



Case Report on Mucormycotic Osteomyelitis of Maxilla

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Introduction: The upper jaw is formed by the maxilla, one of the basic bones of the face. It is a crucial viscerocranium structure that aids in the creation of the palate, nose, and orbit. The upper teeth are held in place by the alveolar process of the maxilla, which is vital for mastication and speaking. Because of its substantial vascular supply, maxillary necrosis is uncommon compared to mandible necrosis [1]. Maxillary necrosis can be caused by bacterial infections like osteomyelitis, viral infections like herpes zoster, or fungal infections like mucormycosis, as well as trauma, radiation, and other factors [2]. Long-term use of antibiotics or corticosteroids, on the other hand, may result in an opportunistic infection. Mucormycosis is a fungal infection that mostly affects immunocompromised persons. These fungi are widespread in many people, although the symptoms have been linked to a weakened immune system. Mucormycosis is a life-threatening illness that frequently affects immunocompromised individuals due to diabetic ketoacidosis, neutropenia, organ transplantation, and elevated blood iron levels.

Clinical Findings: The patient have a complaint of discomfort in the upper left side of the jaw was rapid in start, dull hurting, intermittent in character, and worse on mastication. A radiating headache on the left side is also a complaint.

Diagnostic Evaluation: CRP - 12.48 m/ L, Calcium 8.1 mg/dl, KFT-Ser (urea – 29 mg/dl, Creatinine 0.4 mg/dl, Sodium 138 mmol/L, Potassium -4.3 mmol/L, Albumin 2.6 g/dl,) Urine exam routine Pus cells 1-2 cells, urine albumin nil, Crystal 3-4 calcium oxalate Crystal, 2D echo was done on dated 31/5/21, MRI was done, Cardiac call was done.

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Therapeutic Intervention: If not recognised and treated early, fungal osteomyelitis is more invasive than bacterial osteomyelitis. Treatment is given to the patient as a follow-up.

Debridement of necrotic tissue on a local level. Antibiotics - Tab Augmentine 625 mg, Tab paracetamols 500 mg, Inj T. T 0.5 ml in a single dosage, Antifungal treatment, and Betadine gargle twice a day.

Conclusion: On 04/06/2021, a 58-year-old male was hospitalised to AVBR Hospital's Oral Surgery Ward 35 after being diagnosed with Mucormycotic Osteomyelitis of the Maxilla. The patient is being counselled on how to proceed with his treatment.

Keywords: Mucormycotic; paranasal sinuses; osteomyelitis.

1. INTRODUCTION

Osteomyelitis of maxilla is an uncommon process due to its rich vascular supply, although it can occur due to bacterial, viral, and fungal infections, especially in immunocompromised patients. Mucormycosis is caused by saprophytic and aerobic fungi *Rhizopus*, *Rhizomucor*, and *Cunninghamella* genera of the family *Mucoraceae* which frequently colonize in the oral/nasal mucosa. Mucormycosis is a rare opportunistic fungal infection, with acute, aggressive, and invasive nature, seen in immunocompromised / debilitated patients, especially with diabetes mellitus [1-4]. The key to successful therapy is the early diagnosis of signs and symptoms of the disease, correction of the underlying medical disorder(s), and aggressive medical and surgical intervention.

2. PATIENT IDENTIFICATION

On 04/06/2021, a 58-year-old male patient from Nagpur was admitted to Oral Surgery Ward 35 with Mucormycotic Osteomyelitis of the Maxilla. His weight was 87 kilogrammes, and his height was 167 centimetres.

Present Medical History – A 58 years old, Male, was admitted to Oral surgery ward, AVBRH with chief complaints of difficulties in mastication for about one week, radiating headache on left side, loss of appetite (15 days), and weight loss. Mucormycotic Osteomyelitis of the Maxilla has been diagnosed. His haemoglobin level at the time of admission is.

Past Medical History -The patient has had a history of diabetic Mellitus for around 4 years. He also has a history of tooth extraction 4 years ago. Also, he suffered Covid -19 infection, for which he was taken to a private hospital in Nagpur on April 20, 2021, where he was treated with Inj. Remdisivir, Inj. Prednisolone, Tab Acetazolamide, Tab Ivermectin.

Family history -The patient has a family of five members. He was diagnosed with Mucormycotic Osteomyelitis of the Maxilla, although his parents had no aberrant genetic background. The parents were married in a non-consanguineous way. Except for the patient who is in the hospital, the other members of the family have no concerns about their health.

3. PAST INTERVENTION AND OUTCOME

Mucormycosis was suspected as the cause of the patient's pain on the upper left side of the maxilla. Further analysis revealed that the patient had Mucormycotic Osteomyelitis of the Maxilla, which was subsequently identified by a histological report dated 05/06/21. On admission, the patient's blood sugar level was 250, at which time 2 units of insulin were administered. In addition, a stat dose of inj Tetanus Toxoid 0.5ml was administered.

4. CLINICAL FINDING

The patient complained of discomfort on the upper left side of his jaw, which was rapid in start, dull hurting, intermittent in character, and worse on mastication, He also described lack of appetite, weight loss, and a radiating headache on the left side.

5. PHYSICAL EXAMINATION

On a comprehensive examination from head to foot, it was discovered that the patient had complained of pain over the upper left jaw and difficulty masticating for one week. The patient weighed 87 kg and stood 167 centimetres tall. The GA patient is no longer on covid. Temperature is 98°F, pulse is 84 beats per minute, respiration is 16 beats per minute, GC is good, CNS is conscious. Blood pressure is 112/70 millimetres of mercury. It's common to have bowel and bladder habits. A patient is of average build and is considerably fat. During the

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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