



## СЕКЦІЯ 8 АКТУАЛЬНІ ПИТАННЯ КЛІНІЧНОЇ ХІРУРГІЇ ТА ОФТАЛЬМОЛОГІЇ

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### **A METHOD OF DETERMINING THE PREVALENCE OF ACUTE PERITONITIS**

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The prevalence of acute peritonitis is one of the most disputable issues. Most foreign authors distinguish between diffuse, total, and sometimes - subtotal one. Ukrainian researchers often distinguish between local, diffuse, poured, and general one. However, some of them consider it inappropriate to highlight a general type of AP. These differences are mainly due to the subjectivity of the assessment, which is mostly based on the visual definition of the peritoneum state. Therefore, it is relevant to have the best practice of the objective evaluation method.

In an experiment on 20 albino rats, the width of the scattering zone (WSZ) of a laser beam with a wavelength of 0.63  $\mu\text{m}$  of the inflammatory altered peritoneum was determined. In group I (10 animals) AP was modeled by inserting intraperitoneally the sterile bile, in group II (10 animals) it was modeled by fecal matter. Before its modeling, in 6 and 12 hours afterward, we had determined the WSZ in different parts of the parietal peritoneum, which was then taken for histological examination. The data obtained before modeling AP served as the controlled one.

The benchmarks of WSZ were individually changeable. In 6 hours the WSZ increased significantly in both groups. The indicators in group II were statistically significantly above the ones in group I. Histological examination of the peritoneum in group I showed an aseptic inflammation, and in group II - a purulent one. In 12 hours in group I the WSZ increased significantly, and in group II it has not changed. There were no significant intergroup differences. The histological examination in both groups showed some signs of purulent fibrinous inflammation.

To eliminate the individual variability, we determined the ratio of WSZ indicators of the affected area of the peritoneum to the healthy one. The parameters of the relative indicators were common to have a slight individual variability and statistically significant differences in the case of aseptic and septic AP during the first 6 hours. Later, the relative indicators were almost the same. As a conclusion we can say that the growth of the laser beam WSZ with a wavelength of 0.63  $\mu\text{m}$  in the affected area of the peritoneum, compared to the healthy one, indicates the presence of aseptic AP of 1.5-2 times. The increase of the WSZ twice as much indicates the development of septic AP.

So, we also studied the indicators of WSZ in 28 patients with various forms of septic AP. The absolute indicators of the WSZ of unmodified peritoneum were statistically significantly less than in AP case. There were no clear patterns associated with various forms of AP, although in the occurrence of purulent inflammation the WSZ was noticed as the largest one.

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### **JUSTIFICATION OF GENETIC FACTORS FOR PREDICTING THE RISK OF ACUTE COMPLICATIONS IN PEPTIC ULCER DISEASE**

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Peptic ulcer is an urgent medical problem. Peptic ulcer bleedings are the main cause of non-variceal upper gastrointestinal bleeding. The morbidity in patients with bleeding peptic ulcers reaches 8-10% and increases when recurrent bleeding occurs. The imperfection of prognostic scales is one of the reasons for high morbidity. The most common scales are Rockall, Glasgow-Blatchford, Baylor, Cedars-Sinai, AIMS65, PNED. Though according to some authors, more accurate scales are needed that is why they suggest using additional predictive criteria. A common flaw of the known scales is that they are based exceptionally on clinical criteria and do not take into account the mechanisms of bleeding development. One of these mechanisms is excessive activation of fibrinolysis and inhibition of anti-fibrinolytic factors, which, in particular, is proved in our studies. Though the reasons are not known precisely. At the same time, mutations of the PAI-1 gene



(SERPINE 1) are known to cause bleedings. This gene encodes the PAI-1 protein, an inhibitor-1 of the plasminogen activator, which is a crucial regulator of the fibrinolytic system. PAI-1 is the main inhibitor of tissue plasminogen activator and urokinase. These two proteins are the main activators of plasminogen, which convert plasminogen into plasmin.

In the case of congenital PAI-1 deficiency, the occurrence of hemorrhagic diathesis and increased tissue bleeding can be found in injured patients. 4G / 5G polymorphism in the PAI-1 gene promoter may be a risk factor for recurrent ulcer bleeding. However, the clinical significance of other variants of PAI-1 gene polymorphism has not been studied yet, although it has been noted that this can cause various disorders of thrombosis, regeneration, etc.

The study involved 60 patients with peptic ulcer disease. 42 (70%) men and 18 (30%) women aged from 21 to 83, the average age has been  $52.08 \pm 2.12$  years. 37 (61.67%) patients have had a duodenal ulcer, and the rest (38.33%) - a gastric ulcer. 12 of them have had an uncomplicated ulcer, 3 (27.27%) females and 8 (72.73%) males, the average age has been  $46.91 \pm 4.04$  years. 5 (8.33%) patients have had a perforated ulcer, all males, the average age has been  $35.78 \pm 3.48$  years. 43 (71.67%) patients had ulcers complicated by acute bleeding, 14 (32.56%) females, 29 (67.44%) males, the average age has been  $55.72 \pm 1.81$  years. In 29 (67.44%) patients the bleeding has been stopped conservatively. 11 of them (18.33%) have had an ulcer for the first time, 9 (15%) of the patients have had a history of ulcer, and 9 - a history of bleeding ulcer. 14 (32.56%) patients have had recurrent bleeding, 4 (28.57) females, 10 (71.43%) males, the average age has been  $57.41 \pm 3.04$  years. So there has been no significant difference in demographic indicators among patients. Half of the patients have had their bleeding stopped by injecting hemostasis, and the rest - by operative treatment. PAI genotyping for G43A and 4G/5G polymorphisms has been performed in 60 patients with peptic ulcer. Among them: 12 with uncomplicated ulcer, 5 with perforation, the rest ones - with bleeding. 14 patients have had recurrent bleeding.

The genotype 5G/5G and G43A have not been detected in patients with the uncomplicated ulcer. 2. All patients with ulcer perforation have had the G43G genotype, 60% of patients have had the 4G/4G genotype, and the rest of them have had the 4G/5G and 5G/5G genotypes. The number of carriers of the 5G allele (86.05%) has been higher in patients with bleeding than in ones with ulcer perforation ( $p=0.036$ ) and ulcer without bleeding ( $p=0.021$ ,  $\chi^2=5.32$ ). The number of carriers of the 5G allele has been higher in patients with recurrent bleeding (92.86%) than in ones without any relapses (82.76%). There have been no statistically significant differences ( $p=0.27$ ,  $\chi^2=0.802$ ). 5. The G43G homozygous genotype has been found in 94.12% of patients with peptic ulcer without bleeding, which has been statistically significantly higher ( $p=0.02$ ) than in ones with bleeding. The A allele has been observed in 27.91% of patients with bleeding and 8.33% patients without any bleeding ( $p=0.05$ ). The number of carriers of the A allele in patients with recurrent bleeding has been statistically significantly higher than in ones without any bleeding ( $p=0.046$ ).

**Hyrly Ya.V.**

## **CAUSES OF RECURRENCE OF HYPERTHYROIDISM IN PATIENTS OPERATED OF TOXIC FORMS OF GOITER**

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The majority of patients surgery operated for thyroid about hyperthyroid forms of goiter in the postoperative period have functional disorders of thyroid with different degrees of severity. The most common is a decrease in thyroid function (hypothyroidism), after surgery, occurs in 20 to 70% of cases.

However, the postoperative recurrence of hyperthyroidism stay at a high level, according to various authors, occurs in 10-15% of cases of operated patients.

In this regard, the aim of our work was to identify the most likely causes of recurrence of hyperthyroidism in the remote postoperative period and possible ways to correct it.

We examined 46 patients who had a history of surgery for hyperthyroid goiter. The volume of surgery depended on the severity of thyrotoxicosis, the age of the patients, and the extent of