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Interaction of exo- and endogenous microorganisms as part of associations in infections (Experimental research)

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Over recent years, the frequency of infections caused by associated pathogenic microflora and associated with hospital infection of patients has been increasing. It appears interesting to study the microbiocenosis formed in the animals body with generalized infection in an experiment. Analysis of the experimental animals internal organs microflora infected with cultivated (CFB) and uncultivated (NCFB) forms of *S.aureus* and *P.aeruginosa* selected from patients with burn disease indicates the interaction of the macroorganism with microorganisms, as well as interactions between microorganisms in microbial populations. The mutual influence of associates on each other was revealed. The properties of *E.coli* translocated from the intestine to the internal organs were studied and it was found that in the cultivated form it can exist as a monoculture, showing antagonistic properties in relation to *P.aeruginosa* and *S.aureus* or form a new microbial association with them, contributing to a more severe course of the infectious process due to the synergistic effect in the association. A microbial association consisting of three associants - *P.aeruginosa, S.aureus* and *E.coli* was detected in the liver and kidneys of experimental animals, infected with CFB and NCFB. Translocated *E.coli* acquired atypical properties that enhance its virulence. High mortality of the animals, infected with CFB is due to the increased role of Gr- bacteria in the association. An earlier translocation of *E.coli* was detected in animals infected with NCFB, which leads to an extremely fast disease course with the death of most animals due to bacterial shock.

Recent publications

1. Klimenchenko I A, Sakharov S P. Correction of the emotional-volitional sphere in children with disabilities using color therapy. World of Science. Pedagogy and psychology. 2020 №2.
2. Sakharov S P, and Shen N P. Mechanisms of bacterial complications against the backdrop of burn injuries in the experiment. Messenger of Anesthesiology and Resuscitation, Vol. 13, No. 3, 2016.
3. Sacharov S P, Ivanov V V, Zoroastrov O M, Zo M O. Analysis of lethal outcomes in children with burn dieases. Bulletin of Experimental and Clinical Surgery. Volume 3, №3 2010

Speaker Biography

Molokova O A have an academic degree of Doctor of Medical Sciences, an academic title of associate professor. In the year 1982, I graduated from the Tyumen State Medical Institute and immediately started working as a professor at the department of pathological anatomy and forensic medicine. I have 200 scientific articles, methodological recommendations published in leading Russian journals. The main directions of scientific activity: the study of regenerative abilities of various organs and tissues in pathological conditions. I actively cooperate with doctors of various specialties - pathologists, surgeons, microbiologists. I take part in scientific conferences and congresses devoted to the issues of pathological anatomy, surgery, microbiology, ophthalmology.

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