PROGNOSTIC FACTORS

In the past decennia results of organ transplantation have improved considerably by the clinical introduction of more advanced immunological methods for the prevention of graft rejections. These prognostic factors include HLA-matching of donor and recipient especially with respect to HLA class II antigens and the use of cyclosporin A as an immunosuppressive drug. The clinical success accompanying their application is illustrated in Figure 1 by the results of the Renal Transplant Unit Groningen.

In 1979 the availability of serological methods for HLA-DR typing opened the way to donor recipient matching for HLA class II antigens. The application of this innovative matching criterium is accompanied by a significant improvement of the transplantation results.

A second marked increase in cumulative graft survival data is seen after the introduction of cyclosporine as immunosuppressive agent. It proves to be more potent in controlled graft rejection than the conventional drugs like imuran and prednisolon.

Although very promising to us this prognostic outlook of organ transplant recipients is quite limited because it focusses our attention to graft survival only during a relatively short period after transplantation.

The problems which are still present are illustrated by the case history of our patient with a heart transplantation because of a severe dilatating cardiomyopathy. In such cases HLA typing and matching of donor and recipient cannot be performed because the organ preservation time is limited to six hours. There was initially a good functioning donor heart until three weeks after transplantation clinical symptoms of rejection became apparent, which obviously occurred in spite of his immunosuppressive treatment with cyclosporine and prednisolon. Antilymphocyte globulin was given to the patient as an antirejection treatment. However, this had to be stopped because he developed clinical signs of cytomegalovirus infection.

Attention will be given to cytomegalovirus (CMV) infections as an additional prognostic factor of organ transplant recipients.
Fig. 1. Cumulative graft survival rates from the Renal Transplant Unit Groningen (Dr. A.M. Tegzess).

P+I = Immunosuppressive treatment with Prednison and Imuran; CyA = cyclosporine A; 68-78 = years; N = numbers of transplanted patients. During 79-82 the middle curve, typing and matching for HLA class II was performed and further continued in 83-86.

Fig. 2. The immunosuppressive dilemma constitutes an important prognostic factor for the graft function and quality of life of its recipient. A correct clinical diagnosis of graft rejection and cytomegalovirus infection is necessary for giving the right decision about increasing immunosuppressive treatment in the case of graft rejection of lowering it for facilitating the hosts' immunity to recover from the cytomegalovirus infection.