

presence of such excipients as lactose, sodium lauryl sulfate, and starch. Since piroxicam is poorly soluble in water, it is necessary to add ingredients to the tablets composition that dissolve well in water. Tablets taste is also an important factor, because they disperse directly in the mouth. Special excipients have been taken in order to improve the taste of the active substance.

Superdisintegrant and effervescent addition method were tried for formulation of tablets. Superdisintegrant addition technique was found as best and further study carried out using three superdisintegrants (crospovidone, croscarmellose sodium and sodium starch glycolate) and in different ratios.

**Conclusions.** The choice of excipients for piroxicam fast dissolving tablets and characteristics which may influence drug product performance was discussed.

## **DEVELOPMENT OF COMPOSITION AND TECHNOLOGY OF EXTEMPORANEOUS SUPPOSITORIES FOR THE TREATMENT OF THE HEMORRHOIDS**

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**Introduction.** In recent decades in Ukraine, as in most civilized countries of the world, there has been an increase in the incidence and prevalence of proctologic diseases, of which about 20% are among the diseases of the digestive system.

The most common among proctological diseases are hemorrhoids, anal fissures and rectum gulps.

Hemorrhoids is an ancient disease, a person received her «in reward» for the straight line. The first mention of this disease was discovered in Babylonian manuscripts. In Greece, Hippocrates described this suffering and suggested ways of healing.

The treatment problem of this group of diseases is also relevant because this pathology is gaining increasing social significance, since it has become a frequent cause of long-term disability and disability of people both elderly and young and adulthood.

**Aim.** Development of the composition and technology of extemporaneous rectal suppositories for the treatment of hemorrhoids.

**Materials and methods.** In developing the composition of rectal suppositories, the following active pharmaceutical ingredients (APIs) were used: ethonium, calendula oil. As a suppository basis, it was proposed to use: solid fat, suppostsire AM.

**Results and discussion.** Modern medicine offers many medicines for both local use and systemic action. There are several dosage forms that are successfully used in the treatment of hemorrhoids, but the best of them are suppositories that have several benefits. The action of suppositories from hemorrhoids is aimed at getting rid of the main symptoms of the disease.

Treatment of inflammation of hemorrhoids is possible not only with the help of synthetic drug preparations. Vegetable oils can help in this. For this purpose, both ordinary vegetable oils and etheric oils can be used.

In the form of suppositories, it is possible to prescribe medicinal substances with various pharmacological and physical and chemical properties. Such combinations are appropriate and promising from a pharmacological point of view. To provide suppositories of combined action as active ingredients, it was proposed to introduce ethonium and calendula oil. The joint use of these substances can give a positive result, because the direct venotropic action of flavonoids and carotenoids in combination with the wound-healing action of ethonium has a complex effect on the inflamed areas of the mucosa, while increasing the microcirculation and tone of the vascular wall.

Ethonium is a well-known medicinal product, has bactericidal and bacteriostatic effects, stimulates wound healing, tissue regeneration, strengthening tissue respiration and activating metabolic processes in affected tissues, has a local anesthetic activity.

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