THE RELEVANCE OF THE DEVELOPMENT OF EXTERNAL DOSAGE FORMS FOR THE TREATMENT OF ACNE

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Introduction. Acne, is one of the most common skin diseases: in the puberty period, it occurs with varying degrees of severity in 100 % of boys and 90 % of girls. The peak of the disease is usually 15-16 years. In young children, the disease has a widespread and more severe nature. Acne illness at the age of 12-24 years is called «acne vulgaris». The diagnosis of acne in older age groups is classified as «acne tarda».

Acne with relatively minor violations of physical condition significantly worsens the emotional and social components of life quality, especially among adolescents and young people. This is often the cause of depression, dysmorphophobia, and, in some cases, suicidal attempts. For this reason, the degree of negative effects of acne on quality of life often does not correlate with the objective state of patients.

Aim. Based on the said above, the aim of our work is the development of a number of medicines for external use that provide effective treatment of acne with a low degree of toxicity.

Materials and methods. In the course of research, bibliosemantic, economic and organoleptic methods of analysis were used.

Results and discussion. In order to study the consumers' satisfaction with the available proposals of anti-acne drugs, we conducted an analysis of the pharmaceutical market for medicines for the treatment of acne on the basis of a compendium.

It was found that compendium contains 30 medicines for the treatment of acne. By ATC-classification they belong to the group D10: sulfur compounds (D10A B), retinoids for local acne treatment (D10A D), antimicrobial medicines for the treatment of acne (D10A F), other medicines for local acne treatment (D10A X), retinoids for systemic acne treatment (D10B A), other medicines for acne treatment for systemic use (D10B X).

The vast majority of medicines are represented by foreign manufacturers (76.7 %), while domestic manufacturers offer only 7 medicines (23.3 %) (Fig. 1).

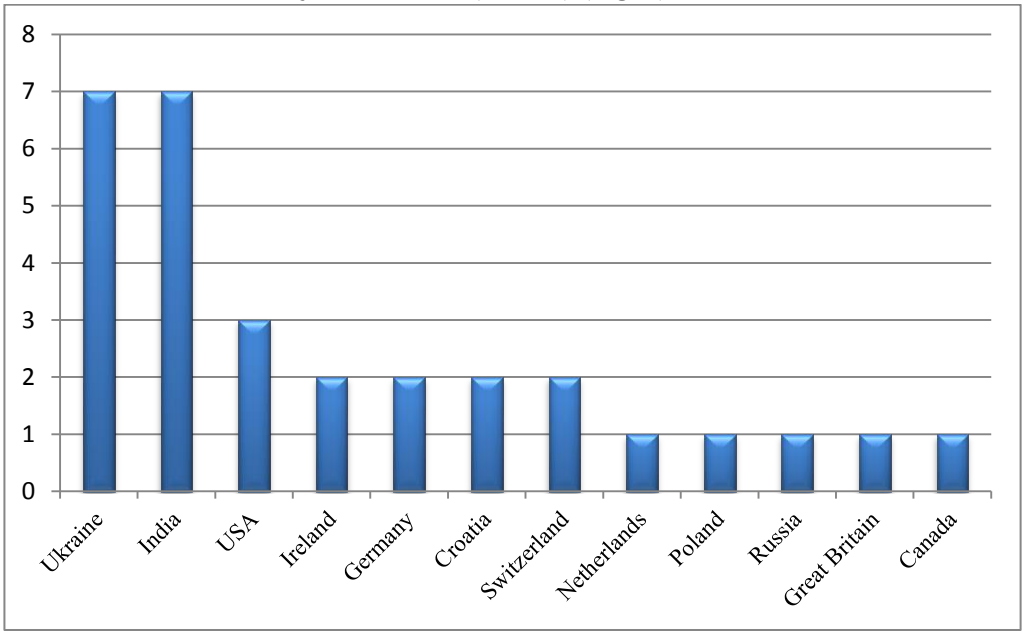

Fig. 1. Analysis of the Ukrainian pharmaceutical market of medicines for acne treatment: distribution of drugs for the treatment of acne by the producing countries

At the same time, medicines for the acne treatment of natural origin are not presented in the domestic pharmaceutical market.

On the basis of the national import substitution programme and in order to expand the range of domestic medicines of this category, then analysis of literary sources was conducted in order to establish promising active pharmaceutical ingredients for the development of medicines for the treatment of acne.

The most promising raw material for the development of external dosage forms for the treatment of acne was established the essential oil of tea tree, essential oil of lavender, essential oil of grapefruit, essential oil of mint, essential oil of rosemary, oil solution of vitamin A and oil solution of vitamin E.

The proposed composition of active pharmaceutical ingredients was used to make an alginate mask. The obtained mask samples are homogeneous, of white colour with a specific odour. The organoleptic indicators of the obtained samples meet the requirements to this dosage form.

Conclusions. The analysis of the Ukrainian pharmaceutical market of medicines for the treatment of acne has shown that all currently registered drugs of this category are of synthetic origin and are mostly produced abroad(76.7 %). Conducted bibliosemantic analysis of literary sources allowed establishing a promising raw material for the further development of external dosage forms for the treatment of acne. The obtained samples of alginate mask on the basis of the proposed active pharmaceutical ingredients meet the requirements for this dosage form according to organoleptic parameters.

STUDY OF ASSORTMENT OF MEDICINES FOR TREATMENT OF RENAL SYSTEM DISEASES

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Introduction. The pathology of the kidneys is a major interdisciplinary problem that unites doctors of different specialties. Important is the issue of kidney damage in various diseases: diabetes mellitus, hypertension, and the like. Due to the proliferation of antibiotic resistance of pathogenic microbes, the number of patients with chronic inflammatory lesions of the genitourinary system with further renal insufficiency increases. In the general structure of renal system diseases, the proportion of urolithiasis, renal system disease in children and pregnant women increases.

Medicines for the treatment of renal system in Ukraine comes from foreign manufacturers: Spain, Russia, France. The manufacturers in Ukraine are the following companies: «Sperk-Ukraine» and «Monfarm» Ukraine. The main active ingredients of medicines are active pharmaceutical ingredients (API) of synthetic and plant origin.

Aim. Conducting an information retrieval and analysis of scientific literature data in a definite direction and on the basis of this development of the composition and technology of the medicinal extemporal medicines for the treatment of renal system disease.

Materials and methods. Study and analysis of scientific literature, analysis of «Compendium 2018», annotations to medicines, Internet source.

Results and discussion. Studies have shown that renal system diseases are used for: nephroprotection (renal cytoprotectors); medicinal substances that inhibition of the renin-angiotensin-aldosterone system (captopril, enalapril, lisinopril); antihypertensive (verapamil, diltiazem); medicines that normalization of lipid metabolism, with additional mechanisms of nephroprotective action (simvastatin, atorvastatin, lovastatin); hypouricemic inhibitors of uric acid synthesis (allopurinol); diuretics (loop – furosemide, osmotic – mannitol); total drugs on a natural basis from lespedeza bicolor and lespedeza capitata (lespenephril, lespeflane), globe artichoke, begonias of reddish, ginkgo, ground elder , canadian goldenrod, restharrow, soy.

Conclusions. The nephroprotective effect is inherent in many API of plant origin. Perspective for the use in the extemporal formulation for the treatment of renal system disease is a combination of AFI of synthetic and plant origin. The list of the following plant raw materials: begonias of reddish, ginkgo, ground elder, Canadian butter-and-eggs, rest-harrow, soy is perspective in this connection.