Summary

• Induction therapy in lung transplantation: initial single-center experience comparing daclizumab and anti-thymocyte globulin

BACKGROUND: Acute and chronic rejection remain unresolved problems after lung transplantation, despite heavy multidrug immunosuppression. In turn, the strong immunosuppression has been responsible for mortality and pervasive morbidity. Because acute rejection is associated with inferior outcomes in lung transplantation, we have routinely employed anti-thymocyte globulin (ATG), or daclizumab as adjuncts to reduce rejection. Daclizumab is a human monoclonal antibody that binds to the interleukin-2 receptor.

METHOD: We performed a controlled clinical trial of these 2 therapies to determine differences in post-operative rejection, infection, bronchiolitis obliterans syndrome (BOS) and survival. 25 consecutive lung transplant patients received ATG (n = 12)(Group 1) and daclizumab (n = 13)(Group2) as induction agents. The groups had similar demographics and immunosuppression protocols differing only in induction agents used.

RESULTS: No differences were observed in immediate post-operative outcomes such as length of hospitalization, ICU stay, or time on ventilators. No patient receiving daclizumab developed drug specific side-effects.

There were no significant differences in the number of epizodes of acute rejection, freedom of BOS or infections between the groups. Freedom from acute rejection was significantly greater with daclizumab than with ATG (p=0.037).

The 1-year survival for Group 1 was 67% and for Group 2 77% (p=0.584).

CONCLUSIONS: This report suggests that induction therapy with a two-dose regimen of daclizumab appears to be safe and well tolerated in patients undergoing lung transplantation. Although daclizumab offers a low risk of drug specific sideeffects, no drug is superior in delaying rejection or BOS or in prolonging long-term survival.

• Cyclosporine-related neurotoxicity in a patient after bilateral lung transplantation for cystic fibrosis

Cyclosporine (CsA) is a widely used immunosuppressant following solid organ transplantation. CsA administration is associated with a number of systemic complications, including neurotoxicity. A 33-year-old man with cystic fibrosis, who underwent bilateral lung transplantation, presented with severe neurotoxic symptoms leading to coma in association with CsA administration combined with high doses of methylprednisolone for treatment of an acute rejection episode. After discontinuation of CsA, a quick resolution of his clinical status was observed, as well as of the pathological findings on magnetic resonance imaging (MRI). CsA was replaced with tacrolimus leading to an uneventful course.