

Original Research Article

Outcome of Honey and Ghee Dressing as Compared to Regular Dressing Materials: A Comparative Study

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Abstract: Background: Ghee and honey has been advocated and used as dressing for infected wounds by Sushruta (600BC). The gratifying results observed with the dressing have prompted this study which aims to establish its efficacy in chronic infected wounds over one year period. A standardised ghee and honey dressing was used to treat: chronic post-operative wounds and infected per op wounds, Honey and ghee dressing markedly reduces the foul odour and discharge, significantly improving the quality of life. The study will tell us comparative result of honey and ghee dressing as compared to expensive vacuum dressing and the regular dressing materials. Innumerable Randomised Control Trials (RCTs) reported on honey dressing for infected wounds, there is substantial evidence that ghee and honey dressing has at least comparable results to other modes of treatment. The easy availability and low cost of this treatment makes it significant in developing countries. Specially in rural population, Required permission has been from the HOD of orthopaedics. **Material and Methods:** Total 20 patients with compound fracture and chronic infected wound, were studied during the period of March 2023 to June 2023 at BVP RMC Loni, Maharashtra. Honey and ghee were taken from a fresh sealed box in 50:50 portion according to size of wound and mixed well then it was applied on the wound directly and covered with gauge and, the dressing was changed is cleaned with sterile normal saline as compared to normal dressing materials ie betadin, povidon iodine ointment, spirit. All Patients data was collected and compiled in Microsoft excel and were statistically analysed using appropriate statistical test using SPSS software. **Results:** Majority patient were males. Mean duration of wound healing among honey and ghee dressing was 15.3 and of regular dressing was 8.9 days. **Conclusion:** Honey is one alternative solution that can be used for non-pharmacological therapy. Honey can be used as a topical dressing on wounds in general or injuries to diabetic foot ulcers, burns, or infections due to trauma or post-surgery.

Keywords: Honey, Ghee, Wound, Healing.

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INTRODUCTION

Wound healing is a complex and dynamic process and, moreover, depends a lot on the wound bearing person's immunity and mental status [1]. Emphasis is required on new and alternative therapeutic approaches and development of technologies for acute and chronic wound management. A wound can be defined as a damage or a disruption to the normal anatomical structure and function [2]. The process can be randomly divided into (i) coagulation and haemostasis, (ii) inflammation, (iii) proliferation, and (iv) wound

remodelling with scar tissue formation [3]. A fast and effective wound healing process would substantially decrease medical costs, wound care supplies, and hospitalization significantly improving the patients' quality of life. The search for effective therapeutic approaches seems to be imperative in order to avoid the aggravation of chronic wounds [4]. Honey has been used for its medicinal properties since time immemorial, particularly for its value in wound healing [5]. The use of honey in wound healing is increasing subsequent to the results of several clinical trials [6]. Honey has been shown to have an inhibitory effect on most strains of

pathogenic bacteria. Honey and ghee dressing markedly reduces the foul odour and discharge, significantly improving the quality of life [7].

The easy availability and low cost of this treatment makes it significant in developing countries.

Aim: To find the effect of Honey and ghee dressing as compared to regular dressing materials.

MATERIAL AND METHODS

It was a Descriptive longitudinal study done at VVP RMC LONI Study population - Patient admitted in Ortho ward in VVP RMP Loni on 20 patients. Among 20 cases, in 10 cases honey and ghee was used and in rest

10 cases regular dressing was done. Sampling method for a duration of 4 months (May 2023 to August 2023) Inclusion criteria: 1 Patient coming to VVP RMC LONI with compound fractures 2 Patient admitted with chronic infected wounds 3 Patient consenting for the study. Exclusion criteria: 1 Associated vascular injury 2 Patient not consenting for the study 3 Patient lost to follow up Honey and ghee were taken from a fresh sealed box in 50:50 portion according to size of wound and mixed well then it was applied on the wound directly and covered with gauze and, the dressing was changed is cleaned with sterile normal saline as compared to normal dressing materials ie betadin, povidon iodine ointment, spirit. All Patients data was collected and compiled in Microsoft excel and were statistically analysed using appropriate statistical test using SPSS software.



Figure 1: Preparation of honey and ghee mixture for dressing



Figure 2: Application of mixture to the wound



Figure 3: Healed wound

RESULTS

Total 20 cases were studied. Majority were males and mean age was 35.6 years.

Table 1: Mean duration of wound healing

Duration in days	Mean	SD
Honey and ghee dressing	15.3	3.2
Regular dressing	8.9	1

Mean duration of wound healing among honey and ghee dressing was 15.3 and of regular dressing was

8.9 days. Applying t test p value was 0.003, which shows statistical significance.



Figure 4: Pictures of wound healing using honey and ghee among study population

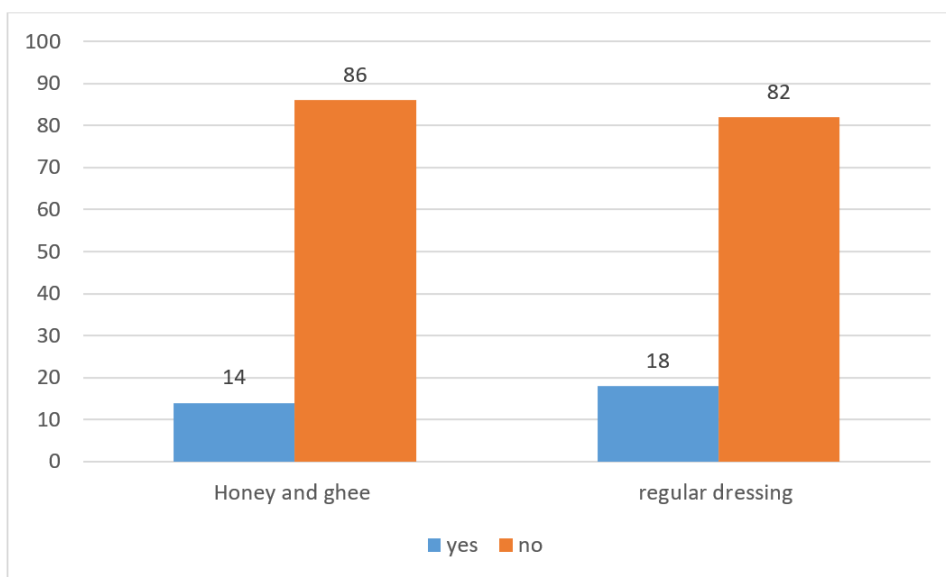


Figure 5: Wound Infection

More infection rate was seen among regular dressing cases as compared to honey and ghee.

Table 2: Most common bacteria found

Bacteria	Percentage
Staphylococcus aureus	22%
Pseudomonas aeruginosa	15%
Klebsiella spp.	3%

Most common bacteria found was staph followed by pseudomonas and klebsiella spp.

DISCUSSION

In present study on Outcome of Honey and ghee dressing as compared to regular dressing materials. Mean duration of wound healing among honey and ghee dressing was 15.3 and of regular dressing was 8.9 days. More infection rate was seen among regular dressing cases as compared to honey and ghee. Most common bacteria found was staph followed by pseudomonas and klebsiella spp.

Study by P Ongom [8] showed that mean duration of wound healing of the 26 patients dressed with Collagen was 9.9 days while that for the 26 patients dressed with Honey-Ghee was 12.3 days. Their study also showed that four (15.38%) patients of the 26 patients dressed with collagen developed wound infection while 5 (19.23%) of the 26 patients dressed with Honey Ghee dressing developed wound infection and also showed presence of Staphylococcus aureus as the commonest organism.

Study have concluded that honey is proven to have the ability to kill a number of bacteria including gram-positive and gramnegative bacteria. Honey causes an increase in osmotic pressure above the wound surface so that it can inhibit the growth of bacteria in the wound area. Besides this, the antibacterial activity in honey

occurs because of the content of hydrogen peroxide, flavonoids and hypertonic sugar concentrations [9, 10]. Wound care using honey requires relatively less cost compared to other methods and is quite effective in preventing the spread of infections in wounds [11].

It is imperative to underscore the viability of honey and ghee as affordable and accessible substitutes for conventional dressing materials, particularly in underserved rural and economically disadvantaged populations. This assertion aligns with findings from studies such as the systematic review conducted by Jull et al., (2015) [12], which emphasizes the efficacy and cost-effectiveness of honey-based dressings in wound management. Similarly, research by Shrivastava et al., (2017) [13] corroborates the therapeutic potential of ghee in promoting wound healing due to its antimicrobial and anti-inflammatory properties. By advocating for the integration of honey and ghee into wound care protocols, healthcare practitioners can enhance treatment accessibility and affordability, thereby addressing disparities in healthcare delivery.

CONCLUSION

Honey is one alternative solution that can be used for non-pharmacological therapy. Honey can be used as a topical dressing on wounds in general or injuries to diabetic foot ulcers, burns, or infections due to trauma or post-surgery. Overall wound care using honey is more effective when compared to conventional wound

care, wound care using povidone iodine or other similar materials.

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