F2 Dental Injuries in Road Accidents

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Traumas of the maxillo-facial region account for a large proportion of the cases admitted to hospital dental wards, and a relatively high percentage of these traumas are due to motor vehicle accidents.

This study analyzes 6,840 cases admitted to the Dental Clinic of the Ospedale Consorziale Policlinico of Bari (S. Italy) between 1998-2000. Of these, 611 admissions (74% M, 26% F) were due to trauma, distributed as follows: accidents: 254 cases, motor vehicle accidents: 232 cases, aggression: 60 cases, firearms: 3 cases, unspecified: 62 cases.

The 232 cases due to motor vehicle accidents have been classified according to: date of onset, age and sex of victim, description of the trauma (diagnosis), treatment and length of hospital stay.

The age ranges were: < 13 years: 12 cases; 14-23 years: 116 cases; 24-35 years: 53 cases; 36-45 years: 26 cases; 46-60 years: 14 cases; > 60 years: 11 cases.

The anatomical areas involved in the trauma were: only soft tissues: 19 cases; mandible: 115 cases; teeth: 69 cases; zygomatic bone: 49 cases; maxilla: 26 cases; nasal bones: 12 cases; orbital bone: 8 cases; unspecified: 7 cases; sphenoid bone: 1 case.

In the high-risk age range (14-23 years) the trauma occurred primarily (68%) during an accident while the victim was riding a motorcycle or bicycle. In this group, the probability of a single or multiple fractures of the mandible was twice that in the other groups. The same applies to the dental arch, while the probability of complete dislocation of these teeth was nine-fold that in the other age groups.

These data show that most road accidents featuring these types of trauma occur while the victim is riding a bicycle or motorcycle. The trauma occurs above all in the chin region and provokes fractures of the mandible (single or multiple) and various dental traumas, especially affecting the dental arch (largely avulsion and coronal and root fractures). It must be pointed out in this context that in most cases use of a helmet, compulsory since 1999 but still rarely used, would have reduced the extent and severity of the injury, if not prevented it.

Treatment of fractures of the mandible is based largely on osteosynthesis or immobilization of the jaw (or both), requiring between 4 days (immobilization of the jaw) and 7 days (osteosynthesis) of hospital stay, followed by a period of up to six months' convalescence and functional re-education.

Treatment of dental lesions involves prostheses for complete dislocation, and reconstruction and endodontic procedures for coronal and root fractures.

Injuries, Motor Vehicle, Road Accidents

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