other parameters. Based on an assessment of MCV, MCH, and MCHC, we found that patients were at the risk of normocytic anemia. A similar study which was done by Jafarzadeh (2010) showed that the MCV was significantly lower in patients with abnormal thyroid function compared to those with euthyroid status.

RDW reflects erythrocyte anisocytosis and besides it increases iron deficiency anemia, recent studies reported that RDW was also associated with conditions characterized with overt or subclinical inflammation (Aktas et al., 2014). In the current study, RDW was non-significantly increased in the HT group compared to the control group (by 9.5%, $p > 0.05$).

Conclusions. Our results suggest that in the subclinical hypothyroid state, patients with Hashimoto's thyroiditis have lower red blood cells, hematocrit, hemoglobin levels than the healthy controls. As lower levels of blood cell count and red blood cell indices are closely related to anemia, hypothyroid Hashimoto's thyroiditis patients have a greater risk of anemic complications than controls. The main limitations of this study are that a larger number of patients are required to increase the accuracy of the findings. Some population-based data are also required to determine the normal geographical and age-related variation regarding the levels of the blood and thyroid test parameters.

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RESEARCH OF MICROBIAL CONTAMINATION OF COSMETIC CREAMS

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Introduction. Cosmetic creams are susceptible to microbial contamination the most among all types of cosmetic products. Big content of water, organic and mineral components, storing at room temperature, non-observance of hygienic rules of taking a cream, create favorable conditions for the development of different groups of microorganisms. Contaminated with pathogenic and even conditionally pathogenic microflora creams can be sources of biological danger to users.

Aim. The aim of the research is to study the dynamics of microbial contamination cosmetic creams after opening during application for four weeks.

Materials and methods. Bacterial and fungal contaminations were determined for eight samples of the Eveline company cosmetic face creams, after opening the package and using within four weeks.

Results and discussion. Users took four samples of the cream before applying them to the skin of the face using hands, four samples - with special applicators. According to the requirements of regulatory documents in Ukraine when assessing the safety of cosmetic products, the total microbial count and the presence of bacteria Staphylococcus aureus, Pseudomonas aeruginosa, bacteria of the family Enterobacteriaceae. Results. Total microbial count in creams after opening packaging was not exceeded 40 CFU/g. After 4 weeks of use and storage at room temperature total microbial count in cream samples, which users took with their hands was 96-109 CFU/g. In one of the samples of creams, fungi of the genus Candida were detected. In creams applied using applicators - the total microbial count was 35-40 CFU/g. Coagulase-negative staphylococci and

spore-forming bacteria of the genus Bacillus were dominated among the detected microflora. Bacteria of Enterobacteriaceae, P. aeruginosa, and S. aureus families were not identified.

Conclusion. Even though all cosmetic creams after opening packages were stored at room temperature, those samples that users took using applicators, had a lower level of microbial contamination. It demonstrates the importance of compliance with hygiene rules when using cosmetic creams.

CREATING VACCINES FOR THE PREVENTION OF HIV

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Introduction. There are approximately 37 million people living with HIV/AIDS in the world. There are approximately 1.8 million new cases of infection every year, including 21.7 million receiving antiretroviral therapy. But the most effective measure, both economically and socially, is vaccination.

Aim. Monitor the dynamics of vaccines for HIV / AIDS prevention.

Materials and methods. Analysis of scientific articles by researched topic.

Results and discussion. Since the 1980s, scientists have been actively working on the development of a vaccine for HIV, but it still does not exist. The HIV vaccine has become a real challenge for scientists because it is quite a challenge. The virus is highly variable, it forms many strains so you cannot find a stable structure. In this regard, a large genetic breakthrough is required to create the vaccine.The results of the first major clinical trial of HIV vaccine were published in 2003. The AIDSVax vaccine contained gp120 glycoproteins, but its efficacy has been demonstrated in clinical studies. The next step was to develop a vector vaccine where the adenovirus served as a "vector". This vaccine was aimed at stimulating cellular immunity. However, this study was discontinued in 2007. In 2009, RV144 studies were conducted using two doses of the vaccine - the "primary" that contained three HIV genes: env, gag, and pol - to stimulate cellular immunity and "additional" - which contained the gp120 protein - aimed at producing neutralizing antibodies. The use of this approach in the study showed a 31% reduction in the risk of infection. Scientists of many countries are working on the creation of the vaccine, and different approaches are being considered. For example, work is underway on the so-called mosaic vaccine, which is made up of proteins from different strains of HIV. As a result of the study, the vaccine elicited an adequate response from the immune system in a large proportion of scientists. Another example is a combination approach (vaccine cocktail) that has led to activation of the immune system and inhibition of virus replication.

Conclusions. Creating a vaccine for HIV prevention is a lengthy and time – consuming, multi-step process that addresses different approaches/ Today, the effectiveness of such drugs is approximately 50%, and for infectious diseases it is very low. The most promising models are at least 70% efficient.