

Today only one artificial tannin is known. It is used to make a number of extemporaneous drugs (ointments, creams, solutions). One of the most well-known industrial drugs is Delaskin (Derma-Pharm, Germany) – an effective astringent in the form of cream and powder (0.4%), as well as in the form of concentrated bath additives. In some European countries (Poland, Belgium, Slovakia, Italy, Hungary) tannin is better known as Tamol RR, which is available in the form of a lotion.

Mild drugs based on synthetic tannin are designed to relieve swelling, irritation and itching, help reduce pain and local inflammation. On healthy skin, it acts as an antiperspirant, reducing sweating and sebum.

In the production of therapeutic and prophylactic drugs (ointments, gels) are widespread: collagen gels, gels of polysaccharides, gels of clay minerals, gels of polyethylene acids, emulsion waxes, etc.

Among the great variety of polymeric materials used as carriers, there is some interest in polymers of acrylic acid, called Carbopol 934 P, 940 P, 941 P and their analogues – "Akmid", "Arespol". The high degree of swelling of polymers of acrylic acid in various solvents, extremely strong ability to thicken, the stability of viscosity properties in a wide range of temperatures and pH values determine the possibility of their use for the manufacture of ointments, gels and liniments.

A feature of soft dosage forms based on carbopol is the possibility of introducing into their base various substances, hydrophobic liquids and alcohol solutions. At the same time stable suspensions without additional introduction of emulsifiers are formed.

Gels with a concentration of polymers of acrylic acid in the range of 0,5-1,5 % have optimal structural and mechanical characteristics, good fluidity and viscosity, which allow to ensure the highest efficiency of the drug.

Conclusions. Thus, on the basis of data on the composition of the extemporaneous formulation of mild dosage forms, the hydrophobic basis of the extemporaneous ointment with tanninum was replaced by hydrogel.

Since, for extemporaneous manufacture, it is advisable to use a ready-made concentrated gel with well-defined values of viscosity and pH, the compositions were obtained using pre-prepared gels of polymers of acrylic acid (on based on 0,5 % and 1 % Arespol sodium gels). Manufacturing was carried out using standard pharmacy equipment (stirrer and mortar).

THE RELEVANCE OF CREATIONS OF A SOFT DOSAGE FORM WITH EUCALYMINE

Harmash O. V., Herasymova I. V.

Scientific supervisor: Yarnykh T. G.

National University of Pharmacy, Kharkiv, Ukraine

iryna_herasymova@ukr.net

Introduction. Modern medicine has in its arsenal a variety of drugs in nature and purpose for the treatment and prevention of purulent-inflammatory infections of the skin and mucous membranes. However, the need for highly effective, affordable domestic medicines is not fully satisfied. The most used drugs for the treatment of this pathology, namely antibiotics and some synthetic chemotherapy drugs, cause the development of drug resistance in microorganisms. The introduction of new generations of antibacterial drugs into clinical practice solves the problem only for a short time, since

this process is each time accompanied by the selection of resistant strains and the emergence of new mechanisms of resistance in microorganisms.

Aim. To prove the relevance of creating new modern domestic drugs based on eucalymine.

Materials and methods. Search and analysis of various sources containing scientific information (articles, books, brochures, websites, etc.)

Results and discussion. According to statistical data, 60 – 70% of young people aged 12 to 24 years in one form or another suffer from infectious purulent-inflammatory skin diseases. In more than one third of cases, these diseases require serious, sometimes long-term treatment by a specialist.

It is known that the leading role in the occurrence of purulent-inflammatory skin diseases, in particular strepto- and staphylo-derma, belongs to the microbial flora. Often, the inflammatory process is accompanied by pain, the formation of ulceration, deep ulcers, healing with rough scars. Therefore, in clinical practice, for the treatment and prevention of purulent-inflammatory skin infections, an integrated approach is used using antimicrobial and anti-inflammatory drugs as local therapy.

Analysis of the literature data shows that among dosage forms for topical use there is a tendency to an increase in the range and volume of production of soft dosage forms (ointments, creams, gels). The external method of using soft dosage forms allows for the maximum concentration of medicinal substances directly in the lesion focus.

For example, in the place of violation of the integrity of the skin, damage to the mucous membrane, suppuration, bedsores, burns, etc. The transdermal route of administration of drugs is considered the safest, since most of the dose is located on the surface of the skin and can be easily changed by partial removal.

The most important indicators of soft dosage forms: structural and mechanical characteristics, stability, releasing ability and therapeutic activity – are determined by the properties of the carriers. In this connection, in recent years, there has been an increased attention to excipients that play the role of carriers of medicinal substances in soft dosage forms. Among the requirements for excipients used in the pharmaceutical and medical-cosmetic industry, an important place is occupied not only by good tolerance, giving the dosage form the required consistency and stability, but also by complementing the therapeutic effect of medicinal substances.

Among the drugs with antimicrobial activity, a special group is represented by inhibitors of microorganisms, which are substances of plant origin, which are characterized by the absence of the formation of drug resistance to them in microorganisms. These drugs are usually distinguished by high efficiency, good tolerance in therapeutic doses and the absence of side effects.

There are results of studies related to the study of the properties of Eucalyminum, isolated from the rod eucalyptus, which have shown the prospects for further development of new dosage forms based on it. This is due to the combination of the antimicrobial action of eucalymine with the presence of anti-inflammatory and immunostimulating properties. The advantage is the absence of side effects with prolonged use, the optimal technology for obtaining from medicinal plant raw materials, as well as the economic availability of eucalymine in comparison with foreign drugs.

However, the use of eucalymine in the form of alcohol solutions is not always convenient, since the application of solutions to the skin surface is possible only with the use of tampons or dressings. Ethyl alcohol has a dehydrating effect, dries out the skin and is undesirable in case of inflammatory processes. The solution to the problem of rational use of eucalymine lies in the development of new soft dosage forms – gel and cream.

Conclusions. Based on the obtained literature data, the necessity and relevance of the development of a soft dosage form based on eucalymine was proved.