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To study the role of x-ray in maxillofacial fractures diagnosis.

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ABSTRACT:

Background- Facial injury constitutes a frequent finding among emergency room patients.

Methods- This study has been conducted in the Department of dental and radiology, on 30 patients with suspected maxillofacial fractures, irrespective of their sex, age and aetiology.

Results- On clinical examination, conventional radiography it was observed that zygoma was the most common suspected site for fracture, followed by mandible, maxilla and then nasal bone.

Conclusion- Early and accurate diagnosis is the key in this situation. Whereas conventional radiography is time-consuming and delayed in case of suspected cervical fractures and other polytrauma conditions.

Keywords: Maxillofacial, Fracture, Diagnostic Tools.

INTRODUCTION:

Facial injury constitutes a frequent finding among emergency room patients. The complexity of facial structures and their relative vulnerability make it important for the radiologist to have an excellent understanding of facial osseous anatomy and patterns of injury.

A recent increase in the incidence of facial fractures has been noted, because of increase in road traffic accidents.[1]Restoration of facial aesthetics and function such as mastication, symmetrical movements of the eyeballs and their optimal position to avoid double vision and speech, after facial trauma is essential aims of a plastic surgeon. The primary definitive treatment of open reduction and rigid fixation using mini-microplates and if necessary, immediate bone grafting is now the standard of care, offering the optimal result in facial fractures[2].

Materials and Methods

This study has been conducted in the Department of dental and radiology, on 30 patients with suspected maxillofacial fractures, irrespective of their sex, age and aetiology.

After stabilisation of the patient, conventional radiography were done. The view of X-ray depended on the suspected injured area as per clinical examination. The record of suspected sites of fracture on clinical examination was maintained.

Results

It was found that most of the patients in the study were in the age group of 21–50 years. The mean age of the study was 31.8 ± 12.6 years. Most of the patients in the study were males(73.33%), whereas females were only 8 in number. It was observed that 80.00% patients had facial fractures because of roadside accident. The next common cause was fall from height followed by assault.

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On clinical examination, conventional radiography it was observed that zygoma was the most common suspected site for fracture, followed by mandible, maxilla and then nasal bone.

Table 1: Number of fractures detected

Bone	On clinical examination	On radiography examination
Zygoma	17	21
Maxilla	11	14
Mandible	9	11
Nose	6	8
Total	43	54

On clinical examination and conventional radiography it was observed that zygoma was the most common suspected site for fracture, followed by maxilla, mandible and then nasal bone.

Discussion

Traumatic injuries are a global health burden.[3] Facial trauma, also called maxillofacial trauma, is defined as any physical insult to face. Facial fractures may initially go unnoticed if a patient has multiple system trauma or other pressing medical concerns.[4] In addition, intoxicated, sedated and intubated patients are unable to clearly report such injuries. Early clinical knowledge of facial fractures could assist in earlier treatment and possible mitigation of related sequelae. Direct and indirect complications of facial fracture can include nerve damage, brain injury, facial cosmetic changes, infections, along with difficulties related to eating, speaking, hearing and seeing.[5] Furthermore, life-threatening injuries have been reported in 6.2% of facial fractures patients in a Taiwanese study, with mortality causes including haemorrhagic shock and compromised airway.[6] Diagnosis of these fractures is very important as to decide the treatment plan, analyse the mode of injury and anticipate the functional and cosmetic side effects.

In the present study, the most common age group affected was 21–50 years. The mean age group affected was 31.8 years. In a similar study by van Hoof *et al*.[7] the most common age group to get facial fractures in European countries is 20–30 years. People of this group are more engaged in rash driving, violence and dangerous sport activities as compared to other age groups, thereby increasing incidence in this group.

Conclusion

Early and accurate diagnosis is the key in this situation. Whereas conventional radiography is time-consuming and delayed in case of suspected cervical fractures and other polytrauma conditions.

References

1. Saheeb BD. Influence of positions on the incidence and severity of maxillofacial injuries in vehicular crashes [corrected]. West Afr J Med 2003;22146-9.
2. Prysi AF, Sargent LA, Franklin JD. Rigid facial skeletal fixation: Advances in treatment. South Med J 1989;82:727-32, 735.
3. Girotto JA, MacKenzie E, Fowler C, Redett R, Robertson B, Manson PN. Long-term physical impairment and functional outcomes after complex facial fractures. Plast Reconstr Surg 2001;108:312-27.
4. Tung TC, Tseng WS, Chen CT, Lai JP, Chen YR. Acute life-threatening injuries in facial fracture patients: A review of 1,025 patients. J Trauma 2000;49:420-4.
5. van Hoof RF, Merkx CA, Stekelenburg EC. The different patterns of fractures of the facial skeleton in four European countries. Int J Oral Surg 1977;6:3-11.