OKT3 Therapy in Highly Immunized Patients after Renal Transplantation

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Dear Sir,

Conventional immunosuppression is not as successful in highly immunized patients, indicated by a high leukocyte antibody titer (LAB), as in patients with a negative LAB titer. Therefore, we treated severe rejections of 5 highly immunized patients (LAB titer $n = 2 > 40\%$; $n = 3 > 80\%$) with OKT3, a monoclonal antibody with a specific effect on T-cell-receptors (total number of transplants in 1987 in our center $n = 120$). OKT3 was given as a single 5 mg (i.v.) bolus injection per day following 100 mg prednisolone and 100 mg indometacin supp. for between 10 and 14 days. The well-known exclusion criteria, e.g. fluid overload, were taken into consideration before treatment.

The observation time after OKT3 therapy was more than 6 months in general. One patient is now observed for more than 17 months after OKT3 treatment which was given 10 days after his fourth renal transplantation. Despite several rejections during the first half year renal function remained stable during the follow-up period in all cases. After OKT3 treatment all following rejections became 'steroid-sensible'.

One graft has been lost due to irreversible rejection 12 months after OKT3. One patient died during a hypertensive crisis half a year after OKT3 treatment (tables I, II).

These data support the widespread experience that OKT3 is an excellent drug for treating acute rejection [1, 2]. The outcome of the transplants in our highly immunized patients is very good in comparison to a conventional treatment.

There is no doubt that the loss of the two grafts in our small series reported here is not connected with OKT3 therapy! In the follow-up period of 6 months after OKT3 therapy, serum creatinine, stability of renal function and number of rejections after OKT3 treatment show that OKT3 should especially be taken into consideration when treating rejections in highly immunized patients.

Table I. HLA-mismatching

Creati- r

nine

mg/dl

HLA locus A1 A2 B1 B2 D1 D2 n

+ = Identical, - = mismatch.

n = Number of blood transfusions; h = cold ischemia time; $r \approx$ number of rejections.

Table II. Renal allograft function and frequency of rejections during the first half year after OKT3 therapy

References

Goldstein, G.: Therapeutic use of the monoclonal antibody Orthoclone OKT3. Transplant. Proc. /Ø:suppl. 1 (1987).