

Mucormycosis: An Opportunistic Fungal Infection in Post COVID-19 Patients

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Mucormycosis is an opportunistic fungal infection also known as zygomycosis. The infection commences in the nose and paranasal sinuses due to inhalation of fungal spores [1]. The issue of post COVID-19 infection has arisen as a significant problem. Normally, COVID patients are given steroids and immunosuppression medicines to avoid cytokine storm. This lowers one's immunity, which could result in the fungus developing in the next 10 - 15 days. Aggravating systemic factors like history of immunosuppressive drugs, uncontrolled diabetes, chronic liver or kidney disease and any other recently diagnosed immunocompromised condition helps in cultivation of fungi. Based on its clinical presentation and anatomic site, invasive mucormycosis is classified as one of the following 6 major clinical forms [1]: (1) rhinocerebral (2) cutaneous/subcutaneous (3) gastrointestinal (4) pulmonary (5) central nervous system (6) disseminated/miscellaneous.

Patients usually represents intraoral findings of tooth mobility, unhealed socket, exposed bone, ulceration of mucosa, pus discharge, mobility of jaw, sinus tract and halitosis while extraoral findings such as facial swelling, paresthesia, sinus tract, discoloration of skin (necrosis), and cranial nerve involvement. Nasal findings like foul smell nasal discharge, nasal congestion and sinusitis. Orbital findings such as chemosis, exophthalmos (proptosis), ophthalmoplegia, vision loss, and peri orbital cellulitis [2].

Rapid diagnostic methods like biopsy, KOH, fungal culture, CBNATT helps to detect the Mucor. There is no standard duration of treatment for Mucormycosis. Various approaches to treat the mucormycosis are rapid control of underlying medical illness, early diagnosis with rapid initiation of effective antifungal therapy (Lipophilic Amphotericin B 1 mg/kg/day while Liposomal Amphotericin B 5 mg/kg/day for at least 2 - 3 days by Intravenous route) followed by aggressive surgical debridement of necrotic lesions followed by antifungal therapy. Intraoperative frozen sections help to delineate the margins of infected tissues [3]. Nasal endoscopy with or without biopsy can be done on follow-up to evaluate any fungal growth. Posaconazole 400 mg BD as a salvage treatment option in case of nephrotoxicity by Lipophilic Amphotericin B, hepatotoxicity by Liposomal Amphotericin B and step down to oral medication [4].

This is very important since prompt and appropriate management can reduce mortality and morbidity considerably. To conclude, as a principle, following aggressive surgical debridement of necrotic soft tissue and bone in conjunction with antifungal therapy until resolution of all clinical, laboratory, and imaging signs and symptoms of infection is the only solution in treatment of Mucormycosis.

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