HYDROPHILIC OINTMENT BASE JUSTIFICATION FOR WOUNDS TREATMENT

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Introduction. In order to expand the range of Ukrainian ointments which contains substances of natural origin, samples of hydrophilic ointment bases rheological studies was carried out. Base components has high impact on consumer properties of semisolid medicines. The effectiveness of wound treatment highly dependent on the quality of used medicinal forms. In this respect, ointments play an important role as a complex medicinal form.

Aim. The aim of our research was to choose an ointment base for use on the first and second phases of wound healing, which along with moderate dehydration antimicrobial action, helps to accelerate repair processes of wounds that are important precisely for the second phase of wound healing progress.

Materials and methods. There were studied literature data of PEO-400 (macrogol type 400) and PEO-1500 (macrogol type 1500) alloys properties which are the products of ethylene oxide polymerization with water or ethylene glycol polycondensation.

Results and discussion. For the first and second phases of wound healing well established emulsion and hydrophilic ointment bases, which shows a high osmotic effect, dried wounds, helps to reduce the quantity of fluid. Among hydrophilic bases today widely used polymers and copolymers of ethylene oxide. Polyethyleneoxide ointment bases has weak antibacterial properties, low sensitivity to pH and electrolyte administration. In the wound PEO-1500 linking inflammatory exudate. Smaller PEO-400 molecules can penetrate deep into the tissue forming of complex with AFI, PEO-400 delivers it to the localization of the infection.

In addition, PEO bases can increase the bioavailability of AFI, and increase therapeutic effect at relatively low concentrations of active substances. They are pharmacologically indifferent easily applied to the wound surface, evenly smears well mixed with exudate. The most commonly used PEO-400 and PEO-1500 in the ratio 6:4, 7:3, 8:2.

Conclusions. Taking into account its properties using of polyethyleneoxide ointment bases helps to improve ointments quality by increasing its stability, osmotic properties, opportunities to improve the bioavailability of AFI etc.