

CRANIO MAXILLOFACIAL INJURIES

Demanding Aspect in Emergency Department

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ABSTRACT

Craniorofacial trauma often manifests itself as a multisystem injury in 20-50% of the cases. Midface and zygomatic bone fractures are the most commonly occurring injuries together in developing countries due to inadequate road traffic legislations while mandible fractures are common due to its most predominant position in face and also due to interpersonal conflicts/assaults. Neurosurgeons and oral & maxillofacial surgeons play a very vital role along with neurologists and ophthalmologists in managing a craniorofacial trauma patient. The emergency physicians must be an expertise to manage the situation and stabilize a patient with severe traumatic injuries of craniorofacial region.

Keywords: Craniofacial Trauma, Cervical Spine, Glasgow Coma Scale.

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Minimum time on scene, Maximum treatment in route, Make a plan soon.

Craniorofacial trauma often manifests itself as a multisystem injury in 20-50% of the cases. Midface and zygomatic bone fractures are the most commonly occurring injuries together in developing countries due to inadequate road traffic legislations while mandible fractures are common due to its most predominant position in face and also due to interpersonal conflicts/assaults.[1,2] Out of these, 25% of women who



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sustain maxillofacial injuries are due to domestic violence. There is higher incidence of cervical spine injuries in cases of midface and mandibular fractures. Fracture of C1, C2 is due to midface fractures while fracture of C3 is due to bilateral mandibular fractures. Sometimes these maxillofacial injuries are associated with traumatic brain injuries which are high due to motor vehicle accidents.[2,3,4] There is also documented evidence that pediatric patients demonstrate a significant higher percentage of associated injuries (73%), as compared in adults (58%). A greater number of cranial injuries associated with maxillofacial injuries have been documented in the pediatric population (55%) than in the adult group (39%). The approach for the primary evaluation of the patient with craniorofacial injury starts with assessment of Glasgow coma scale (GCS).[4,5] Primary survey starts with Circulation, Airway and Breathing to maintain adequate oxygenation, ventilation and perfusion. Soft tissues of Craniorofacial region have a rich vascular supply which causes sufficient amount of blood loss for the patient to go in the state of shock. Maxillofacial fractures like Lefort can cause considerable bleeding episodes by damaging the underlying vessels manifesting itself as epistaxis and hematomas and deep neck injuries like carotid injuries can also worsen the condition of the patient.[5, 6-8]

Primary assessment of the patient includes two main important things: Airway and Cervical spine assessment. Airway of the patient has to be evaluated first by the emergency physician.[2, 3] Patients with

maxillofacial injuries with underlying head injuries can lose their support of tongue which may fall back to the posterior wall of oropharynx leading to airway embarrassment. In these patients endotracheal intubation must be performed cautiously because of the possibility of underlying cervical spine injuries. Safe intubation has to be carried after stabilizing the cervical spine to prevent further damage and then stabilized by traction /hard cervical collars.[1, 3] Literature search revealed there is an incidence of 1% to 4% of cervical spine injuries associated with craniofacial injuries.[2,3] After establishing the airway, if there is an underlying head injury confirmed by computed tomography scan of brain and there is no time to carry out secondary survey, patient is taken in operation theatre to evacuate/treat the head injury. If not so, secondary survey is carried on with clinical case history taking, like cause of the injury, past medical history, last oral intake and an organized protocol for performing the clinical examination of Craniofacial region with expert specialists.[1, 3] Neurosurgeons and oral & maxillofacial surgeons play a very vital role along with neurologists and ophthalmologists in managing a craniofacial trauma patient. The emergency physicians must be an expertise to manage the situation and stabilize a patient with severe traumatic injuries of craniofacial region[9,10,11].

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