FACIAL TRAUMA

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INTRODUCTION

Facial injuries in sports present a broad epidemiological distribution, and their incidence and prevalence vary according to the nature of the sports modality, the mechanism of trauma, and dynamics of the sport, which classify them as higher or lower risk injury. A facial trauma may result in visual harm, respiratory impairment and hearing dysfunction, and impact an athlete's psychological balance negatively. This presentation aims to discuss facial trauma assessment in sport and present the most common injuries reported on facial trauma in sports as well as the initial management of these injuries in the field or sports arena, minimizing the occurrence of significant injuries, establishing the adequate strategy according to the facial injury, and preventing injury.

MECHANISM OF INJURIES (sports dynamics)

- twisting movements, racing with acceleration and deceleration, ball launches, direct hits with the ball and, **player-to-player contact**.
- injuries are directed related to **the trauma mechanism and energy** as well as the **type and size of sports material** involved (kinetic energy)

FACIAL TRAUMA ASSESSMENT

****Focus on** airway, breathing, circulation, and disability

trauma energy is absorbed by the cervical spine or by the head

- cervical spine stabilization and neurological status

highly vascularized region

- epistaxis (most common)
- critical bleeding ⇔ mechanical problems to the athlete's airway

INTRACRANIAL HEMATOMAS

- subgaleal hematomas (in the small parts of the skull)
- epidural hematoma, subdural hematoma, subarachnoid hematoma and intracerebral hematoma (inside the skull)

NASAL FRACTUES

the most fractured facial bone ·

heavy bleeding

controlling nasal

bleeding

- fracture → closed reduction
- complex nasal trauma → surgery

EYE INJURIES people under 25-years old

(72% of cases)

baseball, basketball, hockey, soccer, racquet sports

- foreign bodies and corneal injuries
- subconjutival hemorrhage and conjunctival lacerations,

- hyphema
- retinal detachment

**** an ophthalmological assessment is needed!**

MAXILLARY AND MANDIBULAR FRACTURES (blunt trauma)

- direct contact between athletes,
- athletes and their surroundings,
- falls and direct blows

MANDIBULAR FRACTURES

- condyles and mandibular angle (common sites)
- displaced fracture → surgery **protective measures** ⇔ ↓↓ **incidence of these fractures**

MAXILLARY FRACTURES

classified as Le Fort I, II, and III

- cranial damage,
- nasal air obstruction,
- soft palate edema,
- disturbance of orbit contents,
- cerebral spinal fluid rhinorrhea

BASILAR SKULL AND TEMPORAL BONE FRACTURES

- direct trauma to the occipital skull and temporal bone.
- motorcycling, skateboarding, and bicycling (at higher risk)
- dizziness, vertigo, loss of consciousness, hemotympanum
- cerebrospinal fluid rhinorrhea (higher risk of meningitis)

** **Battle and Raccoon eye** (indirect signs)

TOOTH AVULSION

- mobilize the tooth by its crown avoiding touching the root.
- the tooth should be carefully cleaned with cold water.
- the tooth should be repositioned into its alveolar process (if possible)
- or stored in a recipient with milk or patient's saliva (avoid dry storage),
- and the dentist's assessment (first 30 minutes after trauma).

ERA INJURIES

- auricular hematoma **(early drainage)**
- ear laceration
- otitis externa
- tympanic membrane perforation

- diving and ear barotrauma, and Eustachian tube dysfunction
- ****an otolaryngologist evaluation**

TAKE HOME-MESSAGE

- **trauma energy absorption by the cervical spine or by the head** ○ care of cervical spine stabilization and neurological status
- Tooth avulsion **– "don't touch the root!"**
- **ATTENTION to** indirect signs of Basilar skull and temporal bone fractures (**Raccoon eyes and Battle sign**)
- **auricular hematoma** is best treated by **early drainage**;
- **protective equipment plays a vital role** (↓↓ the risk of facial injuries in sports), BUT **educational interventions** are still needed

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