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Spectrum of paranasal sinus mycosis

Background: Fungi are uncommon causes of sinusitis. Many fungi have been associated with fungal sinusitis, including the *Aspergillus* species, *zygomycetes* species, several of the dematiaceous fungi including *Curvularia, Bipolaris* and *Exserohilum*. The etiological agents of fungal sinusitis reported from India vary from those of the western countries, wherein *dematiaceous* fungi are more common. *Aspergillus* spp., are more commonly isolated from the Indian subcontinent.

Aim: The aim of this study is to determine the etiology of fungal sinusitis and the associated predisposing factors in patients with chronic sinusitis, attending Department of Otolaryngology, Gandhi Hospital, Hyderabad, a tertiary referral centre.

Materials & Methods: Prospective study, approved by the Institution ethical committee, conducted from September 2011 to September 2014. 50 patients in age group of 10 to 63 years (with a mean age of 39.03 years) attending the Department of Otolaryngology, Gandhi Hospital were studied. Clinically suspected cases of Chronic Rhino Sinusitis (CRS), lasting longer than 3 months were included in the study. Children below 5 years were excluded from the study. Patients were evaluated on the basis of the clinical, radiological, mycological findings. Specimens of allergic mucin, exudate from the nasal mucosa, tissue biopsy from nasal polyps and sinus mucosa obtained intra operatively were collected and processed. All samples were received in sterile containers. Specimens were subjected to Microscopy (10% KOH, Histopathology) and culture.

Results: Out of 50 cases studied, fungal culture was positive in 22 (44%), found to be Common in young adults (20-40 years) with male to female ratio is 1:1. *Aspergillus* species (14) were the common isolates followed by *Rhizopus* species (3), *Alternaria* (1), *Curvularia* (1), *Penicillium species* (1), *Mucor* (1), *Aurobasidium pullolum* (1) each. Nasal obstruction (76.6%) and nasal discharge (56.6%) are the common complaints in these patients. In India *Aspergillus* spp., are more commonly isolated and vary from those of the western countries, wherein dematiaceous fungi are more common. In India, a large proportion of the population live in rural or semi-rural areas and their exposure to certain fungi will differ from urban population in developed countries.

Conclusion: In India no population-based data is available and more studies are needed.

Biography

Sudha Madhuri, MD in Medical Microbiology, working as an Assistant Professor in Department of Microbiology, Gandhi Medical College, Secunderabad since 9 years and Pursuing PhD on "Allergic Paranasal sinus Aspergillosis, under Dr. NTR University of Health Sciences, Vijayawada. Did MBBS & MD from Rangaraya Medical College, Kakinada, and Andhra Pradesh. India

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