Fungal infections have a high morbidity and mortality in immunocompromised people. Construction work, especially renovations, can release high loads of fungus in the air. In Sep 1997 renovations were begun in the older areas of a large academic teaching hospital. From Jul 1998 to Feb 1999, 11 cases of nosocomial aspergillus infection or colonization were diagnosed in immunocompromised people in the hospital (Graph). A matched case control study was performed to determine risk factors. The 11 cases were matched with 11 controls based on ICD-9 code, age, sex, and admission date. Ten of 11 patients with aspergillus had radiologic procedures in an area of the hospital that was undergoing renovation (Area B). Out of the 4 major areas of the hospital where radiological procedures are performed, having a procedure in Area B was the only one significantly associated (McNemar $\chi^2$, corrected = 4.17; $P < .05$) with aspergillus, though having a radiological procedure in Area A, also undergoing renovation, approached significance (McNemar $\chi^2$, corrected = 3.20; $P = .07$). Environmental cultures grew fungus from Area B. An environmental consultation was performed to identify sources of potential fungal contamination in these areas. Following this, aggressive control measures were instituted including a dust control policy (sealing off all construction sites, negative air pressure, HEPA filtered vacuum cleaners, covered debris containers with contents moistened for transport, floor mats, enhanced cleaning), rerouting patients when necessary, and requiring PFR 95 masks for immunocompromised patients who must pass near construction sites. During the following 6 months compliance with the protocols was excellent and only 2 cases of nosocomial aspergillus infections were identified. Aggressive dust control measures effectively reduced the risk of fungal contamination during renovations and should be used to protect patients especially those who are immunocompromised.
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