Mucormycosis of the Mandible: A Case Report

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ABSTRACT

CASE REPORT

BACKGROUND

Mucormycosis is a rare opportunistic infection caused by fungi of the order Mucorales, commonly affecting immunocompromised patients with poorly controlled diabetes or hematomalignancies. Rhinocerebral mucormycosis is the most common form, whereas mandibular mucormycosis is rare with only a few cases previously reported in the oral surgery literature. We report a case of mucormycosis of the mandible and adjacent soft tissue.

METHODS: Retrospective review of clinical case

RESULTS: A 70-year-old female with a history of breast cancer, chemotherapy, myelodysplastic syndrome, bone marrow transplant, and graft-versus-host disease presented with fever and acute left side jaw swelling and pain. CT demonstrated an abscess surrounding the left hemimandible and the left sublingual space, with a focus of air within the left hemimandible. The patient underwent submental incision and drainage without gross purulence. Three days later, the left mental/submental skin became acutely necrotic, and pathology and cultures demonstrated invasive mucormycosis. The patient underwent wide local excision of the submental soft tissue, near-total mandibulectomy, and partial glossectomy. Intravenous and topical antifungal agents, intravenous antibiotics, and fistulastron were given. Multiple debridements including subtotal glossectomy and floor of mouth resection were needed to quell the disease progression. Despite aggressive surgical and medical management, the disease continued to progress and approximately two weeks later, the patient was made comfort care only and expired.

CONCLUSION: Although most commonly associated with sinonasal disease, mucormycosis can present in other regions of the head and neck including the mandible. Prompt diagnosis, aggressive medical treatment including correction of underlying immunodeficiencies and appropriate antifungals, and aggressive surgical debridement are important in managing these patients. However, this disease portends poor outcomes, as demonstrated in our patient.

PREOPERATIVE IMAGING

Figure 1. Axial CT showing collection surrounding the left hemimandible extending along the medial aspect of the mandible in the subhyoid space into the inferior left hemitongue and displaces the tongue to the right.

Figure 2. Sagittal C T with intra showing low attenuation collection surrounding left hemimandible.

CASE CONTINUED

Three days later, the left mental/submental skin appeared necrotic (Figure 3), worsening over the course of several hours. Cultures from the previous surgery demonstrated Rhizopus and pathology was consistent with invasive mucormycosis. Intravenous antifungals were started (amphotericin and sanaconazole), in addition to fistulastron. The same day, the patient underwent mandibular dental extractions, wide local excision of the submental soft tissue, near-total mandibulectomy and partial glossectomy. The dental extractions were notable for no blood in any of the tooth roots (Figure 4). Postoperatively, the wound was irrigated and packed daily with topical amphotericin-soaked gauze.

Due to worsening local disease, the patient was brought back to the operating several times for further debridements. These surgeries entailed near-total glossectomy, partial pharyngectomy and floor of mouth resection. Despite aggressive surgical and medical management, the patient’s immune system could not be reconstituted and did not respond to the fistulastron. She had persistent leukocytopenia and an ANC of 265 cells/mm3. Approximately two weeks later, the patient’s family withdrew all interventions, the patient was made comfort care and she expired two days later.

INTRAOPERATIVE IMAGES

Figure 3. Necrotic mental skin near previous submental incision with parotitis.

Figure 4. Post extraction of teeth #20-31 revealing necrotic gray-colored sockets with necrotic bleeding.

CONCLUSIONS

Although most commonly associated with sinonasal disease, mucormycosis can present in other regions of the head and neck including the mandible. Prompt diagnosis, aggressive medical treatment including correction of underlying immunodeficiencies, initiation of appropriate antifungals, and performance of aggressive surgical debridement are important in managing these patients. However, this disease portends poor outcomes, as demonstrated in our patient.

REFERENCES


