Preliminary Communication

EPSTEIN BARR VIRUS SEROLOGY ASSOCIATED WITH POST TRANSPLANTATION RENAL LYMPHOPROLIFERATIVE DISORDER

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INTRODUCTION

One of the serious complications of solid organ transplantation is developed of B-cell expansion in the transplant recipient. This reaction is called post transplantation lymphoproliferative disorder (PTLD) and occurs in 1% to 10% of organ cases depending on the transplant type. The lymphocytic proliferation range from reactive B-cell hyperplasia to large cell lymphoma and are often associated with Epstein Barr virus (EBV) - PTLD. They generally regress after reduction of immunosuppression. Primary infection in renal allograft recipients carry EBV infection. Probability of PTLD is further increased by concomitant use of anti-lymphocytic antibodies and infection with cytomegalovirus.

MATERIALS AND METHODS

We have investigated 65 recipients of renal allograft from cadaveric donors who were operated at our institute. Immunosuppressive regimen consisted of cyclosporine (CsA), azathioprine (Aza), Prednison (Pre) and MMF. Ten patients underwent induction therapy with antibodies with anti-thymocyte globulin (ATG) and monoclonal antibody (OKT3). Serum samples were collected prospectively from all patients before transplantation and at 3, 6, 9, and 12 months after transplantation. The following tests were performed: EA IgM, EA IgA, EA IgG, and EBNA IgG by ELISA.

Samples of peripheral blood were obtained and number of copies of EBV DNA measured by means of quantitative PCR.

RESULTS

At the moment of transplantation 78.5% of kidney recipients had serological symptoms of previous infection and 13.8% were detected reactivation of EBV and primary infection in 4.6% of patients. After first transplantation, primary infection developed in 6.5% of recipients and reactivation occurred in 27%. Only 2 patients were seronegative at the moment of transplantation. One of them developed primary infection during post transplant course. There is no data suggesting the development of PTLD in this patient with primary EBV infection. During 12 months after transplantation 13.8% of patients developed CMV infection.

DISCUSSION

There is a high rate of seropositivity against EBV antigens among population of renal allograft recipients (78.5%) and kidney donors (88.6%) which creates low risk of development of PTLD. There is no increase in EBV replication immediately after transplantation and the risk of development of PTLD is related to initial viral load and this data shows that in population of recipients this risk is relatively low. CMV infection may be associated with reactivation of EBV.

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