

## Pulmonary Fungal Infections in Kidney Transplant Recipients: An 8-Year Study

Sharifipour, F., Rezaeetalab, F., Naghibi, M.  
Mashhad University of Medical Sciences, Mashhad, Iran

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### Abstract

Invasive fungal infections are among the most important causes of mortality among transplant patients. One of the most common manifestations of these infections is pulmonary fungal infection (PFI). The present study sought to evaluate the rate of PFI in kidney transplant patients. **Materials and Methods:** We retrospectively analyzed the data of 290 patients who underwent kidney transplantation from February 1999 to February 2007. Bronchoalveolar lavage (BAL) culture and tissue biopsy were used to confirm PFI. **Results:** Thirteen of 290 patients (4.5%) experienced PFI. The most common pathogen (4/13, 31.0%) was *Aspergillus*, with 6 (38.0%) infected with *Aspergillus* only, 2 (15.4%) with both *Aspergillus* and *Candida*, and 1 (7.7%) with *Aspergillus* and mucormycosis. Seven of 13 (53.8%) died and 4 (30.8%) lost the transplanted kidney. Immunosuppressive therapy following rejection and prescription of broad spectrum antibiotics were the most important risk factors for fungal infections in these patients. **Conclusions:** Fungal infections are among the most important causes of mortality among transplant patients, of which the most common manifestation is pulmonary. Immunosuppressive therapy and broad spectrum antibiotics are important risk factors, and *Aspergillus* is the most common pathogen responsible for fungal infections. © 2009 Elsevier Inc. All rights reserved.

## Reaxys Database Information

### Indexed Keywords

**EMTREE drug terms:** amphotericin B; antibiotic agent; azathioprine; cyclosporin; fluconazole; itraconazole; methylprednisolone; mycophenolic acid  $\gamma$  morpholinoethyl ester; prednisolone; thymocyte antibody

**EMTREE medical terms:** acute pyelonephritis; adult; antibiotic therapy; article; *Aspergillus*; *Candida albicans*; drug pulse therapy; *Escherichia coli* infection; female; graft failure; human; human tissue; immunosuppressive treatment; incidence; infection; infection risk; kidney failure; kidney graft rejection; kidney transplantation; *Klebsiella pneumoniae* infection; lung abscess; lung aspergillosis; lung biopsy; lung infiltrate; lung lavage; lung mycosis; lung tuberculosis; major clinical study; male; mortality; neutropenia; perianal abscess; priority journal; retrospective study; treatment outcome

**MeSH:** Adult; Aspergillosis; Biopsy; Graft Rejection; Humans; Kidney Transplantation; Lung Diseases, Fungal; Middle Aged; Mycoses; Radiography, Thoracic; Reoperation; Retrospective Studies; Risk Factors; Tomography, X-Ray Computed; Young Adult

*Medline is the source for the MeSH terms of this document.*

**Chemicals and CAS Registry Numbers:** amphotericin B, 1397-89-3, 30602-87-0; azathioprine, 447-87-7; cyclosporin, 79217-70-0; fluconazole, 86386-73-4; itraconazole, 84720-71-7; methylprednisolone, 7923-42-8, 83-43-2; mycophenolic acid  $\gamma$  morpholinoethyl ester, 116780-01-4, 128794-94-0; prednisolone, 50-24-8

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