“ Study of Mucormycosis and Liposomal Amphotericin B Prescription trend amongst the ENT Physicians ”

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Introduction

The Zygomycoses (Mucormycosis) are infections caused by fungi of the class Zygomycetes, comprised of the orders Mucorales and Entomophthorales. The Entomophthorales are rare causes of subcutaneous and mucocutaneous infections known as entomophthoromycosis, which largely afflict immunocompetent hosts in developing countries. In contrast, fungi of the order Mucorales are causes of Mucormycosis, a life-threatening fungal infection almost uniformly affecting immunocompromised hosts in either developing countries.Mucoraceae, Rhizopus oryzae (Rhizopus arrhizus) is by far the most common cause of infection. The study aimed to understand Mucormycosis and Liposomal Amphotericin B Prescription in treatment among the ENT Physicians. From the respondent collected from the survey reported that 59% of doctors examine 0-5 patients on monthly basis. 49% of physicians do not examine the cases of Mucormycosis.It was also observed that majority of the patients suffering from the Mucormycosis were immunocmpromised which includes underlying causes, like Diabetes, Cancer, AIDS or use of immunosuppressant agents in case of organ transplant. This study shows that Liposomal Amphotericin B is most prescribed drug and surgery is also preferable by doctors in severe cases.

Objective

The main objective to conduct this research is to understand the Mucormycosis and Liposomal amphotericin B market & suggest the Market developing strategies.

Primary Objectives

- To Find the Prescription pattern of liposomal amphotericin B in management of Mucormycosis.
- To understand the incidence, stages, first line therapy and duration of treatment of Mucormycosis.
- To study and understand the concept and process of marketing research.

Methodology

Sample Design:
Descriptive study

Sampling:
Non probability convenience sampling

Sample Size:
Respondents: 102

Sample Frame:
Private Doctors: 89
Government Doctors: 13

Sample population:
ENT Specialists (99)
ICU Consultants (03)

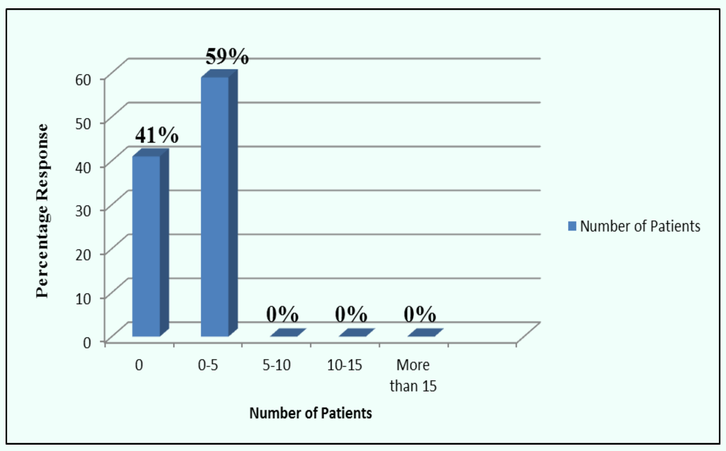
Sample area:
Different areas of Mumbai

Tools Used For Data Collection: Direct Questionnaire method

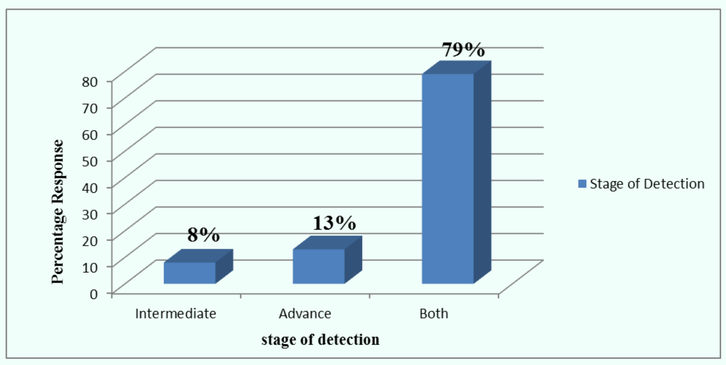
Type of Questionnaire: Semi-Structured

Findings

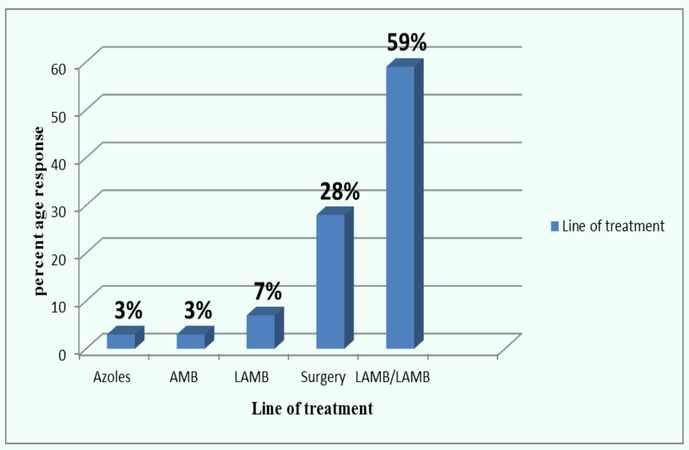
Total No of Patients examine per month



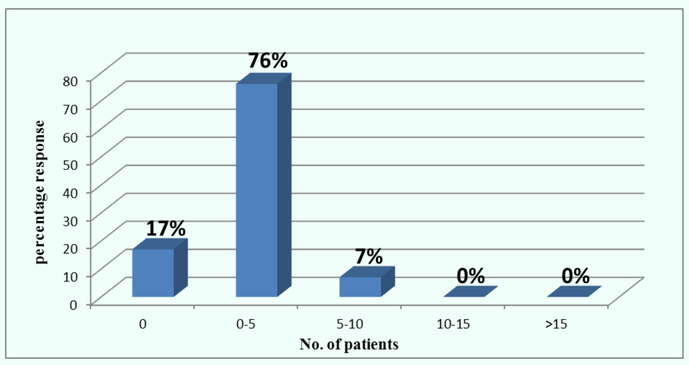
Stage of Detection



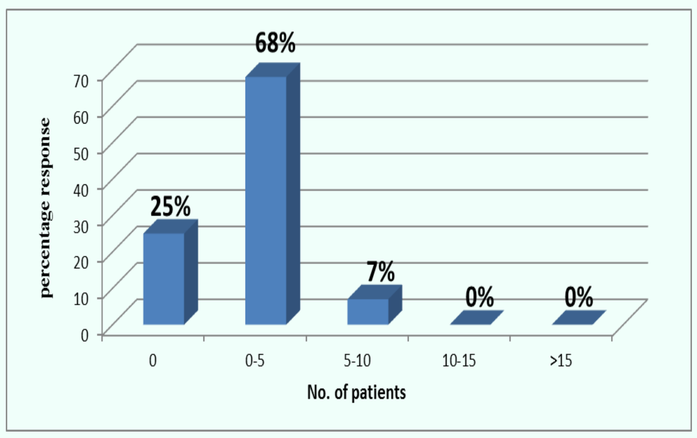
Preferred Line of Treatment



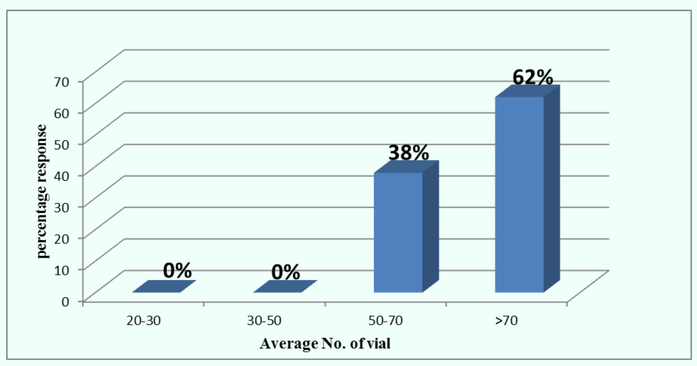
Total No. of Patients Treated with Liposomal Amphotericin B



Total No. of Patients Treated with Amphotericin B



Average No. of Vials used in treatment



Conclusion

Mucormycosis is frequently rapidly progressive, and antifungal therapy (liposomal amphotericin B) alone is often inadequate to control the infection. The rapidly progressive nature of Rhinocerebral Mucormycosis and the mortality rate associated with disease is 40-50% after treating with antifungal therapy. Early diagnosis is important because small, focal lesions can often be surgically excised before they progress to involve critical structures or disseminate. Unfortunately, there are no serologic or PCR-based tests to allow rapid diagnosis. It was found that up to half the cases of Mucormycosis are diagnosed postmortem and tissue necrosis in disease result in poor penetration of anti-infective (azoles and amphotericin B) agents to the site of infection. Finally, surgery is necessary due to the massive amount of tissue necrosis occurring during Mucormycosis, which may not be prevented by killing the organism. Surgical debridement of infected and necrotic tissue should be performed in severe cases.

- The overall finding of the study helped us to understand the prescription behavior of the ENT specialist and surgeon, the reason that influence them to prescribe the various brands of liposomal amphotericin B.
- The cost and dose are the two main factors that influence the prescription of liposomal amphotericin B.

Suggestions

- Increased coverage amongst the ENT physician.
- Awareness about the Mucormycosis disease to the doctors who do not examine the Mucormycosis cases.
- Providing favorable studies and data on Liposomal amphotericin B therapeutic efficacy in Mucormycosis to doctors as the prescription trend may shift towards combination therapy and new generation of azole derivative (e.g. posaconazole).
- Focus should be shifted from only ENT doctors to other Physicians, because it was found that ENT doctors involve other Physician also.
- Medical Representative should update doctors about Mucormycosis through online journals and research studies.

References

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- Atahan A Çagatay, Serkan S Oncu, Semra S Çalangu, Rhinocerebral Mucormycosis treated with 32 gram liposomal amphotericin B and incomplete surgery: a case report. BMC Infectious Disease. 2001; 1: 22.1471-2334-1-22.
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