

РЕЗУЛЬТАТИ ЛІКУВАННЯ 109 ВИПАДКІВ ВОГНЕПАЛЬНИХ ПОРАНЕНЬ ГОЛОВИ У ВІЙСЬКОВОСЛУЖБОВЦІВ

RESULTS OF TREATMENT OF 109 CASES OF GUNSHOT WOUNDS TO THE HEAD IN MILITARY PERSONAL

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Abstract

Introduction. Gunshot wounds to the head are always challenging pathology for neurosurgeons. During war variety of types of weapons, projectiles, missiles, the impact of blast waves make these injuries almost unpredictable. At the beginning of the war, in 2014, the evacuation system was not ready for a sudden start of hostilities because of limited medical resources, the lack of neuro visualization on the frontline, the lack of trained personnel providing first aid to the wounded.

Aim. The aim of this study is to determine the factors that influenced the outcomes of combat head injuries with limited medical capabilities in theatre.

Materials and methods. This is a retrospective study of 109 military cases with open and closed head injuries, which were received during the fighting in eastern Ukraine in the period from March 2014 to the end of December 2017 and received medical aid in the Main Military Clinical Hospital in Kyiv. Information was collected on demographics, evacuation assistance, and type of injury, Glasgow Outcome Scale was used to evaluate early outcomes, where GOS1-3 unfavorable outcome and GOS 4,5 – a favorable outcome. R commander was used for statistical analysis. Statistical significance was defined as $p < 0.05$.

Results. The average age of patients was 31 years (min 19, max 59), all males. Shrapnel wounds prevailed 83 (81.6%), bullet wounds - 16 (14.67%), 10 (9.17%) were injured by the blast wave. The vast majority of the wounded - 96% (106) were hospitalized on the principle of the staged evacuation of the wounded during hostilities in accordance with the doctrine of the Armed Forces of Ukraine. The condition of the wounded was assessed on the Glasgow Coma Scale (GCG), all underwent computer tomography (CT), examination by a neurosurgeon and related specialists. All underwent primary surgical intervention if needed. On discharge GOS 1-3 were in 57 cases, GOS 4, 5 were in 54 cases.

Conclusions. The type of wounding projectile, infectious complications, low GCS score on admission worsen the results of treatment. Surgical treatment of the wounded directly in 3-4 echelons of evacuation improves the results. There are many controversies in managing penetrating gunshot wounds to the head. There is still a lack of information that neurosurgeons can trust. Data even about small samples still very informative.

Keywords: gunshot wound to the head; war injuries; military trauma; Ukraine