson DR. What are the psychiatric sequelae of burn pain?. Current pain and headache reports. 2008 Apr 1;12(2):94-7.
- ⁷ Pereira C, Murphy K, Jeschke M, Herndon DN. Post burn muscle wasting and the effects of treatments. The international journal of biochemistry & cell biology. 2005 Oct 31;37(10):1948-61.
- ⁸ Davoodi P, Fernandez JM, Seung-Jun O. Postburn sequelae in the pediatric patient: clinical presentations and treatment options. Journal of Craniofacial Surgery. 2008 Jul 1;19(4):1047-52.
- ⁹ Landolt MA, Grubenmann S, Meuli M. Family impact greatest: predictors of quality of life and psychological adjustment in pediatric burn survivors. Journal of Trauma and Acute Care Surgery. 2002 Dec 1;53(6):1146-51.
- ¹⁰ Pope SJ, Solomons WR, Done DJ, Cohn N, Possamai AM. Body image, mood and quality of life in young burn survivors. Burns. 2007 Sep 30;33(6):747-55.
- ¹¹ Choudhary N, Soni P, Swarnkar M. A Randomized Controlled Clinical Study of Karanjadhya Ghrita in the management of Dushta Vrana (chronic wounds). International Journal of Ayurvedic and Herbal Medicine. 2015;5(3):1745-53.
- ¹² Biradar V, Rao PN, Kumar H. A Case discussion on Dushta Vrana (Chronic Wound). International Journal of Ayurvedic Medicine. 2012 Jun 6;3(1).
- ¹³ Kumar A, Kumar GR, Dutt SV. Ayurvedic Perspective of Dusta Vrana (Non Healing Ulcer).IAMJ: Volume 4; Issue 02; January - 2016.
- ¹⁴ Shah C, Wagh R, Shiralkar M, Tamhane V. STUDY OF CHEDANA KARMA IN SURGICAL PRACTICE. AYUSHDHARA. 2016 Feb 3;2(5).
- ¹⁵ Dev SV, Sharada BS, Sharma V, Shailaja SV, Mishra B. Surgical procedures in Sushruta Samhita and its relevance in modern surgery. AYUSHDHARA. 2015 Dec 7;1(1).
- ¹⁶ Biswas TK, Mukherjee B. Plant medicines of Indian origin for wound healing activity: a review. The international journal of lower extremity wounds. 2003 Mar;2(1):25-39.
- ¹⁷ Datta HS, Mitra SK, Patwardhan B. Wound healing activity of topical application forms based on ayurveda. Evidence-Based Complementary and Alternative Medicine. 2011 May 26;2011.