The main properties of calendula oil, which have found application in medical practice, are healing of wounds and removal of inflammation. These qualities of a plant are due to a complex of substances that are part of its composition.

Concentrations of active pharmaceutical ingredients in the preparation were selected based on the analysis of the nomenclature of medicinal products of industrial production and considering the direction of the action of the developed drug.

For the preparation of suppositories, the hydrophobic bases: Solid fat type B and Suppotsire AM were used.

When preparing suppositories, particular attention was paid to the method of administration of active substances in order to preserve their pharmacological properties and increase the rate of their release.

According to the results of biopharmaceutical studies, it is known that when preparing suppositories on hydrophobic bases to increase the bioavailability of water-soluble and insoluble APhIs it is advisable to use solubilizers that increase the thermodynamic activity of active components in the stratum corneum and increase their penetration through the skin and mucous membranes.

Therefore, for the grinding of ethonium, it was suggested that, in addition to calendula oil, use the following hydrophilic solvents: propylene glycol and glycerol.

The rate of release of ethonium from suppository compositions by the method of «agar plates» was studied. According to the results, it has been proved that the use of propylene glycol as a solubilizer contributes to an increase in the degree of ethonium release and, therefore, increases the therapeutic effect of the drug. Also, from the results shown, the most intense release of ethonium occurs during the first 30 minutes, which is very important given the time that the suppository is in the city of introduction.

Conclusions. Based on the complex of physical and chemical and biopharmaceutical researches, the composition of extemporal suppositories of combined action was developed. Biopharmaceutical studies have proved that the intensity of release of the active substance is maximal when using a solubilizer for its dispersion. The optimum technology of extemporaneous suppositories is proposed.

DEVELOPMENT OF LIQUID DRUG FOR TREATMENT OF SKIN CANDIDIASIS

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Introduction. In Ukraine, in recent years, there is an increase in diseases among the population in fungal pathology. Factors that greatly affect this can be divided into two groups: socio-economic and medical.

Microscopic mushrooms are part of human habitat. Currently, about 69 thousand types of fungi are studied, 400 of them are pathogenic to humans and cause diseases, combined by the term «mycosis».

The most commonly found form of fungal lesions of the skin and mucous membranes are surface mycoses, which include keratomycosis, dermatomycosis, candidiasis.

Candidiasis is an infectious disease of the skin, mucous membranes and internal organs, caused by the pathogenic action of yeast-like fungi of the genus Candida. The transition of these mushrooms from a saprophytic state to a pathogen contributes to several specific and nonspecific factors.

Candidiasis of the skin begins with the appearance on it of areas of redness with some edema and various elements of the rash: papules, pustules, bubbles.

Treatment of mycoses should be complex and carried out as drugs of general therapeutic nature, and of special action.

Aim. Theoretical substantiation and experimental research on the development of the composition and technology of a liquid drug for the treatment of skin candidiasis.

Materials and methods. The development of the composition and technology of the liquid

extemporaneous preparation was carried out based on physical and chemical and technological researches. As objects of research have been chosen: benzalkonium chloride, copper sulfate, zinc sulfate, zinc oxide, camphor alcohol, water purified. In order to study the influence of auxiliary substances that increase the stability of suspensions, tween-80, a solution of methylcellulose 5% and a 3% gel of bentonite were injected into the model specimens.

Results and discussion. Antifungal drugs, or antimycotics are medicines which used to treat fungal diseases and in therapeutic doses, depending on the type of pathogen, have a fungicidal or fungistatic effect.

Antifungal drugs are a fairly large class of diverse chemical compounds that have specific activity relative to pathogenic fungi. Depending on the chemical structure, they are divided into several groups, differing in features of the spectrum of activity, pharmacokinetics and clinical application with various fungal infections.

During complex therapy of candidiasis, apart from preparations of industrial production, pharmacy production is a separate place.

In analyzing the range of extemporaneous drugs for local use, which are used in dermatological practice in the treatment of skin candidiasis, it has been established that most extemporaneous drugs have antiseptic, dampening and softening effect. A very small percentage of drugs contains in its composition antifungal components. Prevailing soft dosage forms, including ointments.

One of the promising groups of substances that have a pronounced fungicidal and bactericidal action against different types of fungi are the salts of quaternary ammonium bases. The basis of the pharmacological action of the substances in this group is the change in the plasma permeability of microorganisms. They damage the membrane of the fungus, cause osmotic shock protoplast, inhibit the enzymes of the respiratory chain, which leads to the death of fungi.

One of the promising active pharmaceutical ingredients to produce antimycotics is benzalkonium chloride. It has a pronounced fungicidal activity of a wide range of effects, can be used in mixed infections, is not toxic in recombined doses, is synthesized in Ukraine.

Usually benzalkonium chloride is used in pharmaceutical preparations as an antimicrobial preservative. The greatest use has been found in ophthalmology and ENT practice.

Taking into account the above, it was suggested that it be included in the formulation to ensure fungicidal action. For the choice of therapeutically active concentration in the drug, guided by literary data.

In the therapy of candidiasis accompanied by moaning, it is advisable to introduce into the composition of preparations of components that have astringent action. To this end, it was proposed to introduce copper sulphate, which is an integral part of such known antifungal extemporal drugs as Cream and Alibur Lotion.

For the treatment of dermatomycosis, which is accompanied by the destruction of the skin, it is recommended to add that ingredients to the combined preparations, which will help to improve the trophic organs and tissues. Such an effect can be achieved by introducing substances that stimulate sensitive nerve endings. For this purpose, camphor was introduced.

During the development of the drug composition, the effect of stabilizers – tween-80, 5% methylcellulose solution and 3% of bentonite gel on the stability and stability of the suspension was studied. Samples of suspensions were studied on the following indicators: appearance, aggregate stability, resuspendancy index, qualitative analysis.

Conclusions. The composition of the liquid drug for the treatment of superficial skin candidiasis is theoretically and experimentally substantiated. The rational technology of the preparation of the proposed composition based on the physical and chemical properties of the APhI is experimentally grounded.