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EFFECT OF HONEY WITH HARIDRA (CURCUMA LONGA) OINTMENT IN THE MANAGEMENT OF BURN WOUND IN DIABETIC PATIENT – A CASE REPORT

Ayurveda

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ABSTRACT

Burn wound in diabetic person are one of the most unmanageable wounds in wound care units. This condition generally results in infectious non-healing wound and spread of infection to whole body & developed Shock. So daily dressing & internal medicine are needed to manage the further complications. In Ayurveda, various methods of topical care of wounds are described and elaborated. Among them Vrana Ropan (wound healing) & Vrana Shodhana(wound cleaning) drugs are practiced in the management of burn wound. To evaluate the healing potency of Honey & Haridra (Curcuma longa) in burn wound. A 50 years old male patient know case of diabetic neuropathy having post burn wound with discharge & mild swelling around the wound was managed with topical application of Honey & Haridra (Curcuma longa) ointment. The wound was assessed weekly and it was observed that in first week swelling and discharge was reduced completely and patient able to walk properly. In second week granulation tissue was observed. The wound was healed completely within 4 weeks with minimal scar formation and normal skin coloration. This case report showed marvelous healing effect with the help of Honey & Haridra (Curcuma longa) Ointment in Management of Burn Wound in diabetic neuropathy

KEYWORDS

Burn wound, Curcuma longa, Diabetic neuropathy, Haridra, Honey.

Introduction:

In India approximately 6-7 million burn incidences are occurring in a year. Among them most burns are due to illiteracy, poverty & low-level safety [1]. After a burn injury it may be progress & become a deep wound. If it leaves to untreated it become infected & may leads to shock. Burn wound depth is more important to determinate of patient morbidity & mortality. Therefore, reduction or even prevention of secondary burn wound progression is goal of care of burned patient. A patient having diabetic neuropathy are more prone to burn because already there is loss of the sensation. Although patient having no pain & sensation so the wound can be chronic & get infected [2]. If proper care & dressing is not done it's become chronic non-healing wound. 1st & 2nd degree burn can cure by daily dressing & while 3rd & 4th degree burn requires skin grafting. [3]

A major hindrance in the controlling of diabetic foot ulcers is the colonisation of wounds by bacterial pathogens. It involves a mixture of aerobic and anaerobic organism's aerobic gram-positive cocci like *Staphylococcus aureus* are predominates in the infection. Due to the deleterious pathway of ulcer development, patients with DM (Diabetic Mellitus) and DPN (diabetic peripheral neuropathy) require the highest care [3]. Honey having the property like *Madhur* (sweet) & *Kasaya* (astringent) rasa. It has *varna Shodhana* (wound cleaning) effect as well as *Tridoshhar* (alleviation of tridosha). It has a property like *Varnya* (depigmentation), *Shodhana* (cleaning), *Ropana* (healing), *Suksmamaganusari* (potency to penetrate micro channels) & *Sandhana* (heel fracture). [4] It is best *Kapha doshhar* (alleviation of kapha dosha*)* so it can also be used in diabetes. As per Ayurveda it is *Tridoshghna* (alleviation of tri dosha) *Jwaranashna* (Antipyretic) *Swas*(breathlessness), *Premh* (diabetis), *Varna Shodhana*(wound cleaning) [4]. It is also used in skin disordered like psoriasis internally as well as local application.

Haridra (*Curcuma longa)* having a property like *Katu-Tikta rasa* (bitter-spicy test),*Laghu-Ruksha guna*(light-dry property),*katu vipak* (post digestion effect) & *Ushna virya* (potency).[5] As per Ayurveda it has *Kapha-Vata Shamak* ,*Lekhana*(scraping the slough),*Vrnya*(depigmentation) & *Varna Ropana* (wound heling) activity.it is also useful in diabetic & skin disorderd. Due to its anti-bacterial property.[6]

In Ayurveda their 60 types of *Upkarma* are described for the management of wound. [7] Among them here Varna *Shodhana* (wound cleaning) as honey & Varna *Ropana* (wound healing) as *Haridra* (*Curcuma longa)* was used for daily dressing of the wound. Honey & *Haridra* both have a *Prameghna* (anti-diabetic) property so it was found more beneficial in this case.

Case Report: A case of 50 years old male patient visited OPD of Shalya Tantra IPGT&RA Hospital Jamnagar complaining of burn wound at dorsal surface of the both feet for last two days, due to burn the complaint was associated discharge from the wound and mild swelling around the wound. Oral hypoglycaemic medications Tab. Glipizial 5 mg OD & Tab. Metformin 500 mg OD were continue He was taking a treatment for *Sanhigata vata* (Ostia arthritis) & during a *Swedana* (steam bath) by hot water bag for 30 minutes due to diabetic neuropathy both feet planter surface got burn. Although patient got a burn at planter surface of both feet, he ignored to care and the wound got badly infected after time since then pus discharge along with bad smell was also occurred. So, he consulted to us at Shalya tantra OPD for Ayurveda management. Patient was admitted for further investigation and daily dressing. On examination, it was observed that square shape infected ulcer at planter surface of both feet. The size was 6.2 cm x 3.4 cm x 2 mm at Right foot & 4.2 cm x 3.2 cm x 2 mm at left foot, with mild inflamed margins. [Figure-1]. Local examination revels the symptoms of second degree superficial heat burn. The routine blood investigations were done in that Hemoglobin -8.5% & RBS -225mg/dl and in urine examination sugar found ++. The X-ay both feet were within normal without bony involvement or osteomyelitis. All systemic examinations were within normal limit having BP 130/86 mm of Hg. So, the case was diagnosed as *Dushta dagdha vrana* (infected burn wound.)

Honey with *Haridra (Curcuma longa)* ointment was prepared according to slandered protocol of Ointment formulation guidelines.

Wound dressing: The wound was first cleaned with normal saline then applied *Honey & Haridra* ointment on the ulcer in sufficient quentity. [Figure-2] The wound was covered with sterile gauze piece and bandaged. This procedure was followed daily once in the morning for four weeks.

Before and after treatment images of this case:



Fig-1: 1st day



Fig-2: application of ointment



Fig-3: On 7th day



Fig-4: On 15th day



Fig-5: Healed with scab formation on surface.



Fig-6: Complete Wound healed on 30th day.

Results and Discussion:

Being low socio-economic status of patient, his foot care was improper and negligence regarding proper treatment of wound. On the 1st day it was observed that square shape infected wound at planter surface of both feet, size of 6.2 cm x 3.4 cm x 2 mm in right foot & 4.2 cm x 3.2 cm x 2 mm in left foot the margin was covered with unhealthy slough and bad smell were also noted. The wound was assessed weekly and it was observed that in first week swelling and discharge reduced completely and patient able to walk properly. On the 7th day it was observed that bad smell was reduced and fresh granulation tissue was noted. Marginal elevation was reduced and the floor of the wound was free from slough and pain was reduced [Figure-3]. The honey had varna *Shodhana* (cleaning wound) & *Suksma-marganusari* (potency to penetrate micro channels) property which helped to remove the slough and bad smell. As well as the *Lekhana* (scraping the slough) property of honey & *Haridra* is also help to remove the slough, so wound became clean having *Shudha avashta* (healthy condition) of *Vrana* (wound). On the 2nd week (15th day) it was observed that the healthy granulation tissue area was wider, no slough at all and the surrounding tissue getting normal skin colour. The wound contraction was noted in this week and size of wound was reduced half of the first week wound [Figure-4]. On 3rd week (22nd day) it was observed that healthy progress of granulation tissue was occurred and the surrounding skin showed normal skin color. The wound contraction was continued in this week and there was scab formation noted on the wound surface [Figure-5]. The drug had *Varnya* (depigmentation) property so surround skin became normal simultaneously along with healing of wound. On 4th week (30th day), the open wound area was completely covered and the white pigmentation of scar was noticed [Figure6]. The wound was healed completely within 4 weeks with white scar formation and normal skin coloration.

Conclusion:

Study concluded that of Honey & *Haridra* possesses *Shodhan* (cleaning), *Ropan* (healing) and *Varnya* (depigmentation) properties and had potential to heal the burn wound in diabetic patients with peripheral neuropathy. This single case study showed encouraging result in burn wound and needed further study for its scientific validation in more number of patients.

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