ACTUALITY OF THE CREATION OF EMULSION BASE FOR SYMPTOMATIC TREATMENT OF RHEUMATOID ARTHRITIS

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Introduction. A rheumatoid arthritis (RA) is a chronic system disease of connective tissue with the progress symmetric erosive-destructive defeat of mainly peripheral joints and characterize by arthral displays. PA is the most widespread form of inflammatory joints disease. Mean time of life of patients with PA is on 10-15 years less than expected, and for patients with the system forms of disease a rate of death during 5 years is exceeds 50 %. Thus, from the medical and social point of view PA is one of the most essential therapeutic diseases. Therefore, without regard to the far of medicines which are used for treatment of PA, the creation and introduction of new effective drugs with a complex influence on the pathological process is actual.

Aim. Preliminary analysis of the assortment of ointment bases has shown that for the treatment of psoriasis, it is necessary to use an emulsion base, which from the medical and biological point of view is the most acceptable for the treatment of RA.

Materials and methods. Samples of emulsion ointment bases became the object of researches. When solving the tasks posed in the work, the following methods were used: physical and physical-chemical (structural-mechanical and osmotic).

Results and discussion. For develop the composition of the emulsion base for symptomatic treatment of RA combinations of components that met certain requirements (structural-mechanical, indifferent, etc.) were created. Following substances allowed for usage in medical practice as: vaseline, vaseline oil, cetosterol alcohol, white wax, corn oil, paraffin was introduced in the composition of ointment base. Water extracts from chamomile herb and bur-marigold herb have been used as hydrophilic phase of the base which have anti-inflammatory, regenerative and antiseptic actions. The extemporaneous emulsion base was prepared according to the general rules of the emulsion ointments preparation by inversion of phases method. The research results allowed to choose the rational composition of the emulsion base.

Physical-chemical indexes of model samples were evaluated according to the following criteria: color, odor, homogeneity, colloidal stability, thermal stability. Structural-mechanical (rheological) properties of the obtained base was studied.

Conclusions. Based on the conducted researches the extemporaneous emulsion base was created where, as a hydrophilic phase, includes water extracts of chamomile herb and bur-marigold herb; as an emulsifier, cetostearyl alcohol.

DEVELOPMENT OF TECHNOLOGY AND INVESTIGATION DIFFICULT EXTEMPORANEOUS OINTMENTS OF WITH SALICYLIC ACID

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Introduction. In recent years, there has been a trend towards a wider use of ointments in various fields of medicine. A pharmacy analysis of the formulation shows that quite often ointments of a complex composition containing components in a different aggregative state and possessing different physical and chemical properties are encountered. The technology of such ointments is complex and often causes difficulties due to the immiscibility of the ingredients, the aggregative instability of the systems during storage etc.

Aim. The purpose of our work was to eliminate the difficulties arising in the preparation of ointments with salicylic acid.

Results and discussion. Improvement of ointments technology and their quality is carried out in such directions as: increase of chemical, physical, microbiological stability of bases and ointments; development of accessible and objective methods for assessing the quality of ointments; improvement of packaging; development and implementation of elements of minor mechanization in the preparation of ointments in pharmacies; expansion of the range and unification of the formulation of ointments and pastes.

In the first ointment, it was necessary to prevent contact between the molecules of the acid of salicylic and zinc oxide. Therefore, we considered it possible for them to be separately dispersed and further mixed for the preparation of a drug. In the second ointment we grinded up salicylic acid in a mortar according to Deryagin's rule with a small amount of sunflower oil. After that, the rest of the oil was gradually added and lanolin anhydrous was added in several steps. By this order of mixing, we created a single lipophilic phase of the ointment base. After thorough homogenization, the purified water was gradually added. In the third case, stable ointment emulsions were obtained by stabilizing them with a 5 % solution of methylcellulose or Tween-80.

Conclusions. The technology of multicomponent ointments with salicylic acid is experimentally proved taking into account the physical and chemical properties of the ingredients included in their composition. The stability of the prepared preparations during storage was determined.

DEVELOPMENT OF REGULATORY DOCUMENTATION FOR INTRAPHARMACEUTICAL PRODUCT SOLUTION OF RIBOFLAVIN

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Introduction. The growth of the number of pharmacies in Ukraine contributes to the emergence of fierce competition in the pharmaceutical market for providing patients with the necessary medicines. Many pharmacies are interested in improving the quality of patient care. Nowadays, the number of pharmacies that make medicines according to individual prescriptions increases in Ukraine. For example, in Kharkov, there are pharmacy chains such as Leda, Prana, 195, 200 and others. To meet consumer demand, many manufacturing pharmacies prepare extemporal drugs in reserve. In the pharmacies of this category the nomenclature of intra-pharmaceutical products has expanded. To accelerate the process of manufacturing extemporal drugs in pharmacies, a number of concentrated solutions, semifinished products, ointment bases and other intra-pharmaceutical products are prepared, which significantly shorten the time for compounding of medicines.

But at the same time pharmacies face certain difficulties, such as the presence on the market of active pharmaceutical ingredients (substances) and auxiliary substances, the range of which leaves much to be desired. Problems exist in the pricing of extemporal medicines, which are associated with the profit of pharmacies. But no less important and unsolved problem is the availability of a regulatory framework for the manufacture of extemporal drugs and intra-pharmaceutical products.

For each extemporal medicinal product or intra-pharmaceutical product prepared for stock, it is necessary to have the normative documentation in the drugstore.

Aim. The Department of Pharmaceutical Technology of Drugs provides assistance to manufacturing pharmacies in the development of this documentation. One such work was the development of a technological instruction for the intra-pharmaceutical product : a solution of riboflavin 0.02% and the selection of methods for its analysis in pharmacies.

Materials and methods. To develop the technological instruction for a solution of riboflavin 0.02%, there were used materials described in the monograph “Riboflavin”" and “Purified Water”, as well as requirements for intra-pharmaceutical products, and the standards of the Ministry of Health of Ukraine 42-4.5:20015 and 42-4.6:20015, which regulate the preparation of extemporal medicinal products in Ukraine.

Results and discussion. The developed regulatory documentation for a solution of riboflavin 0,02% includes the following sections: production formulation, requirements for APhI and purified water,