THE RESEARCH OF EFFICIENCY OF LIPOSOMAL MEDICAL FORMS FOR CREATION OF ANTIHELMINTHIC DRUGS

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Introduction. More than the one-third of population is infected by parasitogenic helminthes that often leads to chronic diseases and death of patients. In Ukraine the annual index of morbidity on helminthosis is 1333 cases per each 100 thousand of population. As helminthosis usually are difficult for differentiation, a lot of antihelminthic drugs have the wide spectrum of action. These facilities are very toxic for an organism, that will allow to decrease its toxic action and to promote efficiency of medicinal preparations.

Aim is studying of therapeutic action of liposomal forms of antihelminthic medical facilities on experimental models of opisthorchiasis, ascaridosis, trichinosis, hymenolepiasis and toxocariasis.

Materials and methods: experimental opisthorchiasis (infection of hamsters by metacercaria), ascaridosis and trichinosis (infection of mice by eggs), hymenolepiasis (the larval stage of cysticercosis of Hymenolepis nana in the fibres of thin department of mice intestine), toxocariasis (toxocara spp. in the lungs of mice on the stage of migration larvae). We studied negatively charged liposoms, that was got from mixture of polar lipids (phosphatidylethanolamine, phosphatidylcholine, phosphatidylserine, sulfatcerebroside, sphingomyelin) (author development of N. N. Ivanova). We rated the antihelmithic action of liposomal form of Phensal and Albendazole.

Results and discussion. Liposomal medical forms purposefully transport substances to the organs of the reticuloendothelial system, have high bioavailability, does not evince cytotoxicity action and are simple to prepare. In addition, the medical substance, placed into liposome, become more effective, thanks to absence of decay by enzymes. The liposomal forms of antihelminthic drugs act considerably less doses, increase the amount of leucocytes, promote the indexes of alkaline phosphatase, that is the marker of T-cells.

Conclusions. One-time insertion of negatively charged liposoms, that is got on the basis of polar lipids and contain antihelminthic drugs (Phensal and Albendazole) show more expressed therapeutic efficiency in reduced doses, that reduces their toxicity accordingly. The liposomal form of Fensal and Albendazole shows the expressed effect on intracellular infections.