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Oral Presentation

Being a Neighbor to Syria: A Retrospective Analysis of Patients Brought to Our Clinic for Cranial Gunshot Wounds in the Syrian Civil War

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Abstract

Our experience as a result of this war shows that early intubation, aggressive resuscitation and GCS score are important factors for survival. The time of arrival has great importance on mortality. Despite the diversity of views in the literature, patients with GCS of 4 and above should be operated if surgical pathologies exist, and decompressive craniectomy must made wide. If duraplasty is necessary, fascia lata could be preferred considering the possibility that the galea may be contaminated. In craniocerebral firearm injuries in war, there are several factors affecting mortality. For that reason, we suggest that it may be appropriate to consider GCS as the basic criteria in assessments. The evaluation was carried out on 241 patients who were injured in the Syrian War and brought to, followed up and treated in the Neurosurgery Clinic of Mustafa Kemal University, Faculty of Medicine in Hatay, a Turkish city on the Syrian border, between April 2011 and October 2014. The physiopathology of the injuries, clinical findings, injury patterns (penetrating, perforating, tangential and superficial) and injury types (blunt trauma, bullet injury, shell fragment injury, mine injury, bomb, missile and blast) were investigated. For all patients, age, gender, Glasgow coma score (GCS), time to arrival at the hospital, Glasgow outcome score (GOS), CT images, cranial pathologies, postoperative complications, mortality and morbidity rates and surgical methods were evaluated. A total of 241 patients were evaluated in a period of more than 3 years. Of these, 87% were adults. The age of victims ranged from 2 months to 67 years with an average of 31 years. In terms of injury types, 148 patients (61.4%) had shell fragment injuries and 93 patients (38.6%)had suffered from bullet injuries. In terms of injury patterns, 91 patients (37.7%) showed penetrating injuries, 51 patients (21.1%) had injuries crossing both hemispheres at any plain, 39 patients (16.1%) had tangential injuries, 26 (10.7%) had perforating injuries, 6 (2.4%) patients had injuries from ricocheting bullets, and 28 (11%) had superficial injuries. According to admission GCS of the patients, GCS was 3 in 42 patients (17.4%), between 4 and 7 in 93 patients (38.5%), and between 8 and 15 in 106 patients (44%). 80 of the 241 patients (33.19%) died. In regard to distribution of the patients who died, in the surgical treatment group, all the 6 patients who had a GCS of 3 (100%), and 13 of the 72 patients who had a GCS score of 4–7 (18%) died. 2 of the 35 patients who had a GCS of 8–15 died (%5.7). In the conservative treatment group, all the 36 patients who had a GCS of 3 (100%), 14 of the 21 patients who had a GCS of 4–7 (66.6%), and 9 of the 71 patients who had a GCS score of 8–15 (12.6%) died. As it is seen, there is obviously difference between the mortality rate in the surgical treatment group and the mortality rate of the conservative treatment group, given the rates of surgical and conservative patients who had a GCS of 4–7. Our experience as a result of this war shows that early intubation, aggressive resuscitation and GCS score are important factors for survival. The time of arrival has great importance on mortality. Despite the diversity of views in the literature, patients with GCS of 4 and above should be operated, and decompressive craniectomy must be wide. If duraplasty is necessary, fascia lata could be preferred considering the possibility that the galea may be contaminated. In craniocerebral firearm injuries in war, there are several factors affecting mortality. For that reason, we suggest that it may be appropriate to consider GCS as the basic criteria in assessments.

Keywords: Syria, Cranial Gunshot Wounds, GCS, GOS.

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