Orbita fractures in polytraumas and craniocerebral traumas

Burkhard Mootz¹, Friedrich-Wilhelm Weber², Karl-Heinz Moser³, Holger Braunke², Jürgen Menzel², and Thomas Albring⁴

¹E.N.T.-Clinic, University of Bonn, Bonn, West Germany, ²Department of Neurosurgery, City Hospital Cologne-Merheim, ³Second Surgical Department of the University of Cologne, and ⁴Department of Radiology, City Hospital Cologne-Merheim, Cologne, West Germany

Abstract

The authors emphasize that the maxillo-facial surgeon or otorhinolaryngologist should:

1. take part in diagnosing and planning the therapy of poly-trauma patients.
2. operate simultaneously when possible.
3. try to provide immediate maxillo-facial surgical and/or otorhinolaryngologic treatment because of the great importance of early treatment for long-term functional and aesthetic results.

Keywords: Fractures, maxillo-facial injuries.

1 Introduction

Bony injuries of the orbita often appear in combination with a great variety of craniocerebral, maxillary, and facial fractures. Diagnosis of these injuries requires great skill. Usually the surgeon or neurosurgeon takes care of these patients first. Appropriate treatment is usually possible only if the maxillo-facial surgeon or otorhinolaryngologist is consulted in time. Knowledge of exact methods of diagnosis (i.e., radiological diagnosis) is of utmost importance. Radiological examinations should be performed immediately.

2 Materials and methods

From December 1984 to June 1987, 169 polytraumatic patients were delivered into the Surgical and Neurosurgical Clinics in Köln-Merheim. 24 of these patients were cared for by a maxillo-facial surgeon or otorhinolaryngologist. This is 14.2% of the total number. As shown in figure 1, the average age of the patients with fractures of skull and face was 31.9 years; 16 were male, 8 female. 71% of the patients were polytraumatic; 29% had isolated craniocerebral traumas.

Four patients (17%) did not survive operation because of vital injuries. In ten patients (42%) we operated during the first 24 hours simultaneously with neurosurgeons and surgeons. When orbital fractures were combined with a frontobasal fracture we used the following procedure: Maxillo-facial fractures were treated first so that there was no risk of irritation of a previously operated frontobasal fracture, especially when this fracture was combined with dura defects and rhinoliquorrhoe. 10 of 24 patients required frontobasal revision. In many cases (14 patients) immediate operation was prevented by poor general condition. Thus, treatment could only begin 3 weeks after the accident. In one case treatment could start only at the 32nd day (Figure 2).
Six patients suffered severe facial traumas with extensive soft tissue injuries as well as fractures of the maxilla, mandible and the nasal bone, three cases required two, one case three, and two cases even four operations until the injuries were completely taken care of.

As severely injured patients are usually intubated and laying on their backs, conventional radiological methods are often not satisfactory.

Thus we use the following procedures: When the traumatic patient was in critical danger and we had any suspicion of facial trauma, we suggested that the CT examination (which is usually done