

## **Treatment of adenovirus pneumonia with cidofovir in pediatric lung transplant recipients.**

**Doan ML, Mallory GB, Kaplan SL, Dishop MK, Schechter MG, McKenzie ED, Heinle JS, Elidemir O.**

Department of Pediatrics, Section of Pulmonology, Congenital Heart Surgery Service, Baylor College of Medicine, Texas Children's Hospital, Houston, Texas 77030, USA.

**BACKGROUND:** Adenovirus pneumonia results in significant morbidity and mortality in lung transplant recipients. Cidofovir allows for directed therapy but can result in nephrotoxicity. We report our experience with cidofovir for the treatment of adenovirus pneumonia in pediatric lung transplant recipients. **METHODS:** In a retrospective review, we identified four cases of culture-proven adenovirus pneumonia in children who underwent lung transplantation at Texas Children's Hospital (TCH). All patients received cidofovir 1 mg/kg every other day or three times a week for a total of 4 weeks. Probenecid and intravenous hydration were administered in conjunction with the cidofovir. Intravenous immunoglobulin (IVIg) was given as adjunctive therapy, and immunosuppression was not modified during the treatment course. **RESULTS:** The four cases of adenovirus pneumonia comprised 4 of the 54 (7%) lung transplantations performed at TCH from 2002 to 2006, and all were in children <3 years of age. All patients developed pneumonia within 2 months after transplantation. With cidofovir treatment, three of the four children survived. Among the survivors, two developed early bronchiolitis obliterans within 1 year after transplant, and one has continued to have good graft function at 2 years after transplant. All patients maintained normal renal function throughout the treatment course. **CONCLUSIONS:** Pediatric lung transplant recipients <3 years of age are at increased risk of adenovirus pneumonia early after transplantation. Cidofovir, when used in the modified dosing regimen and in combination with IVIg and renal protection measures, is a safe and potentially effective treatment option for adenovirus pneumonia in lung transplant recipients.

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