

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ



**МАТЕРІАЛИ**  
**106-ї підсумкової науково-практичної конференції**  
**з міжнародною участю**  
**професорсько-викладацького колективу**  
**БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ**  
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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**The aim of the study.** The aim of our study was to analyze the population level of aerobic, anaerobic cavity microflora of the large intestine and Candida fungi in uninfected and infected biliary peritonitis.

**Material and methods.** The research group consisted of 14 patients with uninfected biliary peritonitis and 41 with infected one. The comparison group consisted of 12 practically healthy patients. Population levels of aerobic (*S.aureus*, *E.fecalis*, *E.coli*, *P.vulgaris*, *K.pneumoniae*), anaerobic (*B.Bifidum*, *B.lactis*) and Candida fungi were determined in lg KYO/g. Statistical data processing was carried out using the computer programs “Statgraphics” and “Exel 7.0”.

**Results.** The results of the study showed that in patients with non-infected biliary peritonitis, only the level of *E.coli* in the cavity of the large intestine increased. In patients with infected biliary peritonitis, there was an increase in *E.coli* in the cavity of the large intestine and an increase in the level of *P.vulgaris*, *K.pneumoniae*, *E.faecalis*, *S.aureus*, which probably increased not only compared to controls, but also in relation to uninfected biliary peritonitis *B.Bifidum*, *B.lactis* decreased in non-infected biliary peritonitis and underwent further inhibition in the infected pathological process both in relation to the control and in comparison with non-infected biliary peritonitis. Fungi of the genus *Candida* did not undergo significant changes.

The mechanism of development of uninfected biliary peritonitis is due to the development of cholecystitis, seepage of serous exudate into the abdominal cavity or bile leakage. It contributes to the development of the primary immune response, the increase in the content of *E.coli* in the cavity of the large intestine. The development of infected biliary peritonitis is explained by the infection of bile with the formation of phlegmonous cholecystitis with seepage into the abdominal cavity of bile or purulent exudate. The entry of bile into the peritoneal cavity led to damage to the intestinal wall with its paralytic expansion. This contributed to the development of dysbacteriosis in the lumen of the large intestine and excessive flow of bile acids, endotoxin into the portal vein. These changes contributed to the further increase in the content of *E.coli*, *P.vulgaris*, *K.pneumoniae*, *E.faecalis*, *S.aureus* and the decrease of *B.Bifidum*, *B.lactis* in the cavity of the large intestine.

**Conclusions.** Therefore, with infected biliary peritonitis, the increase in the contents of the large intestine cavity of *E.coli*, *P.vulgaris*, *K.pneumoniae*, *E.faecalis*, *S.aureus* contribute to the development of the secondary immune response and the progression of dysbacteriosis with a decrease in the level of *B.Bifidum*, *B.lactis*, which in the future is accompanied by the exhaustion of the reserve capabilities of the immune system with the beginning of the formation of immunodeficiency. *Candida* fungi do not play a significant clinical role in the pathogenesis of uninfected and infected biliary peritonitis.

**Grynnchuk F.F.**

## **WAY OF EVALUATING THE SPREAD OF ACUTE PERITONITIS**

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**Introduction.** Views on the spread of acute peritonitis differ significantly. The lack of accepted ways of peritoneal inflammation objective assessment is one of the reasons for these differences.

**The aim of the study.** To investigate the possibilities of the new way of evaluating the spread of acute peritonitis.

**Material and methods.** 40 albino non-pedigree female rats with models of acute peritonitis, 10 albino non-pedigree female intact rats (control group). All rats were sexually mature (age 6 months). The rat's weight was 180-200 g.

The width of the laser beams scattering zone (WSZ) in the parietal peritoneum was measured. Pieces of the peritoneum were taken for histological examination after measurements. Laser LEDs emitting at wavelengths of  $\lambda=0.63 \mu\text{m}$  and  $\lambda=0.4 \mu\text{m}$  were used for irradiation.

Inhalational sevoflurane anaesthesia was used for analgesia. Animals were removed from the experiment by an overdose of anaesthetic.

**Results.** Histological examinations in the control groups showed no peritoneum structure disorders. Histological examinations in 6 h since peritonitis was simulated showed signs of serous peritoneum inflammation. Histological examinations in 12, 24 and 48 h since peritonitis was simulated showed signs of purulent peritoneum inflammation.

WSZ of the laser beams with a wavelength of  $\lambda=0.63 \mu\text{m}$  WSZ increased statistically significantly in 6 h since the simulation of peritonitis. In 12, 24, 48 h, SHR also increased statistically significantly. The same was found during the measurement of WSZ the laser beams with a wavelength of  $\lambda=0.4 \mu\text{m}$ .

This indicates that in case of acute peritonitis, WSZ of the laser beams in the peritoneum increases. The WSZ indicators parameters increase as its morphological changes increase.

However, the parameters of absolute WSZ indicators have significant individual variability. This is also confirmed by the distribution of WSZ indicator parameters, which was different from normal. Therefore, we investigated the changes in the relative WSZ indicators. For this purpose, we applied the determination of the WSZ ratios of laser beams with different wavelengths.

It was established that in the control the WSZ ratio of the laser beam with a wavelength of  $\lambda=0.63 \mu\text{m}$  and the parameters of the laser beam with a wavelength of  $\lambda=0.4 \mu\text{m}$  is  $1.97 \pm 0.05$  units. In 6 h since acute peritonitis was simulated, the ratio indicators increased statistically significantly by more than 2 units. Later, in 12, 24, and 48 h, the parameters of the ratio indicators increased, and each time statistically significantly exceeded the control data. The distribution of these relative indicators did not differ from normal, indicating a reduction in the influence of individual variability.

So, according to the data of the experimental study, the indicators of the WSZ ratio can be used as a sufficiently accurate criterion for the presence of the inflammatory process of the parietal peritoneum. Parameters of the indicator less than 2 units indicate the absence of acute peritonitis. An increase in the parameters of the indicator over 2.4 units indicates acute peritonitis. The obtained data indicate the possibility of approbation of such indicators in patients.

**Conclusions.** In the experiment, the parameters of the WSZ ratio indicators of the laser beam with a wavelength of  $\lambda=0.63 \mu\text{m}$  and the laser beam with a wavelength of  $\lambda=0.4 \mu\text{m}$  are less than 2 units, indicating the absence of acute peritonitis. Parameters of the WSZ ratio over 2.4 points indicate acute peritonitis.

**Grynnchuk F.V.**  
**COMORBIDITY IN PATIENTS WITH ACUTE PERITONITIS**

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**Introduction.** Comorbidity significantly affects the treatment results of patients with acute peritonitis. In such patients, the number of complications increases, and accordingly, the number of unsatisfactory treatment outcomes increases. Therefore, research into the pathogenesis of comorbidity and the development of new ways of diagnosis and treatment are required.

**The aim of the study.** To improve the diagnosis and management of patients with comorbidity with acute peritonitis.

**Material and methods.** 438 patients, 160 white rats. Clinical, biochemical, histological, microbiological, immunological, and statistical methods.

**Results.** A comparative evaluation of clinical displays and postoperative course of acute inflammatory destructive diseases of the abdominal cavity, complicated by peritonitis has been conducted in patients with a concomitant pathology. Common clinical features of comorbidity is shown to be the increased number of patients with the suppressed and atypical symptoms, increased severity of their condition, slowing the regression of the inflammatory process. A complex comparative assessment of dynamics microbial contamination of the abdominal cavity, microbiocenosis of the small and large intestines, activity of proteolytic, fibrinolytic, cytokine, immune and redox systems is carried out in the experiment. Common regularities of the comorbidity development are revealed.