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Efficiency of application of a healing bandage in treatment of burns and mechanical RAS in animals

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According to statistics of the World Health Organization, burns occupy the third place among other injuries, especially dramatically their number increases in case of natural disasters, military conflicts. It is known that among the burned patients with superficial and limited deep burns prevail, accounting for 75-80%. In connection with these, the development and implementation of new innovative wound healing dressings with high efficiency is an urgent problem. Today in the world of surgical practice, wound healing is widely used in dressings with a high absorption capacity. Unfortunately, in Kazakhstan, a simple dressing is used, without any auxiliary substances for fast wound healing. In this regard, it is urgent to search for and develop new highly effective wound healing materials. The purpose of this research work is to study the healing properties of wound healing dressings. In accordance with the goal, tasks were formulated: Modeling of mechanical and burn wounds; application of a wound dressing with activated charcoal from rice husk for the treatment of mechanical and burn wounds. As an object of study, 8 monthly white laboratory rats with an average body weight of 220-250 g were used. Studies were performed on 18 laboratory rats. To apply burns to the flame, cotton wool, gauze wipes moistened with alcohol were used, and mechanical wounds were applied by damaging the skin with a scalpel.

Dressings in the experimental groups changed every 3 days, observed epithelialization of wounds, there was a presence or absence of purulent exudate in the wounds. Studies carried out on rats have shown that the wound dressing has a pronounced, wound-healing effect. At the same time, the healing time for wounds came much earlier than in the control. Wound dressings series are more effective in the treatment of mechanical wounds. In all animals with mechanical wounds, partial epithelialization of the wound was observed 3 days after the application of the wound, and after 8 days after the application of mechanical damage, complete wound healing was observed. And in the control group, the complete healing of the mechanical wound was observed only 15 days after the injury was applied. Also, in the treatment of a burn wound, this dressing promoted the rapid healing of wounds in comparison with the control, that is, within 20 days the complete healing of the burn wound was observed. The results obtained showed that the wound dressing can be used in the treatment of burn injuries. Carbonized rice husks and colloidal silver that are part of the dressings contribute to the rapid healing of wounds by sorbing the wounded by the carbonized rice husk and preventing the formation of purulent exudate with colloidal silver as a potent antiseptic. Based on the experimental results obtained, it can be concluded that the dressing can be used in practice for the treatment of burn disease.

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Biography

Amzeeva Ulpan Mansurkhankzy graduated from the biological faculty of KazGU (Almaty). She works in the "Scientific production and technical center, Zhalyr". She differs punctuality, delicacy in dealing with subordinates and colleagues, for which she has respect in the team. She has a vast amount of knowledge on the available specialty and is always aware of the latest developments in her field. She has an excellent business negotiation skills. With joy she takes part in the social life of the collective, attends personal growth trainings and refresher courses.

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