

DETERMINATION OF THE PATHOGENICITY FACTORS OF STAPHYLOCOCCUS ISOLATED FROM SKIN

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Introduction. The urgency of the staphylococcus infections problem worldwide has been steadily increasing. Staphylococcus are members of the normal microflora, but their detection in the clinical material is not always objective evidence of their etiological role, because of the pathogenicity degree, wide variability under the antibiotics influence and the clinical forms of these infections extraordinary variety. Staphylococcus are the human skin microbiome important components. Staphylococcus aureus is the causative agent of skin infections and chronic dermatitis, from atopic dermatitis to acne.

Aim. To study the factors of pathogenicity of Staphylococcus and the features of their identification in clinical material.

Results and discussion. According to the Bergey's manual the genus Staphylococcus includes 48 species and subspecies. Staphylococcus are gram-positive microorganisms of spherical shape, 0.5-2.5 microns in diameter, immotile, form regular or irregular clusters in smears. Staphylococcus are facultative anaerobes, have enzymatic and respiratory metabolism, they are catalase-positive and oxidase-negative. Staphylococcus are permanent inhabitants of the skin and mucous membranes, therefore the diseases caused by them have the character of autoinfection or exogenous infection, with airborne, airborne, contact-household or alimentary mode of infection. There are a number of staphylococcus pathogenicity factors that change the microenvironment and create favorable conditions for the microorganisms growth and reproduction. They are: plasmacoagulase, fibrinolysin, DNAaza, hyaluronidase, lecithinase, β -lactamase. Anti-complementary activity is the ability to destroy complement, a natural factor of resistance. Antilysozyme activity is one of the factors that increase the bacteria tolerance to the serum lysozyme action in humans and animals. Anti-interferon activity is an autonomous property of microorganisms intended for targeted, specific inactivation of the human leukocyte interferon bactericidal fraction.

Conclusion. The importance of the problem of staphylococcal colonization of the skin and secondary infections in dermatology remains high.

The bacterial pathogenicity factors detection will help in-depth study the colonization resistance mechanisms in order to increase the antimicrobial therapy effectiveness.