

**Results and discussion.** The results of microbiological studies showed, that the essential oils: peppermint, tea tree, juniper, geranium and sage in conditions in vitro showed of antimicrobial effect.

**Conclusions.** For the first time proved the feasibility of using essential oilspeppermint, tea tree, juniper, geranium and sage to improve the health of students based raw materials from Ukraine. Proven prospects of using essential oils for the prevention of acute infectious diseases and their complications during the training process.

## **FEATURES COMPOSITION OF MICROFLORA OF THE UPPER RESPIRATORY TRACT IN PATIENTS WITH LOCAL SCLERODERMA AND CHRONIC LUPUS ERYTHEMATOSUS**

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**Introduction.** Systemic connective tissue diseases include nosological forms characterized by lesions of various organs and tissues caused by inadequate autoimmune or immunocomplex reactions, as well as excessive fibrosis formation. Recently, chronic connective tissue disease first place in the frequency of detection is chronic red lupus (CRL), the second place – local scleroderma (LS).

According to some authors, disturbance in certain biotopes (upper respiratory tract, skin) can negatively influence the course of these dermatoses, making it difficult to determine etiotropic therapy.

In this regard, it is relevant to study bacteriological biases in the biotope of the body, which play a role in the pathogenesis of severe dermatoses, significantly aggravating their course.

**Aim.** Study of the etiological structure and antibiotic resistance of pathogens of opportunistic infections of the upper respiratory tract isolated from patients with local scleroderma and chronic lupus erythematosus.

**Materials and methods:** biological material obtained from patients with LS and CRL; subject of research – laboratory strains isolated from microorganisms, resistance of isolated laboratory strains to antibacterial drugs, pathogenicity factors; methods of research: bacteriological; bacterioscopic, statistical.

**Results and discussion.** 63 patients were included in the bacteriological study, including 47 patients with LS and 16 persons with CRL who were inpatient treatment at the dermatology department of the Institute of Dermatology and Venereology, of which 51 women and 12 men.

The comparison group comprised 23 practically healthy individuals of the corresponding age and sex. As a result of bacteriological studies, in patients with local scleroderma of the upper respiratory tract, 155 were withdrawn, and on the CRL – 60 strains of microorganisms.

In the analysis of the obtained data it was established that in patients there were shifts in the microbiocenosis of the upper respiratory tract (URT), correlated with the severity of the course of the underlying disease.

In the study of the microbiota of the URT in patients with the first degree of disease severity, the microorganisms of the genus *Streptococcus* were extracted from the nasopharynx. "Viridans" (greenish streptococcus) in association with *Neisseria*, while the microcenose rates in these patients were as close as possible to normocenosis.

From the nasal passages in patients with the first degree of disease the microorganisms of the genus *Staphylococcus* were extracted, with the prevalence of nonpathogenic representatives of the genus.

In the examination of patients with the second stage of the course of LS (32 persons) from the nasopharynx, mostly greenish streptococci were removed, more often in association with *Neisseria*, *Staphylococcus* and  $\beta$ -hemolytic *Streptococcus*. In the study of the material obtained from patients with the second stage of severity of the course of CRL (11 people), there was a similar trend, but with the emergence of transient microorganisms.

Thus, from the nasopharynx, mostly non-pathogenic *Streptococcus* were sown in association with *Neisseria*, *Staphylococcus*, *Micrococcus* and in 2 patients – *K. pneumoniae*.

In studying the material from patients with severe LS, the following results were obtained: a decrease in the frequency of secretion from the nasopharynx of nonpathogenic Streptococcus and Neisseria; Staphylococcus belonging to the association was dominated by *S. haemolyticus*. In 11.5% of cases, we observed the association of streptococcus with *K. pneumoniae*, which is almost 2 times more frequent than patients with stage II severity.

When investigating the material of the upper respiratory tract of healthy persons, the vast majority were representatives of the genus *Streptococcus* "Viridans" and unpopular representatives of the genus *Neisseria*.

Upon identification of the streptococcal component of the nasopharynx, an increase in the amount of *Str. salivarius*, which is a relative indicator of the normocenosis of a healthy person.

**Conclusions.** Based on the results of the analysis, it has been shown that CRL and LS have certain features of prevalence, course, and gender differences. It was established that in the biota of the upper respiratory tract of healthy individuals, the representatives of the indigenous microflora prevailed.

In the examination of patients with II-III degree of severity of the course of dermatoses, there was a tendency to form associations with autochthonic microflora with representatives of allochthonous microflora.

Separate pathogenicity factors of staphylococci isolated from patients with LS and CRL. Monitoring of sensitivity to antibiotics of isolated clinically meaningful Staphylococcus and Klebsiella showed the circulation of strains resistant not only to individual drugs, but also to the multiresistant, which accounted for 26.0%.

## THE DISINFECTANTS' ANTIFUNGAL ACTIVITY DETERMINATION

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**Introduction.** Candidiasis is an anthroponotic disease that is caused by a yeast-like fungus of the genus *Candida*. It is accompanied by the lesions in mucous membranes, gastrointestinal tract, urinary system, internal organs, skin and nails with the whitish pellicle formation. According to statistics, about 70% of mature women at least once in their life faced with this pathology, and in 15-20% of patients candidiasis becomes chronic.

**Aim.** Get acquainted with the fungus of the genus *Candida* and examine its sensitivity to antifungal disinfectants.

**Materials and methods.** To achieve this goal we studied the literature about the fungus, its morphology, cultural and pathogenic properties, risk factors, diagnostic technics and resistance to disinfectants. And also we have worked out a cultural method for determining the sensitivity of the *Candida albicans* museum strain to the disinfectant from the peroxy acids group.

**Results and discussion.** *Candida* is a yeast-like microorganism of oval or rounded shape, 1.5 – 10.0 microns in size. *Candida* is capable of producing pseudomycelium, blastospores, chlamydozoospores, gromerules. *Candida* is an aerobic microorganism. Most often it is cultivated on the Sabouraud and *Candida* Agar medium, where it forms a colony after 2-5 days. The main causative agents of candidiasis are *Candida albicans*, *Candida parapsilosis* and *Candida tropicalis*. Their pathogenic properties are: the enzymes and toxins presence, due to which it is capable to adhesion to the cells of the body, invasive growth in its tissues, toxic effects on the body, as well as its allergenicity. *Candida* fungi are those microorganisms that are found in the normal humans' microflora in a small frequency. Candidiasis develops under a significant decrease in immunity (radiation exposure, tumors, diabetes, prolonged usage of antibiotics, HIV infection). There are such forms of candidiasis: vaginal, urethrogenic, intestinal, cutaneous, oral, mucous membranes and visceral. The main diagnostic method is mycological examination, which includes microscopic and culture methods. The testing materials are urine, feces, mucous membranes swabs, blood, cerebrospinal fluid, vaginal secretions, pleural cavity punctates, etc. The pseudomycelium microscopic detection in smears from pathological material has the diagnostic significance and indicates the *Candida* invasive growth.