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Abstract (poster session)

Invasive aspergillosis among heart transplant recipients: a 24-year perspective

P. Muñoz*, I. Cerón, M. Valerio, J. Palomo, A. Villa, A. Eworo, J.V. Guinea Ortega, I.A. González, E. Bouza (Madrid, ES)

Background: Invasive aspergillosis (IA) has very high mortality in heart transplant (HT) patients (pts). However, no recent series provide an updated, non-biased perspective of the problem. Methods: Prospective follow-up of all HT pts from Aug 1988 to Aug 2011 (24-year study) with IA. Antifungal prophylaxis was started in Oct 1994. Results: IA was diagnosed in 31/479 consecutive HT pts (6.5%): 25 proven (80.6%) and 6 probable. The incidence of IA decreased: 74% of the cases occurred in the first 12 y (1988-1999). Early IA (first 3 mo after HT) accounted for 23 cases (median 34 d after Tx [19-58]) and 8 cases (26%) were late (median 125.5 days after HT [100-237]). The main risk factors were other cases of IA in the program (58.1%), CMV disease (54.8%), re-operation (38.7%) and post-Tx hemodialysis (19.4%). IA emerged despite antifungal prophylaxis in 8 cases with low levels (7 itra, 1 caspo). The most common symptoms were fever (45%), dyspnoea (35%) and cough (32%). Six pts were asymptomatic (19%). The predominant radiographic patterns were nodular (58%), cavitation (42%), pleural fluid (39%) and alveolar infiltrate (23%). IA affected the lungs (90.3%), central nervous system (CNS) (16%), mediastinum (9.7%), myocardium (6.5%) and skin, prostate and paranasal sinuses (3.2% each). Dissemination occurred in 26%. The efficacy of the diagnostic methods was as follows: culture 27/30 (90%) and PCR 4/5 (80%). Monotherapy was used in 77% (amphotericin B, 7; lipid amphotericin B, 12; voriconazole, 2), combined therapy in 7 pts (2 as rescue therapy) and surgery in 7 (22.6%). In 4 cases of early IA, diagnosis was postmortem. Related mortality was 32% (43.5% [10/23] in 1988-99 cases and 0/8 in 2000-2011). Mortality was lower in early cases (16% vs 58%, $p=0.074$). Risk factors for mortality in the univariate analysis were long pre-Tx stay, pre-Tx mechanical ventilation (MV), emergency surgery, OKT3 induction, concomitant CMV disease, CNS involvement (mortality 100%), alveolar infiltrate, need of MV (mortality 50%) and thrombocytopenia. Multivariate analysis showed that CNS involvement and CMV during IA were independent risk factors for mortality. Conclusion: The incidence of IA in HT has decreased, partially due to implementation of antifungal prophylaxis. Most cases occur in the first 3 months post-HT with a high frequency of disseminated disease and atypical sites of infection (heart, mediastinum, prostate). Mortality has decreased significantly in recent years.