

Combined effect of Iranian beehive products on incision wound healing in rat

JARRAHI A. JARRAHI* M. zahedikhorasani M.

Student Research Committee, Faculty of Medicine, Semnan University of Medical Sciences, Semnan, Iran

*Corresponding author. E-mail address: Jarrahi44@yahoo.com ,
Tel:09122312187

Abstract

Background: Surgical site infections (SSI) are problematic for the patients. The beehive products can improve wound healing, but whether it can improve healing surgical wounds, has not been well investigated. This experiment was conducted to compare Iranian beehive products with cold cream for healing of incisional cutaneous wound in rats as a model for surgery wounds.

Materials and methods: 50 male Wistar albino rats were randomly allocated into five equivalent groups, as control, cold cream, propolis cream, honey and a mixture of honey and propolis cream (MHP). An incisional cutaneous wound model was constituted on the back of all rats. The incision area in the five groups were covered twice-daily with cold cream, propolis cream, honey and a MHP respectively. The percentage reduction of wound size was measured at the start of experiments, some specific days and at day 22. The wound tensile strength was also measured at day 30.

Results: There were statistically significant differences between the percentage reductions of wound size in beehive products treated groups compared to the cold cream group on most days of the experiment. Also, there were statistically significant differences between the percentage reduction of wound size in MHP group, compared to honey and propolis groups separately on days 13 and 19. The differences between the wound tensile strength of treatment groups, compared to cold cream were also significant.

Conclusion: There may be a synergistic therapeutic effect between propolis cream and honey in the healing of wound in rat. These results provide a rationale for studying the topical application of this mixture in a clinical setting.

Keywords: propolis, honey, cutaneous, wound, rat