DEVELOPMENT OF THE ANTIMICROBIAL ACTIVITY OF CREAM WITH LEVOMITSETIN FOR THE TREATMENT OF ACNE

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Introduction. Acne is one of the most common skin diseases, as more than 85% of adolescents face this problem. Acne develops as the young men and girls. The peak incidence is at the age of 14-16 years, and the disease itself is characterized by a prolonged course with frequent exacerbations and relapses.

The frequency of acne does not have a clear tendency to decrease, but it also increase very much. This can be associated with a violation of the metabolism of fats in the human body, a genetic predisposition, an increase in the formation of sebum, as well as exposure to the skin of substances that have a camedogenic effect that causing an infection.

Therefore, one of the main actions of the drug for the prevention and treatment of acne should be an antiseptic action that will be directed to the destruction of pathogenic microorganisms.

To take account of the mixed composition of microflora that causes acne, it is advisable to use active pharmaceutical ingredients (API) that have anti-inflammatory and antibacterial properties.

Aim. The aim of the work is to study the antimicrobial activity of cream sample, that containing levomycetin, boric and salicylic acid in certain concentrations.

Materials and methods. As API, the composition of the cream includes levomitsetin at 1% concentration, salicylic acid (1%) and boric acid (2%). Sorbic acid was used as preservative, and corn oil, propylenglycol (PG), and emulsifier №1 were used to create an emulsion base (oil / water type).

The antimicrobial activity of this sample was studied in vitro by diffusion to agar («well» method).

This method is based on the ability of the active substances to diffuse into the agar, which was previously inoculated with cultures of microorganisms.

As a culture of microorganisms are used Gram-positive bacterial (Staphylococcus aureus ATCC 25293) and spore (Bacillus subtilis ATCC 6633) cultures of microorganisms, and also a gram-negative culture (Echerichia coli ATCC 25922) and yeast-like fungus of the species Candida - Candida albicans (ATCC 885-653).

The results were recorded by measuring the growth retardation zones of