Abstract

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The influence of MDOC nanotextile on the healing of an acute dermal wound
Diploma paper
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In this work there are summarized general information about the course of the healing process of acute dermal wounds and their nursing. There are described the inflammatory mediators (cytokines) in more details. In experiment there was assessed the influence of M-DOC® (microdispersed oxidized cellulose) with gentamycin joined on it on the process of the healing of acute dermal wounds. The formulation was called Nanogenta.

Domestic pig, *Sus scrofa* was used as an experimental model. There were 12 animals used, in the experiment. For the demonstration of effectivity of tested formulation the wounds were infected (*Staphylococcus aureus, Pseudomonas aeruginosa, Escherichia coli*). The effectivity of tested formulation was confronted with preparations, that have demonstrated their effect in clinical use yet (Garamycin Schwann®, Hyiodine®). There were performed macroscopic, microbiology and microscopic evaluation.

There were demonstrated sufficient effect of Nanogenta on improving the quality of the healing process of dermal wounds, which was comparable with an effect of the preparations, which were used as a control. Its effect was sufficient (but only bacteriostatic) for suppressing the infection in wound too, which led to improving the process of healing of wounds. Nanogenta is especially able to suppress anaerobic infection. It was confirmed, that M-DOC® is wholly biocompatible and completely resorbed.