PARIPEX P	ORIGINAL RESEARCH PAPER		Radiodiagnosis
	AN U MUC	JNUSUAL CASE RHINO CEREBRAL CORMYCOSIS	KEY WORDS:
Dr Sushmit Kafle*	it Resident Radiology *Corresponding Author		
Dr Sarfaraz Shaikh		Consultant Radiologist,	
F Rhinocerebral mucormycosis is a life-threatening infection caused by saprophytic fungi, and is seen almost exclusively			

Rhinocerebral mucormycosis is a life-threatening infection caused by saprophytic fungi and is seen almost exclusively in immunocompromised patients. The objective of this study was to describe the imaging findings in patients with rhinocerebral mucormycosis in COVID 19 positive patient .

INTRODUCTION.

ABSTR

Coronavirus disease 2019 (COVID-1 9) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has been associated with wide range of opportunistic bacterial and fungal infections.

Mucormycosis is a spectrum of invasive fungal infections that is caused by Mucorales order that belongs to the subphylum Mucoromycotina, Rhizopus, Mucor, Rhizomucor and Lichtheimia. It has been associated with wide range of opportunistic bacterial and fungal infections. These fungi may present in a range of multiple clinical syndromes with sinus, orbital cerebral, pulmonary and cutaneous involvement. They germinate, forming angioinvasive hyphae that cause infarction of the involved tissue, giving in a "dry" gangrene appearance. The angioinvasive capability of these organisms can lead to direct infiltration to blood vessels and thrombosis or emboli thus presenting as acute ischemic stroke.

Several risk factors are described including diabetes mellitus, malignancies, solid and bone marrow transplantation and iron overload status, steroid-mediated or background comorbidities. Other shared risk factors including prolonged hospitalization with or without mechanical ventilators. Diabetes mellitus stands as the strongest risk factor giving that 36% of patients with invasive mucormycosis were diabetic in a previous review of 929 cases [1]. Association with liver cirrhosis is rare and previous literature reviews revealed only few cases [2].

Case study:

We describe a case of rhinocerebral mucornycosis in a 51 years male patient presented with the history of right sided weakness since 7 days with the diabetes mellitus. Reverse transcriptase-polymerase chain reaction (RT-PCR) from nasopharyngeal swab for COVID-19 was positive. The patient later passed away from sepsis.



Polypoidal mucosal thickening is seen in the left maxillary, ethmoid and frontal sinuses with T2W hypointense areas within. On coronal section few areas of cortical breach are seen involving the left cribriform plate with suspicious intracranial extension of the lesion.



Area of altered signal intensity lesion appearing as hypointense on T1, and hyperintense on T2W and FLAIR images anterior, inferior basi forntal crossing the mid line noted.

Histopathology evaluation (HPE) of the nasal discharge revealed broad aseptate like fungal hyphae on KOH wet mount .Lactophenol cotton cotton blue stain after 72 hours of the culture on sabouraud dextrose agar (SDA) revealed broad aseptate ribbon like hyphae.

CONCLUSION:

Magnetic Resonance Imaging (MRI) shows a spectrum of findings in rhinocerebral mucormycosis and plays a major role in assessing the extent of involvement and complications.

REFERENCES

- Werthman-Ehrenreich A. Mucormycosis with orbital compartment syndrome in a patient with COVID-19. Am J Emerg Med. 2020; S0735-6757 (20) :30826 -30833. doi: 10.1016/j.ajem.2020.09.032. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Radulesco T, Verillaud B, Béquignon E, et al. COVID-19 and Rhinology, from the consultation room to the operating theatre. Eur Ann Otorhinolaryngol Head Neck Dis. 2020;137(4):309–314. doi:10.1016/j.anorl.2020.04.013. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
 Khan MM, Parab SR. 0.5% povidone iodine irrigation in otorhinolaryngology
- Khan MM, Parab SR. 0.5% povidone iodine irrigation in otorhinolaryngology surgical practice during COVID 19 pandemic. Am J Otolaryngol. 2020;41(6):102687. doi: 10.1016/j.amjoto.2020.102687. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Tsagkoviis A, Ioannidis D, Rokade A. The microscope drape method to reduce aerosolisation during endoscopic sinus and skull base surgery in the COVID era. How i do it. Eur Arch Otorhinolaryngol. 2021;278(2):573–6. doi: 10.1007/s00405-020-06441-6. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
- Garlapati K, Chavva S, Vaddeswarupu RM, Surampudi J. Fulminant mucormycosis involving paranasal sinuses: a rare case report. Case Rep Dent. 2014:2014:465519. [PMC free article] [PubMed] [Google Scholar]
- Dent.2014;2014:465919. [PMC free article] [PubMed] [Google Scholar]
 Ferguson BJ. Mucormycosis of the nose and paranasal sinuses. Otolaryngol Clin North Am. 2000;33(2):349–365. doi: 10.1016/S0030-6665(00)80010-9. [PubMed] [CrossRef] [Google Scholar]