A retrospective analysis of the pattern of maxillofacial fractures in the traumatic head injury patients in Songklanagarind hospital

Objective:

1) To measure the incidence of the pattern of maxillofacial fracture in patient with traumatic head injury.

2) To measure the incidence of cause of injury, age and gender distribution

Methods:

In this study, we evaluate all patients who presented with concomitant maxillofacial and traumatic head injury in Songklanagarind hospital between 2007 and 2016 whose Computed Tomography (CT) scan was obtained. Data will be collected from the medical records division by using search terms from ICD-10 version 2015.

Results:

859 patients included in the study consisting of 73.3% male and 22.7% female, and the male-to-female ratio was 3.4. Mean age was 39.5 years with a range of 18 to 91.59% of the patients were between the ages of 18-40 years. The most common causes of injuries were traffic accidents, accounting for 77%, followed by falls 8.1% and assault 6.8%. The severity of traumatic head injury was mainly mild traumatic head injury 70.1%, followed by severe 19% and moderate traumatic head injury 10.9%. 44.2% of the patients had used alcohol before the injury and alcohol consumption was significantly related to mild and severe traumatic head injury ($P < 0.05$). Of the total of maxillofacial fractured bones in 859 patients the most frequent was maxilla bone, orbital wall and nasal bone, representing 49.9%, 38.3% and 20%, respectively. The patients with mild traumatic head injury are significantly associated to coronoid process of mandible, Le Fort fracture type II and type III ($P < 0.05$), moderate traumatic head injury is only significantly associated to coronoid process of mandible ($P < 0.05$) and severe traumatic head injury are significant associated to Le Fort fracture type II and III. The most common hospitalization period was 1 days at 10.6% (the average period was 12.2 days). 33.9% patients were undergone the operation and 2.1% experienced postoperative complication.

Conclusion:

The results of this retrospective study provide important data for the design of future planning for injury prevention. In this retrospective study, the most common cause found was traffic accidents. The most common of the severity of traumatic head injury was mild traumatic head injury and the most fractures occurred in the age range of 18-40 years. The maxilla bone fracture was the most frequent site involved. The patients with mild traumatic head injury are related to coronoid process of mandible, Le Fort fracture type II and type III, moderate traumatic head injury are only related to coronoid process of mandible and severe traumatic head injury are related to Le Fort fracture type II and III. Citizen awareness programs should be initiated. Legislation on preventive measures should be enforced and followed by every citizen.

Keyword: traumatic head injury, maxillofacial fracture