

Two years of a fungal aerobiocontamination survey in a Florentine haematology ward.

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The control of microbial air contamination in hospital wards has assumed great importance particularly for those hospital infections where an airborne infection route is hypothesised, such as aspergillosis. Invasive aspergillosis represents one of the most serious complications in immunocompromised patients. For some authors there is a direct association between this pathology and the concentrations of *Aspergillus* conidia in the air; in addition, reports of aspergillosis concurring during building construction have been frequent. In this study, two haematology wards were monitored for about 2 years in order to make both a qualitative and quantitative evaluation of fungal burden in the air, also in relation to major construction and demolition work taking place in the same building. Air samples were taken from the hospital rooms of neutropenic patients, in the corridors of their ward and outside the building. Total fungal concentration resulted higher outside (mean 572 Colony Forming Units/m³ of air), lower in the corridors (147 CFU/m³) and even lower in the rooms (50 CFU/m³). In all the samples we found the development of at least one fungal colony. *Cladosporium* was the most frequently isolated genus (57%), in contrast to *Aspergillus* spp. (2%). The average concentration of *Cladosporium* spp. was 24 CFU/m³ in the rooms, 78 CFU/m³ in the corridors and 318 CFU/m³ outside. The average concentration of *Aspergillus* spp. was 1.2 CFU/m³ in the rooms, 3.5 CFU/m³ in the corridors, 5.6 CFU/m³ outside. Our observations show low concentrations of *Aspergillus fumigatus* and *A. flavus* in all the environments examined and particularly in the rooms (0.09 and 0.10 CFU/m³ respectively); this observation could explain the absence of cases of invasive aspergillosis during the period of air monitoring in the two haematology wards.

Fonte: <http://www.ncbi.nlm.nih.gov/>