

Results: The last years in the world pharmaceutical market appeared an huge number of drugs, including ear drops. Many of them are analogues of known drugs with the same composition, but with a different brand name and various manufacturers. In Moldova the arsenal of remedies with topical and ear application is quite low and there is only one local producer-Depofarm Gmb., which produces a single name for ear drops. There were proposed to analyze the composition and pharmacological action of substances containing in the most common ear drop to develop the new combinations, to increase the efficiency of treatment. The most products (58.3%) are combinations of antimicrobials, corticosteroids, antiinflammatory, anesthetic and antiseptic medicines. Unfortunately, there are not registered medicines of vegetable origin. The study records observations in the ORL department of the Municipal Hospital E. Coțaga, Chisinau revealed a large number (%) of admissions with diagnosis of otitis, especially perforation. The main goal in patients treatment with inflammatory diseases of the outer and middle ear is a local antibacterial and antiinflammatory one. A group of drugs commonly used for these diseases are fluoroquinolones antibiotics. The most popular fluoroquinolone antibiotic is *ciprofloxacin*. It has a broad spectrum of activity and is active against gram-positive and gram-negative microorganisms, as well as Chlamydia. Because of this it was chosen *ciprofloxacin* as the main active substance in the development of combined ear drops. Also, in combined therapy of inflammatory diseases it is important for medicines to contain raw vegetable materials. It was selected the plant basil (*Ocimum basilicum* L.). It is used in medicine for its antibacterial, antiinflamator, antiseptic, antispasmodic effects.

Conclusions: In conclusion it is important to develop a new antibacterial composition for ear diseases, containing raw vegetable materials.

Keywords: ear drops, combined drugs, antibacterial medicines, ciprofloxacin, basil.

ELABORATION OF ANTISEPTICAL SOLUTION ON THE BASE OF ALCOHOLS

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Introduction: Actually, it is proved that a large part of hospital infections are caused by poor hand hygiene. It is very important for hands to be clean and without pathogens, which can be achieved only by applying disinfectants. The WHO's guidelines indicate that the best disinfectant for hands is the one which is based on alcohol, being more effectively against the agents of hospital infections and also it has a good compatibility with skin. Unfortunately, the most disinfectants that are used both in our country and abroad do not satisfy the requirements of effectiveness, harmlessness, ecology, etc. Studies showing the adequacy or inadequacy of hand cleansing by microbiological proof are few. From these few studies, it can be assumed that hands remain contaminated with the risk of transmitting organisms via hands. Their results showed that hand contamination with transient organisms was significantly less likely after the use of an alcohol-based hand rub compared with the medicated wipe or soap and water.

From 52 disinfectants which are registered and approved in Republic of Moldova, only 4 of them are recommended and can be used for surgical disinfection of hands. For all of these, they are all imported and quite expensive. Due to all these, we propose to elaborate a local antiseptic solution for hands, based on ethanol and isopropanol with a fast action and a broad spectrum of antimicrobial activity. It also ensures an optimal pH for hands. The auxiliary substances which will be used will not irritate skin, even after a long use.

Materials and methods: four solutions containing ethyl alcohol and isopropyl alcohol in different reports; determination of the minimum inhibitory concentration (MIC) of these formulations against bacteria; the method of serial dilution in liquid nutrient medium (meat peptone broth 2%, pH = 7.0), liquid nutrient medium (broth Saturo).

Results: The most alcohol-based hand antiseptics contain ethanol, isopropanol or n-propanol, or a combination of two of these products. Concentrations are given as either percentage of volume (= ml/100 ml, abbreviated % v/v), percentage of weight (= g/100 g, abbreviated % m/m), or percentage of weight/volume (= g/100 ml, abbreviated % m/v).

Antimicrobial activity was determined for four solutions with different concentrations of alcohol. The antimicrobial activity of alcohols results from their ability to denature proteins. Alcohol solutions containing 60–80% alcohol are most effective, with higher concentrations being less potent. This paradox results from the fact that proteins are not denatured easily in the absence of water. Alcohols have excellent in vitro germicidal activity against Gram-positive and Gram-negative vegetative bacteria (including multi drug-resistant pathogens such as MRSA and VRE), *M.tuberculosis*, and a variety of fungi.

Conclusions: The efficacy of alcohol-based hand hygiene products is affected by a number of factors including the type of alcohol used, concentration of alcohol, contact time, volume of alcohol used, and whether the hands are wet when the alcohol is applied.

Keywords: Antiseptic solution, nosocomial infections, analysis, quality control, antimicrobial activity.

THE IMPROVEMENT OF THE MANAGEMENT OF PHARMACIES IN THE REPUBLIC OF MOLDOVA

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Nowadays there are many controversial issues and paradoxes in the pharmaceutical activity of the Republic of Moldova (RM), connected either with the lack of maturity of market or with its already established structure.

In this work we tried to express our opinion about the actual situation and propose the alternative model of the development of pharmaceutical industry in RM in the most rational ways, based on the concept “from local to global”. Being in a working process we decided to raise many actual topics which concern the majority of the different social groups connected with the pharmaceutical activity in RM. These groups are: students of faculty Pharmacy, qualified pharmacists, doctors and professors and simple citizens, who face every day with advantages and disadvantages of local pharmacies. Some of the actual topics are: the economic benefits of raising and supporting local drugs’ manufacturers, the gradual introduction of new technologies of organization and management, the rationalization of the whole pharmaceutical industry of RM basing on the models of developed countries, etc.

The results of our research were unexpected not at the point of criticism of already established structure of local market, but at the point of a huge will, potential and opportunity to improve the whole system of organization and management of pharmaceutical industry in RM. The selected concept “from local to global” expresses the main idea of this inevitable process – we should realize all the necessary changes step by step, previously providing all the possible ways of the idea’s development. Thus we can forward our desires and powers in the right direction – from starting the improvement in our township, to expansion of its potential results in all the regions of our native land – the Republic of Moldova.