Diagnostic yield of bronchoalveolar lavage following renal transplantation

F Reichenberger, M Dickenmann, Isabelle Binet, M Solèr, C Bolliger, J Steiger, F Brunner, G Thiel & M Tamm

Organ transplant recipients are at high risk of infectious pulmonary complications. In this retrospective study, the diagnostic yield of bronchoalveolar lavage (BAL) was evaluated in renal transplant recipients. The results were analysed in special regard to the clinical presentation of pulmonary infections and the possible impact of new immunosuppressive agents. Over a 5-year period 91 BAL were performed in 71 renal transplant recipients. Microorganisms were isolated from 69% of BAL (63/91): bacteria 32%; cytomegalovirus (CMV) 27%; Pneumocystis carinii (PC) 22%; other viruses 9% (HSV; EBV, RSV, adenovirus, HHV8); Aspergillus fumigatus 1%. Total cell counts and neutrophil counts in BAL were significantly elevated in bacterial infection, whereas BAL positive for PC showed eosinophilia (P<0.05). There was no association between clinical symptoms and the radiological pattern of infiltrates and the type of infection. Immunosuppression containing tacrolimus or mycophenolate mofetil was associated with a significantly higher percentage of PC and CMV infections compared to cyclosporin-based immunosuppression (65% vs. 30%, P<0.005). A considerable number of PC and CMV infections occurred beyond 6 months after transplantation. In conclusion, BAL has a high diagnostic yield in renal transplant recipients. Infection with CMV and PC should also be considered beyond 6 months after transplantation, and prophylaxis for opportunistic infections should be given if the immunosuppression is intensified.