HELICHRYSUM ITALICUM ESSENTIAL OIL-BASED OINTMENT IMPROVES WOUND HEALING IN A DIABETIC RAT MODEL

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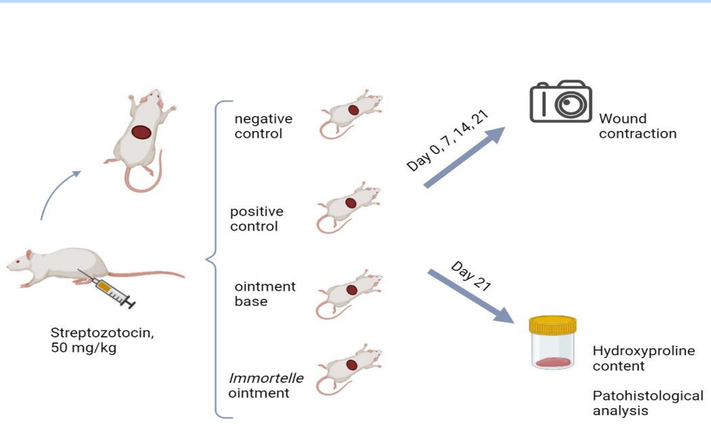
Introduction

Helichrysum italicum is an evergreen plant belonging to the *Helichrysum* (*Miller*) genus. *Helichrysum italicum* represents an important plant in the traditional medicine of Mediterranean countries due to its anti-inflammatory, antioxidant, and antibacterial properties. Additionally, *Helichrysum italicum* essential oil has been traditionally used for wound and burn treatment, but there is no scientific evidence that supports the traditional claim.

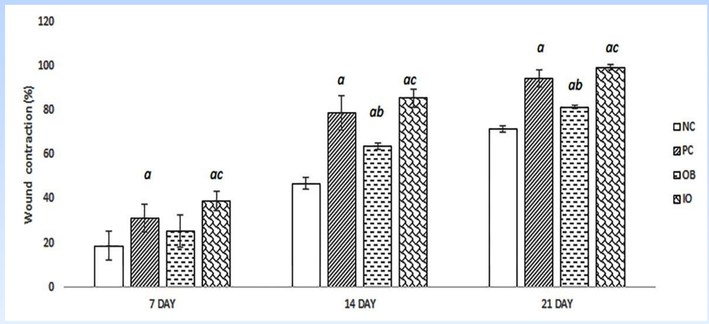
The aim of the present study was to estimate the effects of *Helichrysum italicum* essential oil- based ointment on wound healing in streptozotocin-induced diabetic rats.

Material and methods

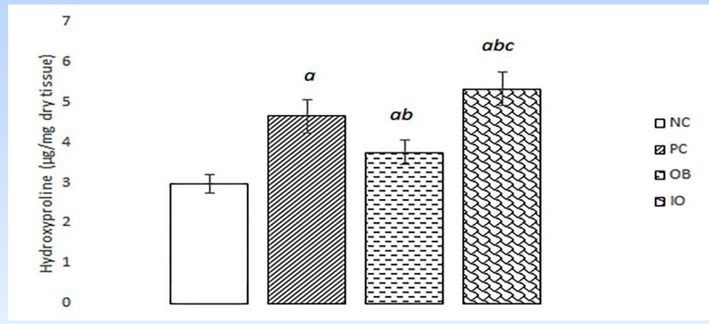


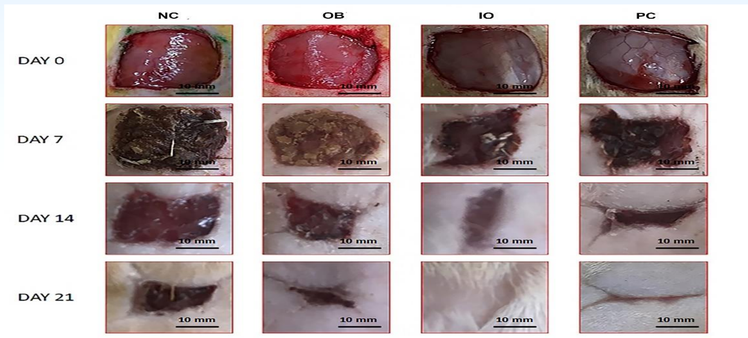
Results

Wound contraction



Hydroxyproline content





Histological analysis

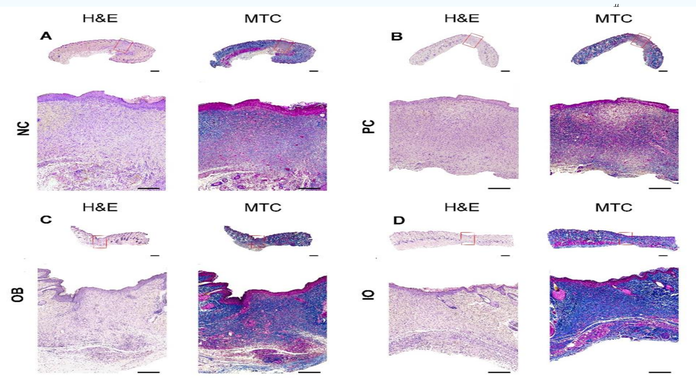


Figure legends:
The values are presented as mean ± SD a - $p < 0.05$ compared to NC group; b - $p < 0.05$ compared to PC group; c - $p < 0.05$ compared to OB group;

Conclusion

The results suggest the potential of *Helichrysum italicum* ointment to accelerate wound healing. The positive effects of this ointment are reflected by a significant increase in the percentage of wound contraction throughout the duration of the treatment. The high level of hydroxyproline content in the tissue suggests increased collagen synthesis, which contributes to the fact that the *Helichrysum italicum* essential oil can significantly affect the healing process and simultaneously provide strength to the repaired tissue.