



Available online through

www.jbsoweb.com

ISSN 2321 - 6328

Research Article

CLINICAL EVALUATION OF EFFECT OF MADHU ON WOUND HEALING

Neha Sharma*, Kulwant Singh Himaliyan, Gaurav Parmar, Anil Dutt

Dept of Shalya Tantra, Rajiv Gandhi Post Graduate Ayurvedic College, Paprola, Himachal Pradesh, India

*Corresponding Author Email: snehpundrik2310@gmail.com

Article Received on: 13/10/21 Accepted on: 21/11/21

DOI: 10.7897/2321-6328.095147

ABSTRACT

In the Indian context, the formal description of wound care has been widely elaborated in the three great treatises (Brahatraysi) of Ayurveda i.e., Charak Samhita, Sushruta Samhita, Ashtang Sangrah. Madhu has been described by them as Vrana Ropaka. A 42-year-old patient came to us with Ignored 10 days old open fracture of the Base 2nd Metatarsal with an infected wound right foot. After debridement of the wound and application of Madhu was done for 3 weeks, and B/K POP Slab applied. The treatment plan followed may be adopted in the future for cases.

KEYWORDS: - Wound healing, Dusht Vrana, Madhu

INTRODUCTION

In today's scenario, modern medicine is doing great, but no one can beat the effect of Madhu in wound healing. Acharya Sushruta defined Vrana (wound) as a phenomenon causing discontinuation of tissue in a particular part of the body. Acharya Sushruta described the causative factors as Sharirik (intrinsic), Agantuja (traumatic)¹. Sushruta has described Madhu in wound management in Shashthi Upakrama². Shashthi Upakrama are the sixty measures described for Vrana Ropana (wound healing). Our Acharyas has described use of Madhu in treatment of wounds (Dushta Vrana), Pana, Anupana. Madhu has Madhur Rasa, Kashaya Anurasa, Ruksha, Sheeta, has Lekhana karma (Scraping), Vrana Ropaka (Healing) Sandhan Karma (Union)³.

With the pH of 3.2-4.5⁴ Madhu prevents colonization and bacterial growth in tissue. It is hygroscopic in nature. Madhu has low water activity (aw) of 0.6 due to which most of microorganisms do not grow in Madhu⁵. Madhu has antibacterial properties. The presence of hydrogen peroxide and a high osmotic pressure also adds to its antibacterial properties. Worldwide, Gamma irradiation sterilized and standardized antibacterial activity possessed various brands of honey are available commercially e.g. Manuka Honey (New Zealand), Tualang Honey (Malaysia) with no adverse effects and toxicity. Previously various clinical studies on honey and honey plus ghee have been evaluated in the cases of infected wound for the wound healing properties. In another clinical study, a case of infected wound on the anterior aspect of leg was reported with a significant healing action of honey and Neem bark decoction on local application⁶.

CASE REPORT

A 42 year old male patient came to Rajiv Gandhi Post Graduate Ayurvedic College and Hospital Paprola with pain, swelling and infected wound over right foot, dorsal aspect since 10 days. Patient gave the history, fall of a wooden block over foot 10 days back. There was no history of any systemic disease. The wound was covered with some unhygienic cloth piece with a foul smell in it. On examination, there was foul-smelling pustular discharge, ugly looking ulcer with approximately 10*4.5 cm over the dorsal aspect of the right foot. On X-Ray right foot AP view and oblique view, 10 days old ignored open fracture of 2nd Metatarsal base was diagnosed with an infected wound. The patient has not taken any treatment in the past 10 days. The wound was primarily managed at home. All laboratory investigations were in the normal range. The patient was admitted to the Shalya Tantra ward of RGGPG Ayurvedic College and Hospital Paprola, Himachal Pradesh for further management. Informed consent was taken prior to the study.

TREATMENT

Debridement after thorough H₂O₂ and NS wash was done on the first day followed by Madhu application with the help of a spatula and B/K POP slab application. For the next 1-week dressing was done daily with Madhu after cleaning the wound with NS soaked gauze, followed by dressing every 2 days for next week and then twice weekly.

OBSERVATION AND RESULT

Wound was in irregular shape as the causative factor is trauma and with sloping edges and infected unhealthy granulation tissue. After the use of Madhu, this has been observed that there was minimal slough formation during wound healing. Local application of Madhu reduced redness, swelling and there was pinkish red granulation tissue on the base. The wound healed with healthy granulation tissue, no discharge present and there was no discolouration around the wound. The whole process of wound healing occurred uneventfully.



Fig 1: Wound on dorsal aspect of right foot after 1 week of dressing



Fig 2: Healed scar on 3rd week of dressing

DISCUSSION

As described in Sushruta Sutra Sthana Madhu has excellent properties to heal the wound by virtue of its, shodhana, ropana, sandhana karma. There is recognition of medicinal properties of Madhu since antiquity. Madhu act by its three vitiated Doshas i.e., Vata, Pitta, Kapha. Madhu has attributory properties like Madhura rasa, Kshaya anurasa, Ruksha guna, Sheeta virya, Madhura Vipaka, Shukshma marga anusari³. Madhu prevents bacterial growth because of its hyperosmolar medium. Madhura Rasa exerts direct nutrient effect on tissue regeneration because it contains a wide range of amino acids, vitamins and trace elements⁷. Kshaya Rasa cleanse the wound surface and remove foul smell from wounds by clearing the bacteria which produces ammonia. The antimicrobial activity in honey is due to the enzymatic production of hydrogen peroxide. High sugar content (high osmolarity) that is enough to obstruct the growth of microbes⁸. It has a high viscosity which leads to formation of physical barrier. Madhu has antioxidant properties because of the enzyme Catalase present in it⁹. Its immunomodulatory property also helps in wound repair. Madhu has ability to promote phagocytosis, detoxification and proteolysis, all of which assist in cleaning the wound¹⁰. This ancient wound healing treatment sporadically used in treatment of burns¹¹⁻¹². In this case healing occurred with minimal scar formation.

CONCLUSION

Madhu has been used for wound healing since ages. The use of Madhu reduces slough formation, discharge and slight decrease

in time for healing has been noted. The treatment plan followed may be adopted in future for various cases.

REFERENCES

1. Shashtri, Ambika Dutt. Sushruta Samhita, Ayurvedatvatvandsipika, Chikitsa Sthan, Dwivarniya Chikitsa Adhyaya, shloka 03, pg1. Varanasi: Chaukhamba Sanskrit Sansthan, 2015. 978-81-89798-19-2.
2. Sashtri, Ambika Dutt. Sushruta Samhita, Chikitsa Sthan, Dwivarniya chikitsa, shloka 8. Varanasi: Chaukhamba Sanskrit Sansthan, 2015. 978-81-89798-19-2.
3. Sashtri, Ambika Dutt. Sushruta Samhita, Sutra Sthana, Dravdravyavidhi adhyaya, Shloka 132. Varanasi: Chaukhamba Sanskrit Sansthan, 2015. 978-81-89798-19-2.
4. Dudhamal TS, Gupta SK, Bhuyan C. Role of honey (Madhu) in the management of wounds (Dushta Vrana). Int J Ayurveda Res. 2010;1(4):271-273. doi:10.4103/0974-7788.76793
5. S.A. El Sohamy, S.H.D. Masry, M.G. Shehata, Physicochemical characteristics of honey from different origins, Annals of Agricultural Sciences. 2015; 60(2): 279-287.
6. Dudhamal TS, Gupta SK, Bhuyan C. Role of honey (Madhu) in the management of wounds (Dushta Vrana). Int J Ayurveda Res. 2010;1(4):271-273. doi:10.4103/0974-7788.76793
7. Vijaya KK, Nishteswar K. Wound healing activity of honey: A pilot study. Ayu. 2012;33(3):374-377. doi:10.4103/0974-8520.108827
8. Mandal MD, Mandal S. Honey: its medicinal property and antibacterial activity. Asian Pac J Trop Biomed. 2011;1(2):154-160. doi:10.1016/S2221-1691(11)60016-6
9. Bangroo A K, Khatri R, Chauhan S. Honey dressing in pediatric burns. J Indian Assoc Pediatr Surg 2005; 10:172-5
10. Al-Waili NS. Investigating the antimicrobial activity of natural honey and its effects on the pathogenic bacterial infections of surgical wounds and conjunctiva. J Med Food. 2004;7(2):210-222. doi:10.1089/1096620041224139
11. Jull AB, Rodgers A, Walker N. Honey as a topical treatment for wounds. Cochrane Database Syst Rev. 2008;(4):CD005083. Published 2008 Oct 8. doi: 10.1002/14651858.CD005083.pub2
12. Baghel PS, Shukla S, Mathur RK, Randa R. A comparative study to evaluate the effect of honey dressing and silver sulfadiazene dressing on wound healing in burn patients. Indian J Plast Surg. 2009;42(2):176-181. doi:10.4103/0970-0358.59276

Cite this article as:

Neha Sharma et al. Clinical evaluation of effect of madhu on wound healing. J Biol Sci Opin 2021;9(5): 54-55.
<http://dx.doi.org/10.7897/2321-6328.095147>

Source of support: Nil; Conflict of interest: None Declared

Disclaimer: JBSO is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publishing quality research, while every effort has been taken to verify the accuracy of the contents published in our Journal. JBSO cannot accept any responsibility or liability for the site content and articles published. The views expressed in articles by our contributing authors are not necessarily those of JBSO editor or editorial board members.