

عنوان مقاله:

Management of Full-Thickness and Non-Healing Diabetic Ulcers Using Novel Dressing based on Amniotic Membrane Extract; Preclinical and Case Study

محل انتشار:

بیستمین کنگره بین‌المللی بیولوژی تولید مثل و پانزدهمین کنگره بین‌المللی سلول های بنیادی (سال: 1398)

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خلاصه مقاله:

Background: Appropriate dressing for full-thickness and non-healing diabetic ulcers is important to shorten the wound closure time. Materials and Methods: Because of safety and effectiveness of amniotic membrane, as well as anti-inflammatory, anti-scarring, anti-bacterial and promotion of epithelialization, we developed a wound dressing contained amniotic membrane ex-tract loaded in PVP-chitosan gel or used as a drop. Results: Our results indicated that AME loaded in chitosan hydrogel enhanced K1, K10, and K14 expression, increased endothelial migration and newly formed blood vessels that ex-pressed higher CD31 gene with proper thickness of epithelial layer and organization of collagen fibers in full-thickness mod-els in the rat as pre-clinical study phase. Application of AME as drop to treat non-healing foot ulcers was safe and efficiently accelerates wound healing in patients. However, more studies need a higher number of patients to approve the efficacy of the component. Conclusion: In conclusion, this study introduces AME in treat-ing chronic wound treatment. The simple production, easy to use by patients, cost-effective, room temperature storage of AME makes it a valuable biological component for marketing

کلمات کلیدی:

Amniotic Membrane Extract, Re-Epithelialization, Wound Healing, Chitosan

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