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Retrospective Study of Incidence of Post Covid, Mucormycosis Cases in Tertiary Hospital

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ABSTRACT
***AIM & OBJECTIVE** : This is a retrospective study of incidence orbital manifestations in post covid cases and their response to IV retrobulbar antifungal agents.*
***RESULTS**: In this study , comprising of 200 cases over a period of 6 months , the orbital & ocular manifestations of mucormycosis in post covid cases has being studied . After surgical debridement of sinuses, and intravenous injections of Antifungal The response of these patient to retrobulbar amphotericin B injections has been established.*
***KEY WORDS** : COVID-19 , MUCORMYCOSIS , PTOSIS , PROPTOSIS AMPHOTERICIN-B , ORBITAL CELLULITIS*
***MATERIAL & METHODS :** The study has been done in the Department of Ophthalmology , SMC , Vijayawada*
Total number of cases – 200
Study period 6 months April 21 to September 21
***INCLUSION CRITERIA :** Post covid cases who presented to OP department with defective vision , headache , drooping of eyelids , proptosis orbital pain have been included.*
***EXCLUSION CRITERIA:** Patients with previous history of injury have been excluded.*

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I. Introduction:

Mucormycosis is caused by fungus, Rhiozpus oryzae intial site of involvement is paranasal sinues with secondary involvement of orbit & brain. 60-80% of these cases occur in diabetic patients & other risk factor include hematologic malignancies , usage of steroids, iron overload, immunosuppresants use. They can reach the orbit via hematogenous spread.They reach the orbit from respiratory tract by inhalation in case of immunocompromised hosts.

All fungi require iron for growth and virulence therefor, patients with iron overload are at increased risk. The acidotic environment of diabetic ketoacidosis promotes both phagocytic dysfunction and decreases in the iron-binding capacity of the blood , there by providing additional iron to the fungus.

ROCM can also present as a painless orbital apex syndrome without any signs of orbital celluitis. Invasion of the cavernous sinus and cavernous part of carotid artery may lead to carotid occlusion , cerebral infraction , fungal meningities , mycotic abcess , and eventually death.
Thrombosis of vessels results in tissue necrosis & black eschar formation over skin of nasal mucosa.

OCULAR : Decresed vision proptosis , peri orbital pain sudden fall of vision due to CRA oculsion.
Orbital infections are not only vision threatening but associated with high mortality.
After confirmation of diagnosis cases were selected for retrobulbar injection depending on following criteria :

1. Clinical evidence of orbital involvement
2. CT & MRI evidence of orbital cellulitis
3. Post FESS cases

Retrobulbar injections given to the patients

II. Results & Conclusions :

Total number of cases of Rhino orbital cerebral mucormycosis 536.
Cases with orbital involment 203

Table 1 : Male Female ratio

	Sex	No.of cases	%
1.	Males	125	61.57%
2.	Females	78	38.43%

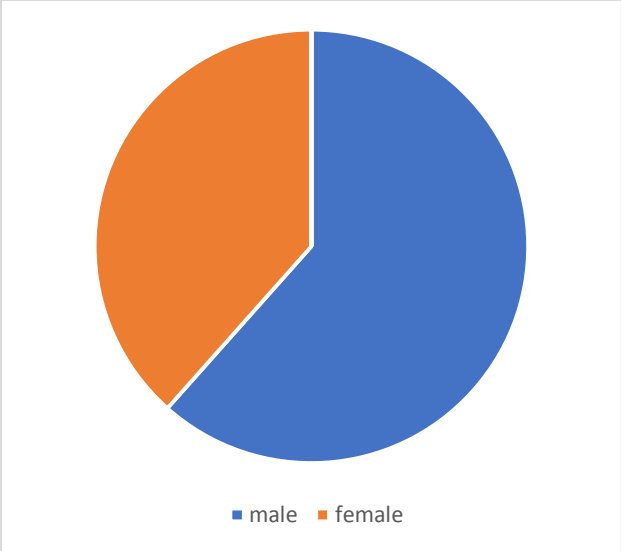


Table 2 : Vision at admission

S.No	Vision	No of cases	%
1.	6/6 - 6/12	38	18.7%
2.	6/18 – 6/60	5	24.75
3.	CF 3m	97	47.7%
4.	Hm	1	0.49%
5.	PL	9	4.43%
6.	NO PL	53	26.10%

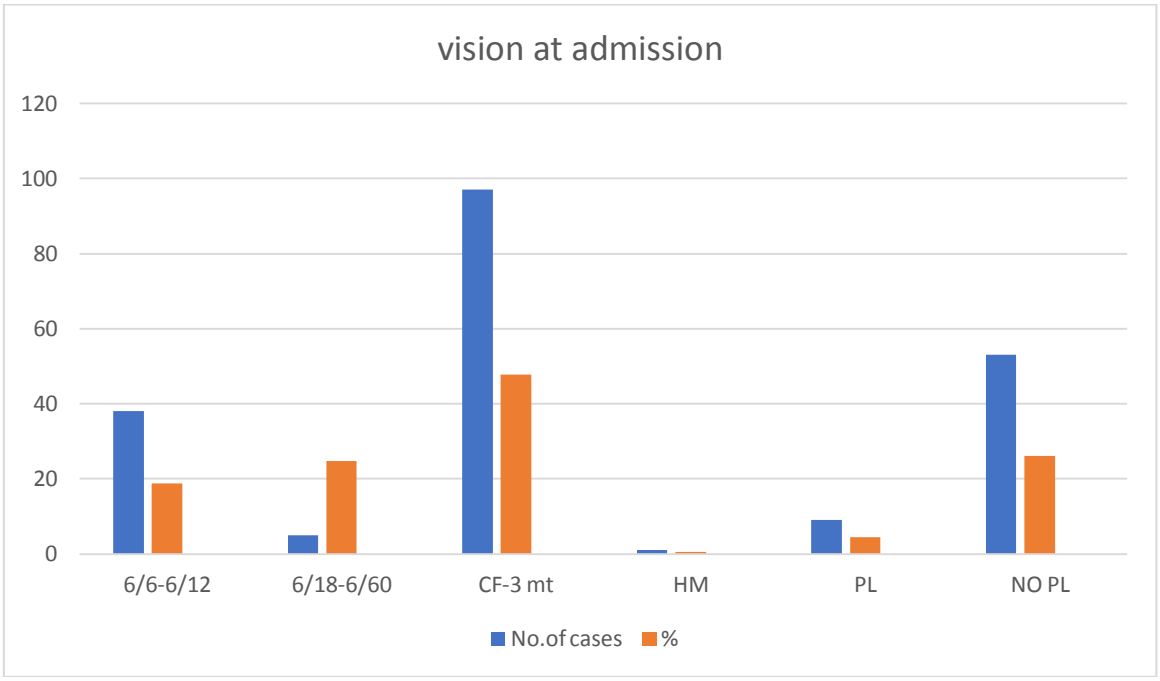


Table 3 : Eye Involved

EYE	NUMBER	%
Right Eye	87	43.8%
Left Eye	112	56.2%

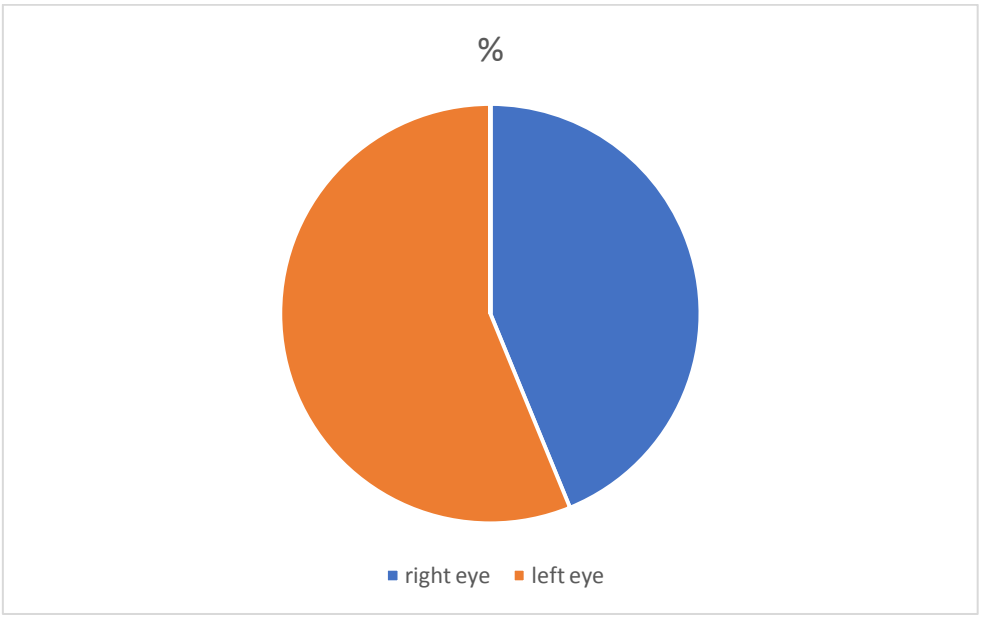
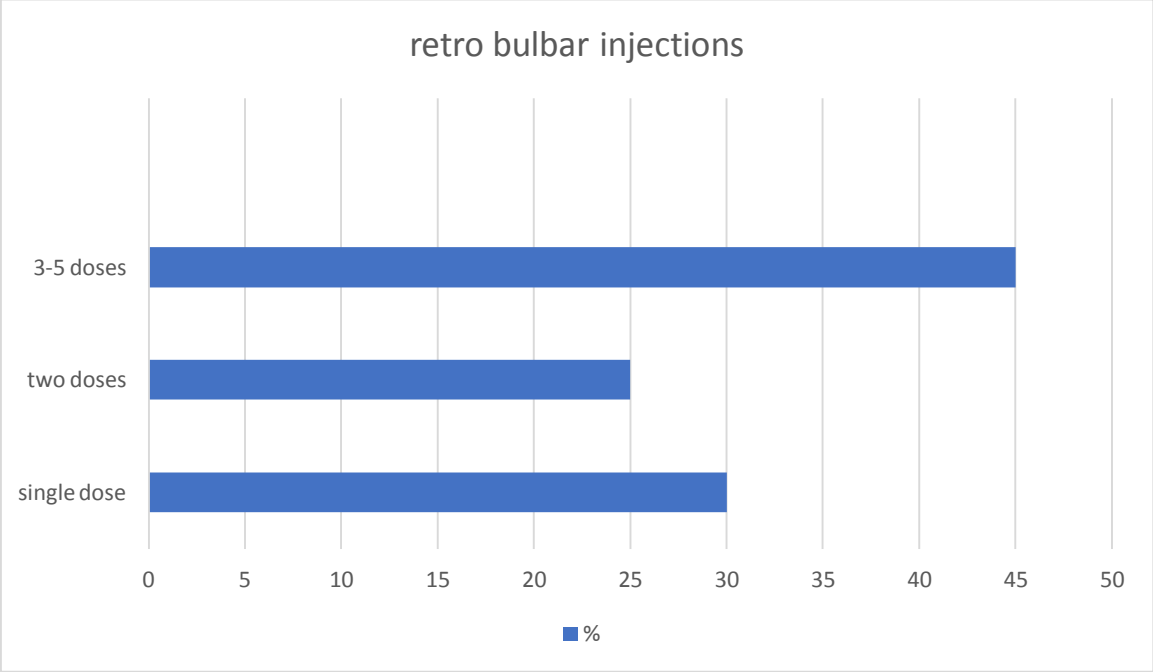


Table 4 : Doses of R.B Amphoterecin B Injection

1.	Single dose	30%
2.	Two doses	25%
3.	3-5 doses	45%



In our study , we have observed the folllowing

- Mucormycosis is more common in males
- Vision at admission CF 3meters no PL
- Pain , conjuctival inflammation , lid edema & proptosis were reduced following retrobulbar injections
- Visual improvement has been seen in 20% of cases & in remaining cases there was no change in vision .

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