



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



group. Thus, 82,0% of the disabled people due to eye injuries are individuals of 21-50 years of age, the second group of the frequency curve of eye injuries corresponds to the age of 75 and older. Existing methods of surgical and medical treatment of corneal-scleral injuries are not effective enough. In 12-20% of cases injuries lead to subatrophy of the eyeball. The frequency of infectious complications after penetrating eye injuries ranges between 5 to 50% according to different authors.

Modern technology of diagnostics and treatment of penetrating anterior eye segment injuries uses CT, MRT, OCT and others which can improve qualified medical aid and results of treatment for these patients.

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### **OPTIMIZATION OF SURGICAL TREATMENT OF CHRONIC ANAL FISSURES**

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The majority of clinicians suggest that the only radical method of treatment of chronic anal fissures (CAF) is surgery. Availability of early and late post-operative complications is indicative of insufficient radicalism of known surgical methods of treatment. Thus, rectal fistulae are diagnosed in 1-2% of patients, anal strictures – in 7-8%, anal incontinence – in 12-15%, relapses of the disease – in 10% of patients. Total occurrence of post-operative complications achieves 35%.

The objective of the study is to improve direct and remote results of surgical treatment of patients with CAF by means of substantiation, elaboration and introduction of a new method of radical surgical treatment.

The results of treatment of 112 patients with CAF were analyzed during 2013-2016. The patients were divided into two groups: I group – 57 individuals (50,89%) – operated on by means of a designed surgical method (the Useful Model Patent of Ukraine № 91491). The second (II) group included 55 individuals (49,11%) – the patients operated on by means of common surgical methods.

Since the third post-operative day and during the whole early post-operative period a considerable reduction of pain was marked in the main group ( $p < 0,001$ ). Before the beginning of treatment there was no statistically considerable difference found concerning the quality of life of patients in both groups ( $p > 0,05$ ). After surgical treatment all the patients admitted a reliable improvement of all the parameters of their quality of life. At the same time, a considerable advantage of all the parameters in the main group was found that was in 1,1-1,3 times higher ( $p < 0,05-0,001$ ) than in the patients undergone a common treatment.

According to all the criteria the efficacy of therapy in the patients of the main group is higher. Particularly, CAF relapse in the group of comparison occurred 2,68 times more frequently as compared to the main group, and anal sphincter failure was detected only among the patients from the group of comparison. Cicatricial strictures were not found in the main group, and the term of a complete healing of the operative wound was 27,58% less as much.

Introduction of a suggested surgical method to treat CAF enables to make the period of patients' inability to work shorter, to improve direct and remote results of the treatment, to reduce the number of post-operative complications, to restore the tonus of the anal sphincter quickly. Application of our designed method to treat chronic anal fissures increases considerably the efficacy of treatment and improves the quality of patients' life, which to our mind, can be a method of choice to treat the given pathology and ensures a high rate of social and working rehabilitation of patients.

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### **INFLUENCE NON SPECIFIC PARTS OF THE IMMUNE PROTECTION COURSE FOR LIVER INJURY**

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System immunological surveillance allocated one of the leading places in the process flow pathological conditions. One of the manifestations of complications in patients with abdominal trauma is low phagocytosis, reduced antibody synthesis, increased production of T-suppressors, cytokines deregulation in the system. Moderate levels of proinflammatory cytokines increase in plasma observed in uncomplicated post-traumatic liver injury period, although in the case of systemic inflammatory response syndrome of endogenous intoxication and increase this level in 10 or more times. Post-traumatic period in patients with liver injury affects various parts of immune regulation. Compensatory reactions can lead to different directions of change - from episodic to persistent syndromes critical states. Non-specific resistance plays a leading role as a course of abdominal injuries in general and in the development of postoperative complications directly.

For the selection of initial indicators benchmark index was used the control group of patients: phagocytic index  $65,14 \pm 3,48\%$ , the number of phagocytic  $3,26 \pm 0,12$ , completeness phagocytosis index  $1,17 \pm 0,06$ , CIC  $74,98 \pm 2,59$  units.

Therefore for study of immunoregulatory mechanisms abdominal trauma progress trigger the special role should be given to components of endogenous intoxication that not only runs but supports a high activity of the immune system, exhausting it in time the onerous factors of traumatic injuries and comorbidity victim. In addition, studies of this level of immune protection as phagocytosis were compared with the damage of parenchymal organs and the use of preventive measures by the proposed method. We use intra-abdominal thermometry and local supply of antiseptic