

Shnitko Sviataslau, Tserakhovich Tatsiana

ENHANCED RECOVERY AFTER SURGERY OF THE GUNSHOT CHEST WOUNDS

Military Medical Institute in the E.E. «Belarusian State Medical University», Minsk, Republic of Belarus

Purpose of the study. The aim of our study was to investigate the effectiveness of the use of the ERAS program with the inclusion of respiratory pulmorehabilitation in the treatment of victims with gunshot wounds to the chest (GWC).

Material and methods. 113 patients with GWC were examined and treated. Of these, 80 (70.8 %) had bullet wounds, and 33 (29.2%) had shrapnel wounds.

The basic scheme of treatment of chest injuries with the inclusion of the ERAS program consisted of: effective elimination of pain in the perioperative period; early and complete drainage of the pleural cavity; sealing and stabilization of the chest wall; measures aimed at early expansion of the lung; elimination of bronchial obstruction and maintenance of airway patency; preferential use of video-thoroscopic surgical interventions; standard antimicrobial prevention; maintenance of an adequate volume of infusion; early postoperative oral nutrition and victim mobilization.

Surgical treatment of wounds was performed in 11 (10.0 %) victims. Thoracotomy (TT) was performed in 12 (10.6 %) patients with ORG. Video-thoroscopic operations (VATS operations) were performed in 13 (11.5 %) patients.

The next step of the ERAS strategy is postoperative pulmonary rehabilitation. Early muscle mobilization and training can improve respiratory function and tissue oxygenation, reduce muscle weakness, and reduce the risk of deep vein thrombosis and pulmonary embolism. In patients who have undergone surgical interventions for chest injuries, the architectonics of the chest is disturbed, which, in combination with a cut of the bio-trauma, leads to a disorder of the biomechanics of respiration. These disorders can be corrected using various methods of pulmorehabilitation.

In order to perform pulmorehabilitation, 43 patients (38.1%) with GWC underwent two-week spa treatment in sanatoriums of the Ministry of Defense of the Republic of Belarus and the Ministry of Health of the Republic of Belarus.

Results of the study. After TT, postoperative complications were 58.3 %, after pleural drainage-19.3 %. Postoperative complications were minimal (7.7 %) after PTS operations.

The duration of inpatient treatment after TT was 57.3 ± 2.1 days, after VATS operations- 28.1 ± 2.3 days.

The tasks of pulmorehabilitation in such patients are: analgesia; prevention of pleural adhesions, improvement of evacuation function of the lungs; improvement of airway patency; as well as improvement of the functional state of the respiratory muscles and biomechanics of respiration.

The study of the external respiratory function (ERF) after carrying out pulmorehabilitation measures in the conditions of sanatorium treatment showed improvements in all 43 patients with GWC. Changes in all indicators of ERF were statistically significant. So, JEL after discharge from the hospital was 72.7%, and after sanatorium treatment - 97.3% (JEL increased from 3.9 l to 4.65 l), DMVL - from 71.3% to 86.1% (MVL - from 100.2 l to 102.3 l); Tiffno index - 79.2% to 85.9% ($p < 0.05$).

Conclusions.

1. Importance in the program «Enhanced Recovery After Surgery" of victims with gunshot chest wounds belongs to the optimal analgesia in the perioperative period and the performance of videothoroscopic operations.

2. The introduction of accelerated recovery technologies improves the results of surgical treatment of wounded with gunshot wounds of the chest and reduces the time of regional treatment by 2 times, the level of postoperative complications by 7 times, and minimizes postoperative mortality.



**МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ И
СОЦИАЛЬНОЙ ЗАЩИТЫ НАСЕЛЕНИЯ
РЕСПУБЛИКИ ТАДЖИКИСТАН**



**Г О У «Т А Д Ж И К С К И Й Г О С У Д А Р С Т В Е Н Н Ы Й
М Е Д И Ц И Н С К И Й У Н И В Е Р С И Т Е Т
и м е н и А Б У А Л И И Б Н И С И Н О»**

ИЛМ ВА ТАҲСИЛОТ БАҲРИ СОЛИМИИ МИЛЛАТ

НАУКА И ОБРАЗОВАНИЕ ДЛЯ ЗДОРОВЬЯ НАЦИИ

**SCIENCE AND EDUCATION FOR THE
HEALTH OF THE NATION**

Материалы годичной (73-ой) научно-практической конференции
«Наука и образование для здоровья нации» с международным участием

ТОМ 2

**(Стоматология, теоретические дисциплины,
фармация, фармакология и тезисы на английском языке)**

Душанбе

31.10.2025