

## **FACIAL TRAUMA: A LITERATURE REVIEW ON THIS COMPLEX APPROACH**

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**Abstract: Introduction:** Facial trauma is a multifaceted clinical challenge that affects not only physical health, but also the functional and psychosocial aspects of affected individuals. The face, as an anatomically crucial and expressive region, contains delicate and vital structures, making injuries in this area particularly important and difficult to manage. **Methods:** This study is a literature review whose objective is to evaluate the epidemiology, etiologies, most affected series and consequences of facial trauma. Therefore, studies were listed between 1988 and 2013, and their results were organized in this review. **Discussion and Results:** Data analysis reveals that young adults are the most affected, especially due to urban violence, while children and the elderly have a lower incidence of facial trauma. Factors such as violence and alcoholism are major precipitants of facial trauma. **Conclusion:** An integrated approach to the management of facial trauma is necessary, considering not only clinical aspects, but also psychosocial and economic aspects, in order to address this important cause of trauma in the country and the world. **Keywords:** Facial trauma; Epidemiology; Violence; Automobile Accident.

## INTRODUCTION

Facial trauma presents a complex and comprehensive clinical challenge, affecting not only physical health, but also functional and psychosocial aspects of affected individuals. It arises from a variety of causes, such as car accidents and assaults, standing out as an important global issue. The face, as an anatomically crucial and expressive region, contains delicate and vital structures, making injuries in this area particularly important and difficult to manage (1).

When dealing with this complex scenario, it is essential to consider not only traditional treatment methods, but also the technological

innovations that are shaping the evolution of the clinical approach. Given the challenges presented by traumatic facial injuries, it is essential to understand the nuances involved in initial assessment, accurate diagnosis, choice of therapeutic interventions, and the long-term impact on the patient (2). Consequently, the complexity of facial trauma goes beyond physical recovery; it affects the emotional and social spheres, influencing the patient's quality of life and self-image.

Analysis of epidemiological studies and patterns of facial trauma reveals the complexity and variety of causes that contribute to this clinical condition. From car accidents to interpersonal violence, the factors that trigger facial injuries are diverse and are often linked to social, behavioral and public health issues.

Therefore, the aim of this review is to provide a comprehensive overview of facial trauma, examining not only the clinical manifestations, but also recent advances in diagnostic, therapeutic and rehabilitation approaches, contributing to a more in-depth understanding of this condition. This narrative review aims to integrate data and perspectives from recent studies to help guide more effective and compassionate clinical practices in providing health care aimed at the full recovery and well-being of individuals affected by traumatic facial injuries.

## METHODS

This study is a review of the literature on the topic of facial trauma. To this end, this study observed relevant works published in English and Portuguese, listed between 1988 and 2013, identified using PubMed, Scielo and official websites of the national government and international governments.

The keywords used in the research were: trauma; face; complications; trauma management and its English counterparts. Studies on the mechanism of trauma,

management of facial trauma, complications of facial trauma and the relationship with morbidity and mortality were considered.

## **DISCUSSION AND RESULTS**

A priori, it is important to highlight that epidemiological results vary according to the demographic data of each population, which are influenced by factors such as geographic region, socioeconomic level, education, time of year and other variables.

### **ETIOLOGIES**

Regarding the etiologies of facial trauma, interpersonal violence appears to be the predominant cause of facial trauma, with alcohol and unemployment being contributing factors to this etiology. Recovering the idea that epidemiology varies according to region and other socioeconomic factors, in certain studies, interpersonal violence surpasses automobile accidents as a cause of facial trauma, a fact explained by public policies that aim to achieve greater control in traffic, such as the use of seat belts, limiting speeding and prohibiting and monitoring alcohol consumption by drivers (3).

Car accidents are one of the main causes and are directly influenced by the driver's recklessness and negligence, poor vehicle maintenance and also by driving concomitantly with the consumption of alcohol and drugs (4). Negligence in the use of seat belts and the lack of protective technologies, such as airbags, also contribute to the increase in this type of injury.

It is worth highlighting a greater distribution of accidents on weekends, when more recreational activities occur outside the home and also greater consumption of alcohol by the population, a substance directly related to higher levels of violence (5, 6).

### **CASUISTRY**

Studies in the southeastern region of Brazil indicate that the most affected age group was 11 to 40 years old, corresponding to approximately 80% of cases, with the peak incidence of facial fractures occurring in adults aged 21 to 30 years old (7). This pattern is mainly attributed to the greater propensity for urban violence and psychosocial conflicts suffered by young people (2).

In the case of the least affected age group, patients under 10 years old and over 60 years old were the least affected. Some authors associate this distribution of lower incidence of trauma in childhood with greater attention from family members, staying at home and child care. In relation to the elderly, little social or sporting activity and less exposure outside the home contribute to a lower accident rate. (5, 8).

Males had a ratio of 4.69:1 compared to females, which can be attributed to the higher level of physical activity among men and also to the fact that they are more involved in traffic accidents and fights.

### **LOCATION OF THE LESION**

The mandible is the facial bone with the highest frequency of fracture, followed by the zygomatic complex and the nose. This can be mainly explained by the fact that the jaw is both one of the most frequent targets in fights, and also the most common bone to be fractured in car accidents (9). Furthermore, traumatic brain injury (TBI) was the most prevalent injury associated with facial trauma, which, in turn, is indicative of severe TBI (10).

The prevalence of trauma in young adults, especially related to urban violence, highlights the need for effective prevention and safety policies. Furthermore, the distribution of injuries on the face, with the mandible being the most frequently fractured bone, and the association with traumatic brain injury, highlight the importance of an integrated

approach in the management of these patients.

## CONCLUSION

This review brings together data and perspectives from recent studies, with a comprehensive view of facial trauma, its causes and clinical and social consequences. We believe that this information can contribute

to improving knowledge regarding facial trauma, and can be used to identify injury patterns and the most affected populations, to support prevention actions and a more assertive approach to reducing this problem.

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