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Research Article

ANALYTICAL STUDY OF MUCORMYCOSIS DONE DURING SECOND WAVE OF COVID-19 IN INDIA

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ABSTRACT

Mucormycosis is caused by infection with fungi belonging to the order Mucorales. The infection starts with nasal congestion or discharge, though it may progress to facial numbness, blurry vision, nasofrontal headache, ocular pain, fever, diplopia and chemosis.

Keywords:

Mucormycosis, Mucorales, infection

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INTRODUCTION

Rhino-orbito-cerebral mucormycosis is a rare opportunistic infection of the sinuses, nasal passages, oral cavity, orbit of eye/eye socket and brain caused by saprophytic fungi. Most mucormycosis infections are life-threatening. Risk factors such as diabetes mellitus are present in most cases. Facial pain, loose teeth, diminished vision is the most common presentation.(1)



Figure: 1

AIMS AND OBJECTIVES

1. To study incidence of mucormycosis in patients with COVID-19
2. To document the clinical presentation of these patients
2. To compare the findings to other/previous studies
3. To document management of these patients

MATERIALS AND METHODS

This is an observational, prospective study conducted in the department of otorhinolaryngology at D.Y PATIL hospital, Navi Mumbai over a period of 3 months.

Demographic data such as sex, age, clinical presentation and investigation were obtained from in-patient records. After assessing the patient clinically; DNE (diagnostic nasal endoscopy), CECT (Contrast enhanced computed tomography)-PARANASAL SINUSES, MRI (Magnetic resonance imaging) FACE +ORBIT (P+C) was advised, KOH mount for any nasal crusts were sent and a diagnosis was made confirming the disease.



Figure: 2

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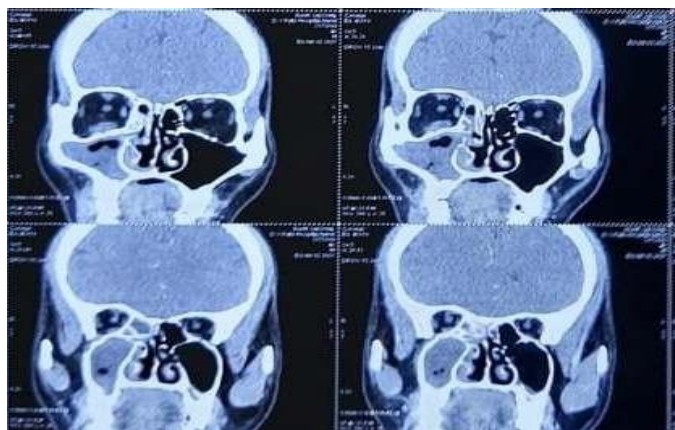


Figure :3

Surgery was planned for each patient. FESS with debridement and other procedures such as Caldwell luc, denker’s, antral debridement depending on the patient’s requirement was done.

The inclusion criteria for selection of cases were patients with COVID-19, Aged between 15-85 years having KOH mount confirming the presence of mucor.

RESULTS

Amongst these 30 individuals, 26 individuals were COVID-19 positive. 23 patients had co-morbidities like diabetes mellitus and hypertension. 24 patients were on oxygen support such as non-invasive ventilation, nasal prongs, hudson’s mask. 16 patients were on steroid therapy(intravenous/oral). 11 patients were administered some form of inj amphotericin B (liposomal/emulsion). Out of 11 patients 6 patients developed side effects of inj amphotericin-B such as deranged serum creatinine, nausea, vomiting, fever, hypoxia. 12 patients required surgical intervention such as Functional endoscopic sinus surgery, Caldwell luc procedure, denker’s procedure Out of 30 patients, 21 patients recovered successfully from mucormycosis by either medical or surgical intervention.

6 patients died and 3 patients were lost to follow up

DISCUSSION

1. Number of patients selected for the study: 30
2. Co morbidities

No of patients with co-morbidities	23
DM	15
hypertension	08

3. Out of 30 patients, 26 patients were COVID-19 positive and 4 patients showed symptoms of COVID but were RT-PCR negative(2,3,4)
4. 24 out of the covid 19 positive patients were on O2 support like oxygen prongs, Hudson mask (5,6)
5. Due to administration of steroids to treat symptoms of COVID resulting in suppressed immunity lead to increased number of mucormycosis cases(7,8,9)
6. Follow up of these patients were done every week; diagnostic nasal endoscopy and debridement as required was done until the patient was completely asymptomatic.

7. Amphotericin-B played a major role in mucormycosis but had its own side effects(10,11)
8. 21 patients recovered successfully, 6 patients died due to COVID-19 and other co-existing morbidities and 3 patients were lost in follow up(12)

CONCLUSION

High prevalence of mucormycosis in patients of COVID-19 as demonstrated by this study. Clinical presentation and rapid progression of mucormycosis requires swift diagnosis and management

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