TRANSPLANTATION PROCEEDINGS

INTERNATIONAL ORGAN TRANSPLANT FORUM

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THOMAS E. STARZL

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AWARD WINNING PRESENTATIONS

First Prize

Studies on FK506 in Experimental Organ Transplantation

T. Ochiai, K. Sakamoto, M. Nagata, K. Nakajima, T. Goto, S. Hori, T. Kenmochi, T. Nakagouri, T. Asano, and K. Isono

Department of Surgery, School of Medicine, Chiba University, Japan

Second Prize

Indication, Technique, and Results of Liver Graft Volume Reduction Before Orthotopic Transplantation in Children

M. Salizzoni, T. Yandza, P.J. Kestens, B. de Hemptinne, and J.B. Otte

Cliniques St-Luc, Brussels

Transplantation Proceedings

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The Hellenic Transplantation Society — *The Canadian Transplantation Society*
The Transplantation Society of Australia and New Zealand
The Scandinavian Transplantation Society

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NOTICE

Dr S.E. Skanes of The Royal Victoria Hospital, Montreal, Canada, wishes to inform the readership that the correct authorship of the article "Tissue Transplantation for Reconstructive Surgery," which appeared in TRANSPLANTATION PROCEEDINGS, 1986, Volume 18:898-900 is: S.E. Skanes, D.D. Samulack, R.D. Daniel, and E.P. Egerszegi.

Quadruple-Drug Induction Therapy in Highly Sensitized Patients

W-D. Illner, S. Schleibner, D. Abendroth, and W. Land

THE IMMUNOLOGIC prognosis of a renal allograft correlates—at least in part—with the state of preformed cytotoxic antibodies of the recipient. Patients with reactivity against more than 50% of the test panel had an inferior graft outcome compared with patients with fewer or no antibodies.[1,2] To demonstrate a beneficial effect of quadruple-drug induction therapy in highly sensitized patients we treated 40 presensitized recipients with an immunosuppressive protocol consisting of low-dose cyclosporine (CyA), azathioprine, antilymphocyte/antithymocyte globulin (ALG/ATG), and high-dose steroids for a short period of time. In this study group we expected a reduced nephrotoxic side effect of CyA, a satisfied immunosuppressive index, and an acceptable complication rate. Parts of this study have already been published elsewhere.[3]

PATIENTS AND METHODS

From August 1985 to August 1987 we performed 40 cadaveric kidney transplantations in highly sensitized patients. The latest mean level of preformed lymphocytotoxic antibodies was 65% (minimum, 30%; maximum, 98%). Seventeen of these patients received a first graft, 17 patients received a second transplant, four patients received a third graft, and two patients received a fourth transplant. Most of the recipients received a well-matched graft. The mean mismatch at the HLA-A locus was 1.1; at the HLA-B locus, 1.2; and at the HLA-DR locus, 0.6.

The immunosuppressive protocol (induction phase) consisted of CyA starting at 6 mg/kg body weight orally, and later increased to achieve whole blood target CyA trough levels between 300 and 500 ng/mL, azathioprine at 1 to 2 mg/kg body weight for 3 weeks, ATG/ALG at 4 mg/kg body weight for seven days, and methylprednisolone at 500 mg/d tapered to 30 mg/d within 1 week.

RESULTS

The 2-year graft survival probability (Cutler/Ederer formula[4]) in this study group is 72% (Fig 1). No patient died during the follow-up period from August 1985 to August 1987. The infection rate of 15% is low. The myelodepressive effect in 22% was reversed in all patients after withdrawing azathioprine therapy. Acute nephrotoxicity was observed in only three patients.

CONCLUSION

Quadruple-drug induction therapy improves kidney graft survival in highly sensitized patients. This immunosuppressive protocol is a safe approach because the infectious complications are low and the early nephrotoxic side effect of CyA is greatly reduced. The frequency of rejection episodes (55%) is increased, and this is the point of great interest—most of them are associated with CyA trough values smaller than 200 ng/mL within 2 weeks posttransplant (Fig 2). The reversal

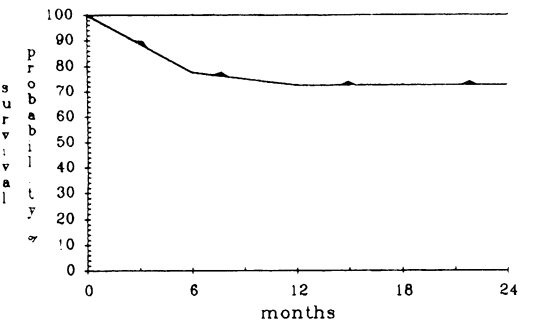

Fig 1. Survival in highly sensitized patients. Two-year graft survival probability (Cutler/Ederer formula) in this study group from August 1985 to August 1987. ▲, Graft survival; —, patient survival.

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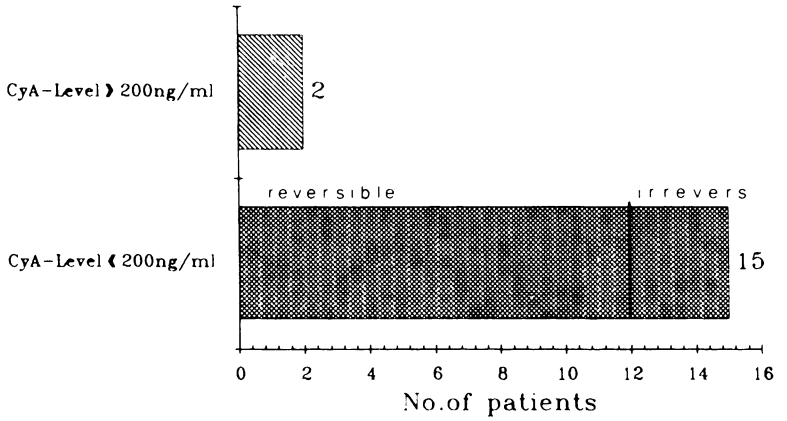

Fig 2. Rejection episodes related to CyA trough blood levels in sensitized patients, n = 40.

under antirejection treatment might suggest that the starting dose of CyA (6 mg/kg body weight orally) was not sufficient and should be corrected to get CyA trough levels above this value, at least in this category of patients.

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