

Epidemiological and Clinical Aspects of Trauma to the Facial Mass at the National Odonto-Stomatology Center in Bamako

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Abstract

Original Research Article

The facial trauma is frequent, severe and of great diversity. The severity of FMD is primarily related to the presence of known or potential respiratory distress, profuse bleeding and / or associated lesions. Moreover, it must also be considered in terms of secondary functional and aesthetic consequences. The objective of this work was to determine the socio-demographic and clinical aspects of facial trauma in our practice. So a retrospective descriptive cross-sectional study was carried out in the stomatology and maxillofacial surgery department of the national center of odontostomatology of Bamako from June 1st to December 31st. 2012 and concerned all patients admitted for trauma massive facial. There were 58 cases. 84.50% of which were men with a sex ratio of 6.2. The best represented age group was 21-30 years old. The average age was 28.56 years old. School children accounted for 39.90% of cases. Road traffic accidents were the main etiology with 79.30% of cases. Bone lesions accounted for 93.10% of cases versus 20.70% of soft tissue lesions. The main fracture sites were the malar. The maxilla the bones of the nose with 63.80%, 39.70% and 31.00% respectively. Extra-facial lesions accounted for 18.96% of cases. The cranio-facial scanner was performed in 77.60% of patients. The orthopedic treatment method was used in 66.10% of cases. The facial trauma remains frequent. His emphasis must be on the empowerment of road users and on the stricter control of compliance with the Highway Code.

Keywords: trauma, fracture, facial massive, Bamako.

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INTRODUCTION

Trauma to the facial mass (TMF) remains relevant despite the various modern measures to protect the face [1]. The severity of FMD is primarily related to the presence of known or potential respiratory distress, profuse bleeding and / or associated lesions. Moreover, it must also be considered in terms of secondary functional and aesthetic consequences [2]. These lesions lead to great clinical humility and most often highlight the need for multidisciplinary care [2, 3].

The objective of this work was to determine the socio-demographic and clinical aspects of trauma to the facial mass in our practice.

MATERIAL AND METHODS

We retrospectively reviewed all the files and X-ray images of patients admitted for a trauma to the facial mass in the stomatology and maxillofacial surgery department of the national odonto-stomatology center, Bamako university hospital of the 1st June to December 31, 2012. Were included in our study, all patients with trauma to the facial mass, whether or not associated with other lesions. Patients with purely trauma to the mandible or associated lesions to the rest of the body were not included in this study. Data on age, sex, occupation, etiologies of trauma, nature of trauma, anatomical locations of trauma, extrafacial lesions, treatment methods (surgical or orthopedic),

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type of anesthesia used have was compiled and analyzed with the French version Epi info 6.0 software.

RESULTS

The Sample Consisted Of 58 Patients, 84.50% Of Whom Were Men With A Sex Ratio Of 6.2 (Table I).

Table-I: Distribution of patients according to sex.

Sex	Number	Fréquence (%)
Male	49	84,50
Female	9	15,50
Total	58	100,00

Table-II: Distribution of patients according to age

Age groups (years)	Number	Fréquence (%)
0-10	3	5,20
11-20	16	27,60
21-30	18	31,00
31-40	13	22,40
41-50	3	5,20
51-60	4	6,90
61 et +	1	1,70
Total	58	100,00

The best represented age group was that of 21-30 years. The mean age was 28.56 years with extremes of 7 and 61 years and a standard deviation of 16.80.

School children represented 39.90% of cases. Sixty-nine percent of the patients resided in the district of Bamako. Patients were admitted to our department within 24 hours of the trauma in 65.50% of cases and only 1 case after 2 weeks, ie 1.70% of cases.

Table-III: Distribution of patients according to etiology

Etiology	Number	Fréquence (%)
road traffic accident /motorcycle	46	79,31
Blows and injuries	4	6,90
Sport	1	1,72
Domestic accidents	5	8,62
Road traffic accident /auto	2	3,45
Total	58	100,00

Road traffic accidents were the main aetiology with 79.30% of cases (Table III). Bone lesions represented 93.10% of cases against 20.70% of soft tissue lesions. The main sites of fractures were the malar, the maxilla, the clean bones of the nose with respectively 63.80%, 39.70% and 31.00%. Extra-facial lesions represented 18.96% of cases. Cranio-facial computed tomography was performed in 77.60% of patients. The orthopedic treatment method was used in 66.10% of cases. The use of general anesthesia predominated with 70.70% of cases. The postoperative follow-up, although difficult, was carried out over a period of 3 months in 53.40% of patients.

DISCUSSION

FMD is very common and of great diversity: it can affect the soft parts, teeth, temporomandibular joints, the facial bone skeleton, alone or in combination [4]. It is not easy to specify the exact frequency of traumatic injuries limited to the face, since statistics generally include all injuries to the head and neck. Lesional associations are frequent and it should be borne in mind that a trauma to the face is above all a trauma to the skull and cervical spine [2, 3]. There are important epidemiological nuances depending on geographic data (country, region, urban situation or not) and socio-economic data (social environment, professional activity, etc.) [5]. In Mali, a study [6] found that ENT and maxillofacial emergencies represented 8.5% of all surgical emergencies. The epidemiological data are less well known in children because they are much less frequent in the pediatric population [5]. They are mainly the preserve of young adults with a predominance for males. This trend has been observed in several studies [5, 7, 8, 9, 10] and also in our study. Some authors [6, 7, 8, 10] have cited RTAs as generally responsible with wide variations. Physical attacks and brawls were the most common causes with 36.70% and 33.8% of cases, respectively, in the study by Diallo AO *et al.* [9].

Clinical and radiological symptoms can be deduced from essential elementary anatomical knowledge [1]. It is important to note that bleeding disorders should benefit from emergency measures taken at the scene of the accident [2,3]. It is known that fractures of the nose / and other fractures of the maxilla and fractures of the cervical spine can put at risk of upper airway obstruction as described by some [6, 11,12]. The prominent position of the nose's own bones in the facial skeleton would explain the high frequency of this impairment [9]. The current radiological means effectively help their exploration. Standard x-rays are no longé relevant in the initial lesion assessment. However, they can be useful in centers not equipped with CT machines, allowing a lower quality diagnosis. They may also be reserved for the operative follow-up of certain patients for occasional problems at the facial level [5, 14]. Today, CT remains the gold standard for maxillofacial trauma, especially violent one. It is thus the first-line examination for any polytrauma patient, which allows them to respect the conditions of safety and management of vital emergencies, and to obtain basic images very quickly. It also provides both bone and parenchymal windows without additional patient irradiation [13]. Its availability and relatively high cost have limited its implementation in some patients. Moreover, if it is carried out, it makes it possible to make a precise analysis of the facial lesions and to stratify the delays to involve the surgeon, once the possible vital problems have been resolved [2].

Traumatic lesions of the facial mass must be the subject of a well-codi fi ed therapy which must remain adapted to each case [1]. The objectives of the treatment are not only to restore the patient's pre-existing anatomical bone state and dental articulation, an essential guide to the operative process centered on maxillo-mandibular blockage, but also to fix the fractured bone structures at the level of the pillars of the face. Surgical treatment includes, depending on the case, and after reduction of the fractures, bone repair procedures such as osteosynthesis by metal plates and the use of bone grafts in the event of comminuted fractures or extensive loss of substance [13, 15]. The surgery is performed in the absence of significant edema; either before the 12th hour or postponed depending on the importance of it. Primary consolidation is rapid and it is best to intervene before the 10th day. The quality of the internal fixation results in the duration of the maxillo-mandibular blockage [15]. While internal fixation by miniaturized-screwed plates and immediate bone grafts are of interest, the classic therapeutic arsenal is still relevant, as it is dependent on varying exercise conditions and pathological disturbances. The low rate of osteosynthesis in our study is mainly explained by the high cost of osteosynthesis materials, which are not always within the reach of patients.

CONCLUSION

TMF remains common today, despite the development of effective protection methods. The precocity of the treatment and the quality of the lesion inventory allow a global and if possible definitive treatment which constitutes the best guarantee of a good result. Thus, the emphasis must be placed on the empowerment of road users and on stricter control of compliance with the highway code.

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