A Rare Occurrence of Bilateral Lefort III with a known case of Myocardial Infarction

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Abstract

Background: Patients with LeFort III fractures are at an elevated risk of needing emergency airway management because of midface instability and oropharyngeal airway obstruction. Lefort fracture includes fracture of the nasofrontal junction, bilateral area of the frontozygomatic suture, and probable fracture of the zygomatic arch. This fracture is also referred to as cranial facial disjunction. The Novel treatment for bilateral Lefort III is surgical management and medical management. It may be present in anyone who meets with an accident. Here we present the case of a 41-year adult man who came to the emergency department with complaints of head injury, absence of consciousness, nasal bleed drop by drop, swelling in the face, tooth avulsion, and prickling sensation over the lower right side of the face.

The patient was kept in emergency ICU for observation and monitoring for one day, then referred to neurosurgery ICU where he was administered intravenous pan 40mg, Inj emset 2ml, Inj pause 1gm, Inj levopril 1gm, Inj ceftriaxone 1gm, Inj optineurin with 500ml ns, Tab zeredol 20 mg, Tab lume 500mg. The Patient was taken to the ophthalmology operation theater for suturing. Open reduction and internal fixation this surgical procedure is done on my patient. The patient's prognosis was good.

Keywords: Lefort, Frontozygomatic suture, Disjunction, Nerve paresthesia.

INTRODUCTION

Named for Rene Le Fort, who examined the effects of blunt force trauma on cadaveric skulls, Le Fort's injuries are midface complex fractures. His research identified the “lines of weakness,” or structural weak spots, in the maxilla that led to fractures. (1) Based on the direction of the fracture, these fractures are divided into three different groups: horizontal, pyramidal, and transverse. All varieties of Le Fort fractures include the pterygoid plate. (2)

A pterygomaxillary separation could happen as a result. A Le Fort fracture cannot exist if there is no pterygoid fracture. When a patient is exposed to an accident, they may develop bilateral lefort3, a frequent condition that can afflict anyone of any age or gender. (3) Despite low death rates, these fractures rarely occur alone and are frequently linked to severe head and neck injuries Therefore, prompt identification and diagnosis of Lefort fractures are essential for the effective therapy of blunt-force face injuries. The fracture line in this, also known as cranial-facial separation, extends from the nasofrontal region through the medial, posterior, and lateral orbital walls, the zygomatic arch, and the top portion of the pterygoid plates. (4)

The fracture separates the entire midfacial skeleton from the cranial base and runs parallel to the base of the skull. The phrase "craniofacial dissociation" refers to this continuity between the skull and the face. (5)

CASE PRESENTATION

A case of a 41-year-old male brought by the emergency department by his brother with complaints of head injury, loss of consciousness, nasal bleed which was come drop by drop, swelling over the face, swollen lips, loss of memory, intoxicated
with alcohol, oral, nasal, and ear bleed, a tooth is completely dislodged from its socket, prickling sensation over the lower right side of the face.

The patient had sustained injuries over the head and face. Initially, the case was registered as a road traffic accident by the police and he was shifted to the nearby local hospital for primary care given such as first aid treatment provide and given antibiotics and painkillers, and then he was referred to a multidisciplinary hospital for further management.

The patient was first admitted to neurosurgery ICU for management of subdural hemorrhage at the falx and pneumocephalus. The patient was then taken to the ophthalmology Operation Theater for suturing. Open reduction and internal fixation these surgical procedures are done. The patient's prognosis was good.

The patient has a history of myocardial infarction one year ago when he was undergone through angiography. He is a chronic alcoholic and tobacco chewer since from 20 years. The patient is also a known case of hypertension. The patient is on long-term medication for the same. (Tab. Rozagold 20 mg HS, Tab. Ramistar 2.5mg OD). The patient is also on medication for the management of alcohol addiction.

Physical examination revealed a grossly asymmetric face with the presence of diffuse edema over the right and left sides of the face. Sutures are present over the left supraorbital and lower lip region. Lymph nodes are not palpable. The temporal mandible joint revealed reduced mouth opening with restricted jaw movements. On examining the eye, it revealed sub-conjunctiva hemorrhage and periorbital edema. Maxillofacial examination revealed step and tenderness present over the bilateral zygomatic arch region. The vertical and horizontal compression test is positive. Rest all other facial bones appear to be normal and clinically intact.

On admission, blood pressure was 170/100 mm/Hg which was increased. On Radiological investigation, a Computed Tomography Scan reveals a Subdural hemorrhage along the falx, Multiple contusions in the bilateral basi-frontal region, and Multiple fractures as described above. 2Deco shows Anterior wall hypokinesia, Ecg shows Middling left axis deviation, ST depression, and Inferior myocardial infarction.

The patient was kept in emergency ICU for observation and monitoring for 1 day, then referred to neurosurgery ICU where he was administered intravenous pan 40 mg, Inj emset 2ml, Inj pause 1gm, Inj levoprit 1gm, Inj ceftriaxone 1gm, Inj genta 60 mg, Inj metronidazole 100ml, Inj neomol 100 ml, Inj mannitol 100 ml, Inj optineuron with 500 ml ns, Tab zerodol 20 mg, Tab limce 500mg.

**DISCUSSION**

Multiple anatomical reasons contribute to airway impairment in Lefort III fracture. The principal factors obstructing airflow in the oropharynx are the fractured maxilla's downward displacement and the symphyseal and bilateral body fractures of the mandible's loss of support for the glossal and suprahoid musculature. (6-16) The radiological examination in our case verified that this was the reality. This also explains why the patient was placed in the optimal breathing position, which is sitting with his head bent. (17-25) Fra Lefort fractures are not uncommon and commonly present in emergency rooms. These fractures are also related to other facial, skull, and ocular injuries, necessitating an interprofessional team. The trauma surgeon should get in touch with the appropriate specialist after the workup. sutures that separate the skull from the face are what are referred to as Lefort III injuries. The fractures begin at the bridge of the nose, move posteriorly through the medial and lateral orbital walls, and then through the zygomatic arch. (26-30)

According to the findings of CT imaging examinations, which also revealed many fractures as previously mentioned, a subdural hemorrhage along the falx, and multiple contusions in the contralateral basi-frontal region. (9) The hemodynamic stability, cooperation level, and resource availability of the patient all influence the imaging modality that is selected for facial fractures. CT is the greatest tool for detecting fractures among the intricately curved face bones. Fine cuts, control reconstruction, and sagittal reconstruction should all be included in face CT scans. (31)

The decision to operate on these patients depends on the stability of the fracture, the health of the neurological and ocular components, and hemorrhage. (11) Management of the bilateral Lefort III fractures clinical manifestation protocol should be provisioned. A patient with a bilateral Lefort III requires a proper comfortable position, proper ventilation, primary emergency
Lefort fracture III are specific patterns of facial bone fractures that develop secondary to blunt facial trauma. While mortality rates due to Lefort fractures themselves are low, these injuries rarely occur in isolation and are frequently associated with other severe injuries to the head and face. The ability to quickly and accurately diagnose Lefort fracture is crucial to the successful management of patients. In India, mortality due to bilateral Lefort III is more occurred in urban areas due to the lack of awareness, driving under the intoxicating influence, and speedily driving the bike. There is a need to follow the protocols to prevent bilateral Lefort III. Mostly occur in this place bilateral Lefort III patients were treated firstly in the nearby local hospital for primary care and referred to the multidisciplinary hospital for further management. There is a need for education to people regarding primary treatment has to be given as early as possible to reduce the pain and life-threatening symptom. In this case, the patient lives near the hospital area, and his parents brought him immediately multidisciplinary hospital. The patient got a standard line of treatment during the golden period. Because of that, his life was saved and the patient’s prognosis was good.

CONCLUSION

Lefort fracture III are specific patterns of facial bone fractures that develop secondary to blunt facial trauma. While mortality rates due to Lefort fractures themselves are low, these injuries rarely occur in isolation and are frequently associated with other severe injuries to the head and face. The ability to quickly and accurately diagnose Lefort fracture is crucial to the successful management of patients. In India, mortality due to bilateral Lefort III is more occurred in urban areas due to the lack of awareness, driving under the intoxicating influence, and speedily driving the bike. There is a need to follow the protocols to prevent bilateral Lefort III. Mostly occur in this place bilateral Lefort III patients were treated firstly in the nearby local hospital for primary care and referred to the multidisciplinary hospital for further management. There is a need for education to people regarding primary treatment has to be given as early as possible to reduce the pain and life-threatening symptom. In this case, the patient lives near the hospital area, and his parents brought him immediately multidisciplinary hospital. The patient got a standard line of treatment during the golden period. Because of that, his life was saved and the patient’s prognosis was good.

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