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## Treatment of inflamed skin wounds with biodegradable polymeric film “Biodep nano”

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### Abstract

**Background:** Experimental and clinical studies show that wound healing cannot be evaluated as optimally effective today. For the treatment of wounds today, various methods and means are used. Wound dressing was developed from both natural and synthetic materials. However, polymeric biodegradable materials, saturated with various active drugs, which are effective, easy to use, have insignificant disadvantages and need further study. The aim was to study the effectiveness of the use of biodegradable polymeric film “biodep nano” in the treatment of suppurable postoperative wounds of the skin in the experiment.

**Material and methods:** The research was carried out on 45 guinea-pigs of the species “Murchaky” in the clinical and biological base (Vivarium) of the Ivano-Frankivsk National Medical University, in accordance with the requirements for the maintenance and handling of laboratory animals. The pelvic wounds were simulated after *staphylococcus aureus*  $2.0 \cdot 10^8$  KU/ml infection.

**Results:** The change in the wound area of the group IV and group V decreased slightly up to the third day, and after 7 days the area of the wound surface was reduced by 7% and 13.6% respectively. During the observation period, 14 days, the wound area in relation to the initial area was 35.5% in group IV and 43% in group V.

**Conclusions:** The biodegradable polymeric film “biodep nano” demonstrated high antimicrobial and wound healing properties in an experimentally simulated peptic cutaneous wound of the skin.

**Key words:** purulent wound, polymer films, treatment.