



Brazilian Journal of OTORHINOLARYNGOLOGY

www.bjorl.org



EDITORIAL

Epidemiological modifications of facial trauma and its implications[☆] Modificações epidemiológicas do trauma facial e suas implicações

Trauma of the face has undergone major changes over the years, regarding its etiology, age range, gender, distribution and severity. There have been many epidemiological studies in the literature that attempted to draw a profile of facial trauma. In a recent literature review published by Chrcanovic¹ in 2012, factors that influence the incidence of maxillofacial fractures were evaluated. Regarding age, the highest incidence occurs below the age of 35, with a prevalence of 65-96% of cases observed in the 3rd decade of life. In the population older than 65 years, 30% of affected individuals have visual impairment. Another interesting aspect is that condylar fractures are the most common type of trauma in children.

Considering gender, the predominance of fractures in men is evident and the ratio with women varies from 2:1 to 32:1. This is attributed to the fact that women are more limited to domestic work and are more careful in traffic; moreover, they occasionally participate in commerce and agricultural activities, and are little exposed to accidents caused by fights, industrial work and sports practice.

Other factors that influence the incidence of maxillofacial trauma are: cultural aspects and geographic region, socioeconomic conditions, climatic and seasonal influences, as traumas are more common on weekends and in the summer months, especially in countries where the seasons are well defined, alcohol and drug use, traffic laws, domestic violence and osteoporosis, which seems to predispose to facial fractures in the elderly, especially women.

Brazil, a country with continental dimensions, has an epidemiological variability in facial trauma that varies according to the region studied. Melo, when analyzing 4,548 patients with facial trauma in Recife, observed that traffic accidents showed the highest percentage, about 37.2%, followed by falls, with 30.6%, and physical aggression with 23.0%, which amounted to 90.8% of cases.

Similarly, some countries such as Iran (91%), Arab Emirates (59%), Nigeria (56%), Pakistan (54%), Egypt (41%), have traffic accidents as the leading cause of facial trauma. Considering southeastern Brazil, the region has some

distinct characteristics. In a study carried out in São Paulo by Wulkan, etiological factors of patients with facial trauma were evaluated. It was observed that the main cause was interpersonal violence, with 48.1% of cases, similar to other countries such as Canada (53.5%), Finland (42%) Turkey (40.6%), United States of North America (29.9%) and Germany (28.3%). At present, we have seen a considerable increase in facial trauma resulting from violence, in some places surpassing traffic accidents, falls, household accidents and sports practice. Such violence is mainly due to the indiscriminate abuse of alcohol and drugs in groups of adolescents and young adults.

In the past, these aggressions were mostly caused by physical fights or small-caliber weapons. Currently, the use of weapons that cause massive destruction is quite common, resulting in severe disfigurement or death. As for accidental falls, they still occur with some frequency; however, with the fad of extreme sports, the incidence of more severe trauma with consequent severe facial injuries has increased in recent years.

The leading causes of death worldwide are cardiovascular and diseases followed by cancer. Trauma appears in 3rd place. However, when one studies the age range of 20 to 40 years, trauma becomes the leading cause of death in statistics. It can be observed that craniofacial trauma is the major cause of death in this group. Although facial trauma is less frequent in children and the elderly, these numbers have increased in recent decades. Similarly, for decades men occupied 70-90% of the statistics of facial trauma worldwide and currently, women have progressively increased their participation, being involved in up to 40% of cases in some locations.

Domestic violence or violence by marital partners is a global problem, occurring independently of culture, ethnicity or socioeconomic status, accounting for 34-73% of all cases of facial trauma in women. Arosarena et al.² (2009) reported that victims of domestic violence are most affected with complex zygomatic fractures, blowout orbital fractures and intracranial injuries, whereas women who suffer

[☆]Please cite this article as: Mello Filho FV, Ricz H. Epidemiological modifications of facial trauma and its implications. Braz J Otorhinolaryngol. 2014;80:187-8.

trauma by strangers in criminal situations more commonly have mandibular fractures. In a survey published in 2014 by Wong et al.,³ it was observed that cervico-facial lesions are the most common findings in Chinese women victims of domestic violence, affecting 77.6% of them. The most common etiology consists of punching with fists in the upper third of the face.

Trauma also involves an important public health issue, as it is related to socioeconomic, urban and rural changes, the conflicted relationship between peoples. Interpersonal physical aggression in traffic, sports practice, at home or even in major military conflicts produce great physical and financial losses. The effective cost for treating isolated facial fractures is quite high when compared with patients admitted to the emergency room for other injuries. These data speak for themselves on the importance of educational and preventive policies for trauma, as well as the need for professionals working with facial trauma, well acquainted with the fundamental aspects of traumatology, craniofacial anatomy and physiology.

The face usually is the only body part that cannot be covered. It is the center of human relations, in which one can identify genetic characteristics, emotions of the past (wrinkles) and present (expression), age, intellect, and several other features of every human being. All this makes the responsibility of professionals involved in the care of facial injuries greater, so as to not cause an injury that could indelibly scar the person that bears it. Additionally, today's cult of beauty produces in everyone, but especially in women, the non-acceptance of the possible sequelae of facial trauma.

We know that the greater the facial tissue destruction, the greater will be the sequelae. An appropriately performed initial treatment, which meets the standards

established by the handbook of polytrauma care "Advancement Trauma Life Support (ATLS)" can save lives, but does not guarantee the restoration of facial functions. One must remember that complications of facial trauma have serious consequences, such as phono-articulatory and visual disorders, presence of hypertrophic scars, esthetic deformities and even psychological disorders. Thus, isolated measures, without fundamental knowledge of the trauma process and what was restored and what was lost, often produce poor results. To attain a good outcome, multidisciplinary and integrated care is necessary to achieve perfect esthetic and functional recovery of the patient.

References

1. Chrcanovic BR. Factors influencing the incidence of maxillofacial fractures. *Oral Maxillofac Surg.* 2012;16:3-17.
2. Arosarena OA, Fritsch TA, Hsueh Y, Aynehchi B, Haug R. Maxillofacial injuries and violence against women. *Arch Facial Plast Surg.* 2009;11:48-52.
3. Wong JY, Choi AW, Fong DY, Wong JK, Lau CL, Kam CW. Patterns, aetiology and risk factors of intimate partner violence-related injuries to head, neck and face in Chinese women. *BMC Women's Health.* 2014;14:6.

Francisco Veríssimo de Mello Filho*, Hilton Ricz

*Hospital das Clínicas da Faculdade de Medicina de
Ribeirão Preto, Universidade de São Paulo,
Ribeirão Preto, SP, Brazil*

**Corresponding author.*

E-mail: fdmfilho@fmrp.usp.br (F.V. Mello-Filho).