

ERRATUM

1. Ibrahim SM, Mohammed B, Yahaya M, Audu BM, Ibrahim HA on the article "Prevalence of Vaginal Candidiasis among Pregnant Women with Abnormal Vaginal Discharge in Maiduguri" on Page Nig. J. Med 2013. 138-142. Should read: Ibrahim SM, Bukar M, Mohammed Y, Audu BM, Ibrahim HM.
2. Mohammad RJ, Gholam T, Zahed M on the article "Dislocation of the Zygomatic Bone into the Nasal Cavity" on Page Nig. J. Med 2013. 151-153. Should read: Jamalpour MR, Farhangi GR, Mohammadi Z.
3. Mbachu I, Udigwe GO, Okafor CI, Umeonunihu OS, Ezeama C, Eleje GU on the article "The Pattern and Obstetric Outcome of Hypertensive Disorders of Pregnancy in Nnewi, Nigeria" on Page Nig. J. Med 2013. 117-122. Should read: Mbachu II, Udigwe GO, Okafor CI, Umeonunihu OS, Ezeama C, Eleje GU.
4. Olusola AS on the article "Profile of Ear Diseases among Elderly Patients in Sagamu, South-Western Nigeria" on Page Nig. J. Med 2013. 143-147. Should read: Sogebi OA.
5. Choriocarcinoma in Enugu, South east Nigeria: A Need for a Shift From Mortality to Survival by: Dim CC, Ezegwui HU. This has been re-published due to some missing signs in the result section of the abstract in Nig. J. Med vol. 22. No. 2, April-June 2013.

Dislocation of the Zygomatic Bone into the Nasal Cavity

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ABSTRACT

A 25-year-old patient sustained a traumatic dislocation of the right zygomatic bone into the nasal cavity. After ten days, the bone was taken out of the nose and fixed in its presumed original place. After the operation, the facial contour was desirable and orbital functions were also normal.

KEYWORDS: Dislocation, zygomatic bone, nasal cavity, maxillofacial trauma

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INTRODUCTION

In zygomatic fractures, displacement of the fractured segment is common, and the zygoma may rotate around a vertical or longitudinal axis, and may be displaced medially, laterally, posteriorly or inferiorly (1). However, dislocation of the fractured zygoma into the cavities of the maxillofacial region is really rare.

An unusual case of zygomatic fracture and its dislocation into the nasal cavity was described here. The causative mechanism, diagnostic features and clinical management were also discussed.

CASE REPORT

While a 25-year-old man was standing by the road, he was hit by a van. He was admitted to the emergency ward of Besat Hospital, Hamedan, Iran. The patient was conscious at the time of admission and his vital signs were normal. He had a deep laceration in right side of his face, from lateral canthus to near the nasal ala at the same side. There was also right zygomaticomaxillary complex fracture.

Furthermore, head, chest, and abdominal radiographs and computed tomographic (CT) scans showed no obvious abnormalities. The patient was hospitalized for observation after suturing the facial laceration. Thereafter, after seven days he was transferred to the oral and maxillofacial surgery department for treatment of zygomatic fracture.

On clinical examination, there were enophthalmos of the right eye, deformities of the lateral and infra-orbital rims at the same side and diplopia in upward and lateral gazes. Moreover, the patient had some problems in nasal breathing. Head radiographs showed a complicated

fracture at the right zygomaticomaxillary complex region. The CT scan of the face and orbital regions revealed that the major part of right zygoma was dislocated into the nasal cavity (Fig.1 and 2). This segment had crossed the medial side of right maxillary sinus and stayed in the mid portion of nasal septum at the level of the middle turbinate.



On day 10, the zygomatic fracture was reduced under general anesthesia. Because, the major portions of the

dislocated zygoma were covered by the submucosal tissues of septum, lateral nasal walls and middle turbinates, we decided to reimplant the dislocated zygoma.

The fracture sites were approached by the infra-orbital, lateral brow and Lynch incisions. The fractured lateral orbital rim, which was separated from its periosteum, removed from the fracture site. After taking the dislocated zygoma out of the nose (Fig. 3), and shaving on some portions, these two bony segments (lateral orbital rim and the dislocated zygoma) were reduced and fixed together on the surgical table. Then this new reconstructed segment was reimplanted to its original site. At the end, the reimplanted bone was firmly fixed to its presumed original location by means of titanium mini-plates and screws. The septal perforation was also repaired.



Two months after surgery, the facial contours were good, and the orbital functions were normal, without any diplopia and enophthalmos. The patient was followed for three years continuously. The facial contour and functions were still good, but, only a mild resorption was noted radiographically.

DISCUSSION

Traumatic dislocation of mandibular condyle has been reported frequently (2-4). But this type of injury is quite rare in other facial bones. Contrary to the usual mechanisms involved in the dislocation of the zygomatic bone, the peculiar nature of this fracture is attributable to a metal bar which was illegally attached to the van.

Yokoo et al (5) reported a case of zygomatic fracture in which the zygoma had been completely avulsed. It was preserved frozen for 40 days and then replanted. Survival of this bone and partial new bone formation were noted histologically and by bone scintigraphy 19 months after surgery. However, slight resorption of the

bone was observed 3 years later.

Bite and Meland (6) reported a case of total traumatic amputation of the lower face and upper half of the neck. Immediate replantation of the amputated part was unsuccessful. After removal of the soft tissue from the amputated part, the skeletal structures, consisting of the mandible and maxilla, were reattached rigidly to the remaining skeleton. Then, soft tissue coverage was provided by free flaps. The amputated maxilla and mandible survived with evidence of revascularization.

In reconstruction of midfacial injuries, protection of orbit and restoring and maintaining pre-injury facial skeleton contour are the main goals of treatment. Freihofer and Van Damme (7) showed that the primary reason for deformities secondary to midfacial trauma is malposition of zygoma. In the treatment of the presented case, both of the mentioned goals should be achieved, because the extensive defect at the right midface secondary to dislocation of the zygoma, had caused enophthalmos, diplopia, and loss of facial contour.

The methods that we could use to treat the zygomatic defect of this patient consist of augmentation with prosthesis or bone graft, and replantation of the dislocated bone. The benefits for using alloplastic materials in facial reconstructions are the ease of use, availability, and saving of the operation time. However, the main problems with using alloplastic prosthesis are the possibility of infection, extrusion and displacement (8).

The use of bone has been less frequent than that of alloplastics, owing to the difficulty in contouring bone and the unpredictable amounts of resorption that may occur (1).

In this case we used dislocated zygoma to reconstruct the traumatic deformities. Because this bony segment had been covered by submucosal tissues on its surfaces in the nasal cavity, this bone had been preserved like a free graft.

On the other hand, it is now recognized that all of the bones superior to the level of maxillary dentition can be totally removed and replaced as free bone graft without significant risk of osteonecrosis and or infection (1).

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