

A study on the prevalence of fungal isolates among the Rhinosinusitis patients at CMCH Coimbatore .

**Introduction:** Rhinosinusitis is a common disorder affecting 20% of the population due to numerous causes. Fungi plays an important etiological agent. Invasive forms cause life threatening complications and also there are emerging drug resistance to fungi.**Aim :**The aim is isolate the fungi ,categorize the disease by histopathology, study the antifungal susceptibility by CLSI broth dilution and E-strip method and to compare both the methods. **Materials and Methods:** Prospectively 106 Rhinosinusitis patients undergoing DNE and FESS in ENT Department over a period of one year were included.Sinonasal polyps and aspirates are subjected for KOH mount and processed in two SDA slants with Gentamicin and incubated at 25° and 37°c for 4 weeks before labeling it as negative. Tissue samples were also sent for HPE and GMS Stain. slide culture and LPCB mount was used for microscopic analysis and correlated with HPE. All the isolates were tested by CLSI broth dilution using Amphotericin-B and Voriconazole for only Aspergillus species.E-test using Amphotericin-B is for all the isolates.Both the methods were compared.**Results:**21% prevalence identified . AFRS is 68% of FRS ,Aspergillus flavus(67%) being the most common fungi isolated.4.5% being Fungal ball, Aspergillus fumigatus isolated. 9% is AIFRS where Rhizopus species isolated.14% is CIFRS, Rhizopus being the common isolate.4.5% is CGFRS, Aspergillus flavus isolated. All 22 are culture proven,95% KOH and77%HPE proven. Bronchial asthma and DM are statistically significant risk factors for FRS. The mean age of occurrence also high(42.45years)and statistically significant. All the isolates shows MIC <2µg/ml to Amphotericin-B by broth dilution and E-Strip method. All the Aspergillus species shows low MIC with Voriconazole when compared to Amphotericin-B.**Conclusion:**AFRS is the commonest form of FRS, where Aspergillus flavus being common fungi. Though invasive forms shows low prevalence when compared to non invasive forms, life threatening complications are more. The presence of fungal elements in KOH and HPE is considered more significant than fungal culture alone. Taking CLSI as reference method ,E-strip showed good reproducibility. Voriconazole has good invitro susceptibility for Aspergillus species when compared to Amphotericin-B.

Key words: Fungal Rhinosinusitis,categorization,Aspegillus species