

Título: HYALINE FUNGI PREDOMINATE IN THE AIR DURING THE DRY SEASON OF A TERTIARY HOSPITAL IN THE CITY OF FORTALEZA, CEARÁ

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Resumo:

Because hospitals congregate people with suppressed immunity, it is particularly important to monitor their air quality. In this sense, the present study monitored the fungal microbiota of the air in different sectors of a public tertiary hospital that is a reference for treatment of patients with immunosuppression, during the dry season in the state of Ceará, northeastern Brazil. For this purpose, we obtained monthly air samples in the period from September through November 2014, from the following sectors: transplant unit, ICU and two reception areas (emergency and elective care). The samples were collected by the passive sedimentation method, with exposure for 1 hour in each sector of a Petri dish containing potato dextrose agar. The dishes were incubated for 7 days (28 °C) and after growth, the fungal colonies were counted and identified. During the sample collection, the maximum and minimum temperature and average air humidity were recorded. A total of 24 air samples were analyzed, from which growth was observed of 696 colonies, belonging to 8 genera, the most frequent being *Aspergillus* sp. (100%), in particular the species *A. niger*, and *Penicillium* sp. (100%). Other genera isolated were *Acremonium* sp. *Fusarium* sp., *Mucor* sp., *Scopulariopsis* sp. Because of the diversity of yeasts isolated – *Candida* sp. (100%) and *Rhodotorula* sp. (50%) – these deserve special attention for being present in all the samples obtained from the ICU and transplant unit. In particular, according to the literature *Candida* sp. are implicated in high fungemia rates in tertiary hospitals in many countries and are the main fungi that cause of bloodstream infections. The average maximum and minimum temperatures in the sectors were 28 and 22 °C and the relative air humidity was approximately 60%, considered propitious conditions for growth of fungi. Based on the cataloged data, it can be conclude that periodic monitoring of the distribution of fungi in hospital environments is necessary, because the level of contamination by these organisms can increase considerably, as a result, for example, of favorable micro-climate, as found in the dry season in the state of Ceará.

Palavras-chaves: airborne fungi, dry season, tertiary hospital.

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