

عنوان مقاله:

Preparation of alginate /fibrinogen hydrogel-loaded nisin for skin wounds healing

محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

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خلاصه مقاله:

IntroductionThe objective of this study was to fabricate of alginate/fibrinogen hydrogel loaded nisin for skin wound healing. Fibrinogen has a coagulation property that plays a significant role in wound healing. On the other hand, due to the widespread presence of bacteria in the wound that causes infections and increase the tissue damage and bad smell. Therefore, the intended dressing should have an antibacterial property. In our study, nisin has been used for this purpose. Nisin is effective against gram-positive bacteria and is almost ineffective in relation to gram-negative bacteria.
MethodsWe have been used the combination of nisin and EDTA in the preparation of hydrogel. The mechanical properties of prepared hydrogel include swelling, degradation, compressive modulus and rheological properties of the gel dressing were assessed.
ConclusionThe obtained data from release data indicated sustained release of nisin from the composite gel dressing compared to pure hydrogels. Interestingly, the in vitro study confirmed that the prepared hydrogel could considerably inhibit the growth of bacteria in the wound place

کلمات کلیدی:

Wound healing, Tissue engineering, Alginate, Fibrinogen, Nisin

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