Aim. To conduct a study of the blood immunological parameters in patients at different stages of coxarthritis as to assess the immune status.

Materials and methods. Studies were conducted on the basis of the Department of Laboratory Diagnostics and Immunology of Sytenko institute of Spine and Joint Pathology. A total of 19 patients were examined, of them 7 had the I–II coxarthritis stages, 12 had the III–IV coxarthritis stages according to the Kellgren and Lawrence classification. The age of the patients was from 36 to 52 years, 12 men and 7 women. The control group consisted of 15 clinically healthy people aged 35 to 55 years, 8 men and 7 women. Patients were examined in the following immunological parameters: subpopulations of T-lymphocytes, circulating immune complexes (CIC), immunoglobulins (Ig G, A, M), the spontaneous neutrophil migration coefficient (LIF) and the level of lymphocytes migration with antigens (bone, cartilage and synovial membrane joints).

Results and discussion. In patients with coxarthritis at I–II stages were found the CIC level by 97.9 % increase, LIF – by 44.8 %, migration level of lymphocytes with cartilage antigens – by 2.1 times, with synovial membrane antigens – by 62.7 % compared with the control group. At the III–IV stages CIC were increased by 88.9 %, LIF – by 40 %, migration of lymphocytes with cartilage antigens – by 32.2 %, with synovial membrane antigens – by 46.7 % compared to the control group. Other parameters did not differ from the control group.

Conclusions. Patients at the I–II stage of osteoarthritis of the knee joints had more serious immune status disorders associated with a more active inflammatory process in the joints, which must be considered in the conservative and surgical treatment.

RISK OF INFECTION IN THE EDGED MANICURE

Mukhina K.Yu., Shostopal M.V.
Scientific supervisor: associate prof. Geyderikh O.G.
National University of Pharmacy, Kharkiv, Ukraine
microbiology@nuph.edu.ua

Introduction. Classic or edged manicure – a manicure where the cuticle is cut off with special tweezers or scissors for burrs. There are always risks of circumcision manicure, among which: tools can permanently damage the nail bed, improper disinfection of tools, the possibility of infection, the color of varnish on the nails can hide the infection. After sterilization, the instruments must be stored in airtight trays or ultraviolet sterilizers. The master must get them already in the presence of the client. The complete processing of tools takes at least 1.5-2 hours. Therefore, in the cabin necessarily must be several sets of manicure instruments. The treatment must be subjected to absolutely all the repeated tools with which the master worked. Anesthetic saws and baffles that are in contact with the blood can not be used more. You need to disinfect and throw away. In addition, before the beginning of the work, the master is obliged to wash the hands and hands of the client with soap, as well as to treat them with antiseptic.

Processing of manicure tools must include: clearing of visible contaminants (cream, traces of blood) from the surface of tools; disinfection, sterilization of tools for the complete destruction of microbes (quartz sterilizer, autoclave, dry chest cabinet). Some masters still use ultraviolet sterilizers. However, it should be kept in mind that sterilization should still be performed after ultraviolet treatment. Because ultraviolet does not kill viruses hepatitis B and C, HIV, herpes. Ultraviolet sterilizers are not essentially sterilizers, they are intended only for storing sterile instruments. Ballistic sterilizers are not recommended for use in manicure sterilization as the most authoritative organization in the world – the FDA (USA Food and Drug Administration). They do not provide the purity of manicure instruments.

Aim. Control of the quality of the disinfection tools used in the circumcision manicure.

Materials and methods. Disinfectant "Lizoformin 3000", a high-performance disinfectant Bacillon AF. Cultures of microorganisms: Staphylococcus aureus ATCC 6538, Escherichia coli ATCC 25922, Bacillus subtilis ATCC 6633, Pseudomonas aeruginosa ATCC 9027, Candida albicans ATCC 10231. Direct sowing method on nutrient media: meat-peptone agar, Endo agar, yellow-salt agar, blood agar, Sabur agar.

Results and discussion. Manicure tools were previously contaminated with a mixture of flushes of daily bacterial and fungal cultures. Microbial load 10^5 in milliliters. «Lysophormin 3000» and «Bacillol AF» were treated with disinfectants. Disinfection with «Lysophormin 3000» was carried out by immersing the instruments into a solution in a glass container, tightly closed lid, followed by flushing with tap water. Time spent in solution – 15-60 minutes. During the disinfection of the instrument, all its surfaces were completely covered with a solution for disinfection of at least 1 cm. Disinfection with «Bacillol AF» was carried out by irrigation, followed by wiping with a napkin. The quality control of disinfection was carried out by the method of washings. The taking of washes was carried out from surfaces of manicure instruments after disinfection. The taking of washes was carried out with sterile gauze wipes, pre-moistened with sterile tap water. After wiping the surfaces of the instruments, the napkins were placed in test tubes with water, from which they were sown in a volume of 0.1 ml on the surface of meat-peptone agar, Endo agar, yellow-salt agar, blood agar, Sabur agar. The crops were kept in a thermostat at a temperature of 37^0C. The results were taken after 48 hours.

After being washed away after the disinfection with «Lizoformin 3000», for 15 minutes, Petri dishes with meat-peptone agar received colony growth, which were subsequently identified as Escherichia coli and Bacillus subtilis. Number of Escherichia coli – $<10^3$ CFU in 1 ml, Bacillus subtilis – 10^5 CFU in 1 ml. After treatment with «Bacillol AF», the amount of Escherichia coli – $<10^3$ CFU in 1 ml, Bacillus subtilis – 10^4 CFU in 1 ml. The results obtained indicate a lack of exposure time. With an increase in the duration of disinfectants, the absence of growth of microorganisms in dense nutrient media environments, which indicates the quality of the disinfection carried out.

Conclusions. Disinfectants are well suited to their task and destroy microorganisms. But they do not destroy all the pathogenic factors, but only those that fall under the spectrum of their actions. That is, to completely eliminate all factors, it is necessary to carry disinfection a complete disinfection and to follow the instructions for their application. Compliance with all stages of cleaning, disinfection, sterilization and storage of manicure tools provide the health of the master and the client.

CHRONIC WASTING DISEASE

Pavlenko A.S.
Scientific supervisor: senior researcher Gliebova K.V.
National University of Pharmacy, Kharkiv, Ukraine
microbiology@nuph.edu.ua

Introduction. Chronic wasting disease (CWD) – it transmissible spongiform encephalopathy that affects deer family. Diseases are caused by proteins-prions. Moreover, prions are not just they accumulate and induce structural transformation of normal proteins. Until the end of the details of these processes, scientists have not been elucidated. Accordingly, there is no ways to stop the development of the disease. CWD is currently incurable and ends with the death of the animal. A particular problem is that the incubation period of CWD is very long-more than one year, that is traditional exposure in quarantine is likely not to show the disease. It is possible to deliver in the cage like a healthy animal, and a year to learn that he is sick and has infected all the deer that were with him in the enclosure. Disease it spreads through direct contact between animals and through saliva or excrement. Formally called chronic debilitating disease the disease affects the brain, spinal cord and causes a sharp weight loss, loss of coordination, and increased aggression in the animal. At the same time, since infection and before the first symptoms may take several years. In the words people who have seen infected animals, they really become like zombies.

Aim. Assess the risks of human chronic disease the depletion of deer.

Materials and methods. Analysis of the scientific literature and the results of the advanced research in the field of medicine and pharmacology.

Results and discussion. Due to similarity with BSE (spongiform encephalopathy cattle), which is similar to Creutzfeldt-Jakob disease in humans, and due to the known fact that transmissive spongiform encephalopathy can transmitted between different species of animals, it was suspected that chronic debilitating deer disease can be zoonotic, that is, transmitted to humans. One of the reasons for this