

## Case report on Management and complications of zygomaticomaxillary complex (ZMC) Fracture

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### **Abstract:-**

**Background:** Fractures that have not been displaced, fractures that have been replaced at a single buttress, and extensively fractures with comminuted fragments and bone loss are all included in the ZMC fracture category. Blind procedures are frequently used to treat zygomatic arch fractures. The closed reduction makes it difficult to see the fracture lines because they can't be seen directly; a clinical guide such as Crepitus noise and digital exploration of traditional radiography imaging is employed to realign the fragments. Because of the extensive oedema that commonly follows these fractures, clinical closure reductions can be challenging. The only way to know the outcome is to take radiographs following surgery. A left zygomatic arch w-shaped depressed fracture with a zygomaticomaxillary complex fracture is described in this case report.

**Main symptoms and/or essential clinical finding:** A 43-year-old male has been admitted to hospital in ENT ward. Wardha with the chief complaint of pain over the right side of his face since two weeks.

**The primary diagnosis therapeutic interventions and outcomes:** This case was diagnosed after a physical examination and investigation as Zygomaticomaxillary complex fracture.

**Nursing perspective:** NS and RL nebulization are examples of fluid replacement. Vitals are being monitored on an hourly.

**Conclusion:** To minimize further problems, a severe maxillofacial fracture must be treated immediately. When combined with correctly calibrated CT scan imaging, Multidisciplinary exams can provide more accurate early suggestions.

**Keywords:** Maxillofacial, trauma, zygomaticomaxillary, fracture.

**Introduction:** Because sports and car accidents frequently result in injuries to the face, facial reconstructive surgery is joint. Repairs to the cheekbones and eye sockets are common, necessitating significant reconstruction.<sup>1</sup> The most common Zygomatic complex (ZMC) fractures are a type of injury, which are defined as fractures of the zygoma and nearby The maxilla, for example, is a type of bone. Either the orbit or the temporal bone. The orbital floor and the medial orbital wall that has been damaged are common in ZMC fractures.<sup>2</sup> Because of their delicate nature, the orbital floor is easily destroyed during a craniomaxillofacial trauma. Sustained fractures most commonly occur in the area just. The infraorbital groove and canal area on the medial side of the infraorbital groove and canal.<sup>3</sup> Because of the thinness of the bone in that location, the fractures can sometimes cause injury to the medial orbital wall.<sup>4</sup> These fractures have the potential to cause major ophthalmic and cosmetic issues. Visual disturbance, diplopia, and enophthalmos are severe ocular problems, while face asymmetry is an aesthetic issue.<sup>5</sup> Plastic surgeons may have substantial difficulties in repairing these problems.

### **Patient information:-**

A 43-year-old male was taken to hospital ENT ward, Wardha, with a primary complaint of pain on the right side of his face that had been present for two days. Numbness, weakness, and restlessness were symptoms of a right zygomaticomaxillary complex, which was discovered after a physical examination and study.

**Primary concerns and symptoms of the patient:** Patient first visited govt. Hospital at Sewagram where CT Scan was done and the patient was admitted under neuro ICU for five days for a hemorrhagic contusion of left frontal lobe for which conservative management was done and medication were prescribed (Tab. Levera 500mg) . For other

care, the patient was referred to rural hospital on date 15/2/21 with chief complaints of numbness, weakness, loss of consciousness, restlessness, and pain over the right side of the face for two days.

**Medical, family and psychosocial history:-**There was no history of medical issues in this case. Her husband's medical history included a history of the zygomaticomaxillary complex, and he was from a joint family. He was vigilant, steady, and conscious of the date, time, and location. He got along well with the doctors and nurses and other healthcare professionals, and the other patient.

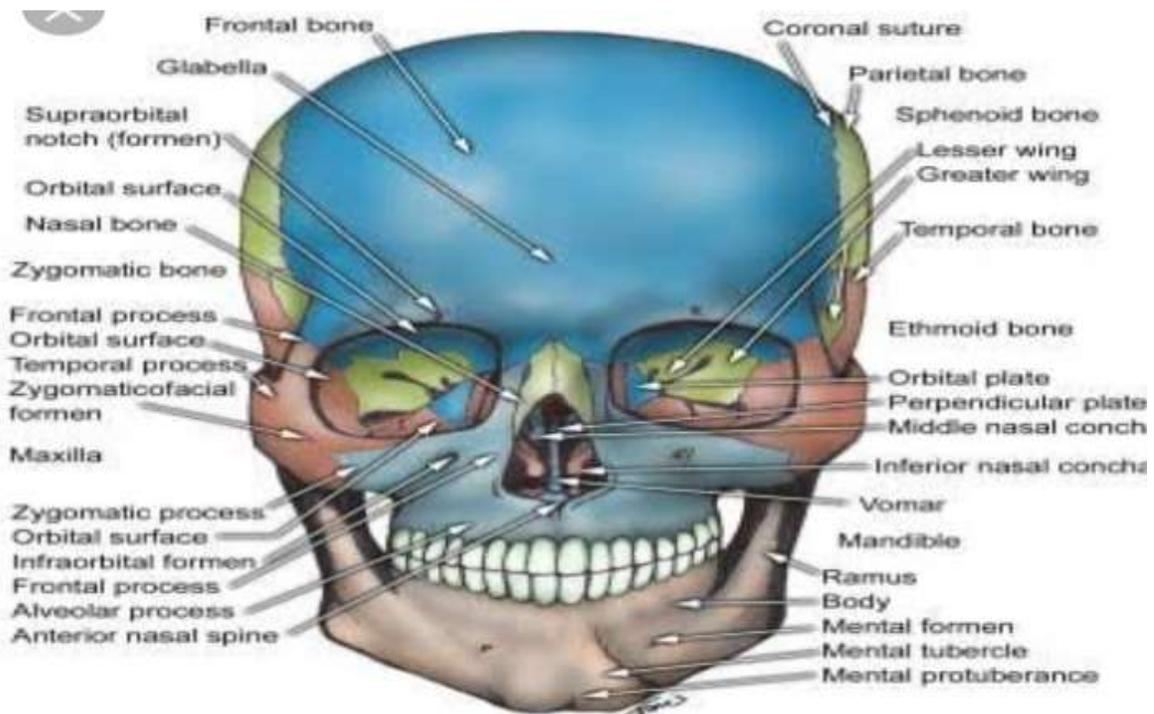
**Relevant past interventions with outcomes:-**The current instance had a poor medical background. Patient was admitted in govt hospital at sewagram, where a CT scan was done, and the patient was admitted under neuro ICU for five days for a contusion of the left frontal lobe for which the conservative condition was poor, so patient was referred to Rural hospital Wardha for further management.

**Clinical finding:**

The patient was awake and aware of the date, time, and location. His physique was average, and she had kept up with her personal hygiene. Her haemoglobin level was abnormally low. i.e. 11.2gm .RBC3.95 m/cumm, Total WBC count 12500 cumm, total platelet count 3.19 lack /cumm MCV count 84.6 FL, MCH count 29.4 Pico gram ,granulocytes 65% , lymphocytes 30% glucose plasma random 108 mg% ,Total bilirubin level 0.6 mg/dl, ALT 320 U/L, AST 132 U/L ,in temperature is normal pulse rate was slightly increased ,respiration 20 breath/ min blood pressure was 122/80mmHg .A zygomaticomaxillary complex was repaired using a surgery of ORIF of ZMC & Mandible fracture Right side. The current instance had a poor medical background. The patient was admitted in govt hospital at sewagram, where a CT scan was done. The patient was admitted to neuro ICU for five days for a contusion of the left frontal lobe, for which conservative Management was done. I was prescribed (tab. Levera 500mg) with chief complaints of numbness, loss of consciousness, restlessness, and pain over the right side of face for two weeks. Patient's general condition was deteriorating at the time. Thus he was referred to AVBRH Sawangi Meghe Wardha for further treatment.

**Diagnostic assessment:**

Based on the patient's history, blood tests, and other investigations, a physical examination is performed. A blood test revealed that the HB percent was 11.2 gm, total RBC was 3.94, WBC count was 12500, and total platelet count was 3.19. An x-ray and CT scan were also performed. Although blood sugar levels were normal, haemoglobin levels had dropped. The urea serum level was somewhat lower, but the total WBC count was higher. The patient's blood pressure was 122/80 mmHg. No challenges experienced during diagnostic evaluation.



**Diagnosis:** The doctor diagnosed this case with zygomaticomaxillary complex fracture after a medical examination and investigation (ZMC)

**Therapeutic interventions:**

present case took the medical management in the treatment of zmcinj. Augmentin 1.2gm IV BD 4 days , inj. Pantaprazole40mg IV BD 4 days ,Tab limcee 500mg BD 4 days, Tab. Chymoralforte BD 4 days,Tab.levocet10 mg HS 4 days, Tab. Levera500mg BD 7 days, inj metro 500mg IV BD 4days ,Tab. UDCA 300 mg BD 4days. When the diagnosis was most likely to occur, no adjustments in therapeutic interventions were made .she was surgical treatment and all surgical supportive treatment to manage a symptom and outcomes was good.

**Nursing perspective:-**NS and RL nebulization are examples of fluid replacement. Vitals are being monitored on an hourly basis.

**Follow up and outcomes:-**Clinical and patient-reported outcomes: Despite all of the patient's efforts, the patient's active health will improve, and his or her health status will improve more than previously.

**Necessary follow up diagnostic and other test result -** All signs and symptoms, such as loss of consciousness, fever, weakness, numbness, and restlessness.

**Discussion:**

The present case was admitted in rural hospital with a chief complaint of weakness, pain over the right side of the face for 2 days, Numbness, restlessness, and loss of consciousness. He was given antibiotic therapy. The patient's health was in good hands. Haemoglobin levels were within normal limits 11.2 gm %, and blood pressure was normal, that is 122/80 mmHg.<sup>6-9</sup>

The physical examinations, including ophthalmology findings, must be understood by healthcare providers who care for these individuals. Any misinterpretation or erroneous reconstruction of the pre-injury architecture can result in post-traumatic orbital abnormalities, leading to significant problems such as enophthalmos, diplopia, and visual acuity impairment. Any face injury should be diagnosed and treated as soon as possible to avoid late intervention and the risk of permanent deformity.<sup>6</sup>Work on these patients, including computed tomography (CT) scans, must be conducted appropriately before surgery.<sup>10-15</sup>

Facial trauma frequently results in Fractures of the zygomatic-maxillary complex (ZMC). We describe a unique approach to ZMC fracture pattern analysis in this retrospective study, which uses Malar prominence can be visualized in three dimensions using computed tomography (CT) images. Displacement in the context of a three-dimensional coordinate system.<sup>7</sup>The treatment outcome was then connected to the fracture pattern.<sup>16-19</sup> determining the ZMC fracture pattern may be useful when contemplating treatment alternatives.

**Conclusion:**

To avoid further problems, a severe maxillofacial fracture should be treated right away. When combined with correctly calibrated CT scan imaging, multidisciplinary evaluations can provide more accurate early suggestions.

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