

عنوان مقاله:

The Prevalence of Positive Fungal Cultures in Patients with Chronic Rhinosinusitis in a High Altitude Region of Iran

محل انتشار:

مجله علمی گوش و حلق و بینی ایران، دوره 24، شماره 1 (سال: 1391)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Introduction: There are suspended fungal spores in the air and in the nasal mucosa of adults, especially in areas with a humid climate. Several studies have revealed the role of fungi in the pathogenesis of chronic rhinosinusitis (CRS) in recent years but it is a topic of controversy, especially in regions with low humidity. The aim of this study was to evaluate the prevalence of fungal species in intraoperative specimens from patients who underwent functional endoscopic sinus surgery (FESS) for CRS in Hamadan, a high altitude region of Iran.

Materials and Methods: In this prospective cross-sectional study specimens were obtained from 62 patients with a diagnosis of CRS according to clinical and computed tomography criteria who underwent endoscopic sinus surgery. During the functional endoscopic sinus surgery, specimens were collected from the nose and sinuses of patients and preserved in conical centrifuge tubes containing Sputolysin and chloramphenicol. The specimens were then plated on Sabouraud dextrose agar, Mycosel agar, Niger seed agar, and Chrom Agar/Candida plates and incubated at 30°C for up to 1 month. At the end of the incubation period the samples were evaluated microscopically to detect fungi and identify their genera and species. **Results:** The fungal cultures were positive in 16 out of 62 patients with CRS (25.8%). In order of frequency the fungal genera and species were: *Aspergillus fumigatus* (9), *Aspergillus niger* (3), *Candida albicans* (2), *Penicillium* sp. (1) and *Cladosporium* sp. (1). The percentage of positive cultures collected was higher in winter but the difference was not statistically significant compared to the rest of the year. **Conclusion:** Our data show that 25.8% of patients tested positive for the presence of fungi. The results strengthen the theory regarding the role of fungi in the pathogenesis of CRS even in areas with low humidity. *Aspergillus* was the most commonly isolated fungus.

کلمات کلیدی:

Chronic Rhinosinusitis, Fungus, Altitude region

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