

of this work was to study the antibacterial action of EOs in combination with fluoroquinolone gatifloxacin against staphylococci.

Material and methods. Activity of gatifloxacin and 9 EOs (bergamot, clove, eucalyptus, juniper, lavender, lemon, silver fir, tea tree, and thyme) was studied by disk diffusion and serial dilution methods. Nutrient media contained sub active concentrations of gatifloxacin (1/4 of minimal inhibitory concentration); diameters of zone inhibition and minimal inhibitory concentrations (MIC) of oils were measured. One reference strain (*Staphylococcus aureus* ATCC 25923) and 20 clinical isolates of staphylococci were used. Statistical analysis included calculating mean value and standard error of the mean, comparison of groups was performed by U-test Mann-Whitney.

Results. Disk diffusion method showed high activity of thyme oil in the presence of gatifloxacin on referent strain *S. aureus* ATCC 25923. The diameter of zone inhibition was enlarged from 28.3a 0.52 in absence of gatifloxacin to 30.5a 0.55 in presence of gatifloxacin ($p=0,003$). Serial dilution method proved synergy action between gatifloxacin and thyme oil. In the presence of sub active concentration of gatifloxacin MIC of thyme oil was increased in 13.09 ± 3.21 times.

Conclusion. Thyme EO has synergy action with gatifloxacin in vitro towards staphylococci and can be recommended for local use in patients with wound or gynecological infections caused by staphylococci, and systemically treated with gatifloxacin.

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IMMUNOHISTOCHEMICAL CHANGES IN PERIPHERAL LYMPH
NODES AT SECONDARY CHRONIC INFLAMMATION
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Aim. Study of the features and regularities immunohistochemical changes in peripheral lymphnodes at secondary chronic inflammation.

Materials and methods. The work was carried out on 68 rats of Wistar line with weight of 180-200 g. The model of inflammation consists of secondary chronic carraghenen aseptic inflammation caused by induced by hypodermic injection of 10 mg carraghenenin 1 ml of isotonic solution of NaCl. The state of lymphnodes was investigated in dynamics of inflammation, from 6th hour up to 28th day, on paraffine sections of 5-6 mcm by indirect and direct methods by Kunsu on technique by Brosman. The immune cells were differentiated with the help of monoclonal antibodies to various clones of cells: CD3 (common population of T-lymphocytes), CD45RA (common population of B-lymphocytes), CD8 (T-suppressors/cytotoxic), CD4 (T-helpers), ED1 (macrophages/monocytes), as well as antisera to IgG and IgE.

Results. Immunohistochemical researches testify to the active immune response in lymphnodes to antigen influence developing and reaching a maximum by 10th day. Activation of the immune response is expressed in reduction helper activity, which is testified by increase in CD4 population and relative strengthening in CD8 population. Increase B-lymphocytes number, as well as in strengthening IgE and IgG production at expressed macrophage reaction.

Conclusion. In peripheral lymphnodes at secondary chronic inflammation an activation of cellular and humoral immune reactions, but reaction of the cellular immune answer is more expressed.

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CIRCUMSTANCES AND MANNER OF DEATH AS A FACTOR OF THE
SUPRARENAL MEDULLA PRESERVATION

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Introduction. A lot of morphological studies are aimed at the suprarenal medulla with intraorganic formations of the suprarenal gland and therefore required the well-preserved gland structure. The purpose of our study was to define criteria based on circumstances and manner of death that determine a minimum damage to the suprarenal medulla before the autopsy.

Material and Methods. The present study was performed on 46 corpses without diagnosed endocrine pathology from August 2011 to January 2012 that subdivided into 2 groups. Experimental group consist of 26 cadavers (mean age 43 years, 62% male) death was caused by accident, homicide or suicide at an ambient temperature below zero (agonal period up to 30 min). Control group consist of 20 cadavers (mean age 52 years, 60% male) natural manner of death (cardiovascular diseases) at room temperature. During the autopsy, the adrenal glands were weighed and subjected to histological examination.

Results. The average weight of both the right and left suprarenal gland in the experimental group was significantly higher than in the control group on $26,4\% \pm 6,3\%$, especially in cases of suicide by hanging. The suprarenal medulla was minimally corrupted or had not necrosis on histological specimens in the experimental group.

Conclusion. Manner and cause of death authentically exert on suprarenal medulla preservation. Use of this factors (intentional cause of death, agonal period is less than or equal to 30 min, ambient temperature is below zero) as a criteria for selection of materials will maximize the probability of gland structure preservation to the most morphological researches focused on suprarenal medulla or its intraorganic structures.

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DRUG PRODUCING METHODOLOGY FOR POLYCYSTIC OVARIAN
SYNDROME TREATMENT

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Introduction. Polycystic ovarian syndrome (POS) is a multiple endocrine disease and characterized by specific structural changes with ovarian dysfunction. Medicamentous therapy has partial effectiveness and through risk of cyst ruptures it has arise the necessity of operative intervention. Common rate of postoperative inflammatory complication for gynecological operations is from 7 to 25%.