



4 content was lower than that determined diagnostically significant in plasma and equal to zero), the level of proinflammatory TNF- α in these patients was lower by 20,62% ($p_{GG}=0.037$).

For R122H polymorphism of gene PRSS1, in heterozygous carriers of the mutant allele cytokine and CRP content was higher than in the GG-genotype carriers, for IL-4 – by 73,45% ($p_{GG}=0,048$), for IL-1 β – by 18,60 % ($p_{GG}=0,044$), for TNF- α – 2,24 times ($p_{GG}=0,001$), for CRP – c 2,87 times ($p_{GG}=0,005$), respectively.

For existing deletion of phenylalanine amino acid in the domain 508 of the seventh chromosome of gene CFTR (delta F508) was found a significantly lower level of IL-4, TNF- α and CRP, than with its absence: by 30,9% ($p_{NN}=0,035$), 12,75% ($p_{NN}=0,04$) and 5,19 times ($p_{NN}=0,001$), respectively.

Thus, in patients with edematous pancreatitis was observed the high production of TNF- α , IL-1 β and IL-4 in carriers of wild C-allele of the gene IL-4, NN-genotype of CFTR gene and GA-genotype of gene PRSS, that indicates the increased activity of nonspecific anti-infectious immune defense factors in these patients. Systemic inflammatory response in these patients was accompanied by cytotoxic levels of CRP, which were significantly superior in patients with CC-genotype of gene IL-4 by 19,05% and 26,13%, GG-genotype of gene TNF- α –7,95 times, NN-genotype of gene CFTR – 5,19 times and in patients with heterozygous GA-genotype carriers of gene PRSS1 – 2,87 times.

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CHANGES IN THE IMMUNE PROTECTION STATE IN DIABETIC PATIENTS WITH PYOINFLAMMATORY PROCESSES

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The immune system disorders in diabetic patients lead to a significant decrease in non-specific and specific immune antiinfectious defense by inhibiting phagocytic function of polymorphonuclear leukocytes, lowering of compliment system activity, lyzocim, interferons, bactericide activity of blood serum.

Materials and methods: diabetic patients with pyoinflammatory processes treated by traditional methods ($n = 40$); diabetic patients with pyoinflammatory processes treated by ozonotherapy along with traditional treatment ($n=53$).

The obtained results confirm changes in the absolute and relative number of immune cells in the peripheral blood of DM patients associated with pyoinflammatory processes.

A relative number of lymphocytes decreases in these patients, at the same time a tendency to growth in the absolute number of the total pool of lymphocytes is formed. The research of the immune disorders degree confirmed that therapeutic measures, including ozonotherapy, against pyoinflammatory processes in patients with DM show their effectiveness.

On admission 65,0% of patients were diagnosed with the I-II degree of immune disorders, which required immunorehabilitation; after pyoinflammatory processes therapy only 55,0% of diabetic patients were left. Special efficiency is shown in the III stage of immune disorders.

Pyoinflammatory processes in patients with diabetes occur on the background of decrease in the appropriate number of lymphocytes; increase in the absolute and relative number of monocytes, the absolute number of leukocytes due to the increase in the relative amount of neutrophilic polymorphonuclear leukocytes, as well as decrease in the absolute number of eosinophils, erythrocytes and hemoglobin and a significant increase.

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MORPHOLOGICAL CHANGES OF HERNIA SAC AND HERNIA-SURROUNDING TISSUES IN ELDERLY PATIENTS SUFFERING INGUINAL HERNIAS

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During last years the incidence of inguinal hernias in elderly grew significantly. The complications development in these patients after inguinal hernioplasty reached 6-18%. It can be explained with the fact that during surgery and postoperative period surgeons don't take all the aspects of complications pathogenesis in these patients into consideration.

The aim of the study was to evaluate the morphological changes of hernia sac and hernia-surrounding tissues in elderly patients with inguinal hernias.

For the research purpose we used bioplates of hernia tissues of 24 patients (aged 60-83, mean 67.47 ± 2.54 yrs), obtained during the inguinal hernioplasty. We paid special attention to evaluation of the muscular tissue atrophy and development of cicatrize and inflammatory changes. For investigation we assessed following tissues: hernia sac, subcutaneous cellular tissue, muscular tissue and, in some cases, preperitoneal cellular fat. Fragments of tissues were fixed and processed in accordance to histological standards.

We determined principal signs of chronic inflammation of the hernia sac in all 24 patients. In 8 (33,3%) patients we established isolated inflammation of hernia sac tissues, and in 10 (41,6%) patients it combined with chronic inflammatory changes of hernia-surrounding tissues.

In 6 (25,0%) patients with the recurrent inguinal hernias the inflammatory changes of hernia sac and hernia-surrounding tissues were very pronounced and combined with their cicatrize changes. In all patients we also established expressed atrophic changes of muscular tissue. The last can witness about the fact that the suture methods of



hernioplasty can cause the further development of ischemia, atrophy and cicatrize changes in muscles of the anterior abdominal wall, leading to hernioplasty insufficiency. Use of 'suture-free' techniques in elderly patients may greatly reduce inflammatory changes impact on healing, though not providing full protection.

Among the reasons for complications development in post-hernioplasty period in elderly patients are the chronic inflammatory changes of hernia sac and hernia-surrounding tissues.

The employment of antibacterial and anti-inflammatory remedies can be important component for postoperative complications prophylaxis in these subjects.

Inflammatory and cicatrize changes after the suture methods of hernioplasty cause ischemia, atrophic and cicatrize changes in muscles during postoperative period, making these methods of surgery in elderly patients not sufficiently effective.

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OUR FIRST EXPERIENCE OF TREATMENT OF GUNSHOT FRACTURE CONSEQUENCES AT THE TRAUMATOLOGICAL DEPARTMENT OF CHERNIVTSI EMERGENCY RESCUE MUNICIPAL HOSPITAL

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The main task of field-military surgery is treatment of gunshot injuries and gunshot fractures of the limbs in particular. At the same time, the problem of treatment of gunshot fracture consequences, their healing failure (non-union) and pseudoarthrosis remains a topical one.

The objective of our study was to present the results of treatment of non-unions and pseudoarthrosis after gunshot fractures of the limbs.

5 patients, participants of ATO, who had received their gunshot injuries during military operations in the east of Ukraine, were treated at the Traumatological Department of Chernivtsi Emergency Rescue Municipal Hospital (ERMH) – University hospital, during 2015-2016. An average age of the patients was $35,4 \pm 0,7$. One patient was diagnosed with pseudoarthrosis of the upper third of the left upper arm after experienced gunshot comminuted (crushed) fracture of the left upper arm, one more was diagnosed with malunion of the distal metaepiphysis of the right upper extremity after gunshot fracture of the right upper extremity. The rest three patients were diagnosed with healing failures (non-unions) of the tibia after gunshot fractures of the shin bones. The periods from the moment they had received their injuries to performing surgery at the Traumatological Department of ERMH was $12 \pm 0,5$ months. Then all the patients were treated at military-medical establishments of the Ministry of Defense of Ukraine. After demobilization they were admitted to Traumatological Department of Chernivtsi Emergency Rescue Municipal Hospital (ERMH) – University hospital with above-listed diagnoses.

All the patients underwent reconstructive surgery with the use of locking compression plates (LCP). During surgery certain technical difficulties occurred such as noncompliance of anatomical interrelations between the soft tissues and bones, problems of surgical access due to available post-traumatic extensive scars characteristic for gunshot injuries. Analysis of the results obtained showed the following: the fracture was healed and the functions of the limbs restored in 4 patients, postoperative period was complicated by postoperative wound infection in 1 patient. This complication was successfully eliminated by means of VAK-drainage.

The treatment of gunshot fracture consequences requires consideration of anatomical disorders of the area operated on before planning surgery. Application of stable fixation means promotes healing fractures and restoration of functions of the injured limbs in the optimal period of time.

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MODERN TECHNOLOGIES ON MANAGING ANTERIOR EYE SEGMENT PENETRATING INJURIES

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Penetrating eye injuries and their consequences remain one of the most causes of disability and blindness of able-to-work individuals in the world. This rate in Ukraine is rather common and constitutes 25,5%. Many specialized ophthalmological services deal with a comprehensive treatment of eye injuries in Ukraine. However, the number of disabled people due to eye injuries does not decrease, it is still not solved problem. The Regional Eye Trauma Center is on duty 24 hours in Chernivtsi Regional Clinical Hospital.

Signs of an injured part of the anterior eye segment are characterized by polymorphism. Penetrating injuries of the corneal-scleral and scleral region portions are the most severe. This is due to anatomical-physiological peculiarities of this area with specially important ciliary body function and the anterior chamber angle, causing a variety of clinical signs even in case of minor penetrating injuries in this area.

Most of penetrating injuries of the anterior eye segment are complicated. They are often accompanied by prolapse of the cornea and ciliary body into the wound, dislocation of the lens, development of traumatic cataract, loss and opacity of vitreous body, hemophthalm, endophthalmitis.

The main cause of disability of patients experienced a penetrating anterior eye segment injury in Ukraine of the eye are lens injury – 44,4% and cornea - 26,1%. Teenagers and young able-to-work people constitute the main