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CHURCHILL LIVINGSTONE 

Case reports: Two patients with fractures of the mandible caused by a horse-kick had additional laryngeal fractures. In one patient mediastinal emphysema led to the diagnosis; in the second patient laryngeal trauma was suspected because of extensive swelling of oropharynx and larynx. In both patients tracheostomy and laryngeal revision were performed. In the third patient with severe midfacial fractures caused by a motorcycle accident a tracheal transection was detected by means of endoscopic tracheal examination. The diagnosis was delayed because a too deep endobronchial intubation had been performed at the site of the accident. The tracheal transection was repaired with a pericardial flap.

Discussion and conclusions: Laryngotracheal injuries are uncommon in maxillofacial trauma patients and may lead to life-threatening airway problems. Early assessment by clinical symptoms (airway obstruction, emphysema), flexible endoscopy of the larynx and radiographic examination (CT scan) is mandatory. Tracheostomy, neck exploration and meticulous repair of laryngeal/tracheal structures are the principles of surgical treatment. A well-planned interdisciplinary approach to this kind of injuries is necessary to prevent long-term complications.

716

149

FUNCTIONAL ENDOSCOPIC SINUS SURGERY (FESS) IN THE TREATMENT OF FRONTAL SINUS FRACTURES

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Aims: The purpose of our study was to incorporate nasal endoscopy as a diagnostic tool and as functional endoscopic sinus surgery (FESS) in the treatment protocol of frontal sinus fractures.

Subjects: 11 patients, admitted between April 1999 and December 2000 at the University of Padova Medical Center with a diagnosis of frontal sinus fracture were included in our study. All patients underwent a preoperative nasal endoscopy for evaluation of the frontal recess. In 2 patients the frontal recess was enlarged. 10 patients underwent open surgical treatment of the fractures, which in 2 cases included frontal sinus obliteration, following the standard treatment protocol. No cranialisations were performed. The postoperative follow-up included aesthetic, clinical and endoscopic evaluation. Of all patients, one who had not undergone any surgical treatment refused the followup endoscopy but was clinically symptom-free.

Results: The aesthetic result was considered satisfactory in 7 patients; no patient complained of nasal symptoms related to the FESS procedure. The frontal recess was widely opened in all

patients who had undergone FESS while in the remaining ones, the osteomeatal complex was open and properly functioning.

Conclusion: According to the current literature, the treatment protocol for frontal sinus fractures does not include FESS. Our results and the current literature on FESS for the treatment of frontal sinus pathology, suggest that nasal endoscopy should be an integral part in the preoperative evaluation and treatment of frontal sinus fractures. FESS is a safe, more conservative, complications-free, functional procedure.

655

150

CRANIO-MAXILLOFACIAL TRAUMA: A REVIEW OF 9543 CASES WITH 21067 INJURIES IN 10 YEARS

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Aim: The goal of this study was to assess the impact of the five main causes of accidents resulting in facial injury on the severity of cranio-maxillofacial trauma.

Material and methods: During a period of 10 years (1991–2000) 9543 patients were admitted for cranio-maxillofacial trauma. Data of patients were prospectively recorded for cause of injury, age and gender distribution, frequency and type of injury, injury mechanisms, localization and frequency of soft tissue injuries, dentoalveolar trauma, facial bone fractures and concomitant injuries. Statistical analyses performed included descriptive analysis, Chi square test, Fisher's exact test, Mann-Whitney U test, and logistic regression analyses for the three main injury types.

Results: Five major causes and mechanisms of injury exist. Namely, 3613 (38%) activity of daily life and play, 2991 (31%) sport, 1170 (12%) violence, 1116 (12%) traffic, 504 (5%) work accidents and 149 (2%) others were noted. A total of 3578 patients (37.5%) had 7061 facial bone fractures, 4763 patients (49.9%) suffered from 6237 dentoalveolar injuries, and 5968 patients (62.5%) showed 7769 soft tissue injuries. Gender distribution showed an overall male-to-female ratio of 2.1 to 1 and the mean age was 25.8 ± 19.9 years; but both varied greatly depending on the injury mechanism.

Conclusion: This study dissects the distinct impact of injury mechanisms in cranio-maxillofacial trauma. In facial trauma, older persons are prone to bone fractures (increase of 4.4% per year) and soft tissue injuries (increase of 2% per year) while younger persons are more susceptible to elevated risks for dentoalveolar trauma (decrease of 4.5% per year).