

عنوان مقاله:

The Effects of Supplemental Zinc and Honey on Wound Healing in Rats

محل انتشار:

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خلاصه مقاله:

Objective(s) Clinicians have long been searching for ways to obtain "super normal" wound healing. Zinc supplementation improves the healing of open wounds. Honey can improve the wound healing with its antibacterial properties. Giving supplemental zinc to normal rats can increase the wound tensile strength. This work is to study the concurrent effects of zinc and honey in wound healing of normal rats. **Materials and Methods** One hundred and seventy two young rats were randomly divided into four groups: control, zinc-supplement, applied honey, zinc-supplement and applied honey. Two areas of skin about ۴ cm^۲ were excised. The wound area was measured every ۲ days. After ۳ weeks, all animals were killed and tensile strength of wounds, zinc concentration of blood and histological improvement of wounds were evaluated. The results were analyzed using two-way ANOVA and the mean differences were tested. **Results** It was found that honey could inhibit the bacterial growth in skin excisions. The tensile strength was increased significantly in the second to fourth groups at ۲nd day ($P < 0.001$). Also there was a significant increase in tensile strength at the same time in the fourth group. The results of the histological study showed a considerable increase in the collagen fibers, re-epithelialization and re-vascularization in the second to fourth groups. **Conclusion** The results of the present study indicate that zinc sulfate could retard re-epithelialization, but when used with natural honey (administered topically) it could have influent wound healing in non-zinc-deficient subjects as well.

کلمات کلیدی:

Honey, Spectrophotometry, tensile strength, Wound healing, Zinc sulfate

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