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Case Report

Post-transplant Lymphoproliferative Disorder Following Kidney Transplantation: A Case Report

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ABSTRACT

Posttransplant lymphoproliferative diseases are complications that develop after solid organ transplantation. Primary EBV infection is one of the most important risk factors. After deceased kidney transplantation, we presented a young male patient diagnosed with diffuse large B-cell lymphoma.

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Introduction

Post-transplant lymphoproliferative disease (PTLD) is a severe complication of solid organ transplantations (SOT) associated with immunity changes. Risk factors are the degree of immunosuppression, recipients age, allograft type, and the most important is post-transplant primary EBV infections (i.e. recipient is EBV-seronegative before transplantation).[1] Herein, we presented a kidney transplant recipient diagnosed with diffuse large B-cell lymphoma.

Case Report

A 26-year-old male patient with a 5-year history of hemodialysis treatment for chronic kidney failure due to polycystic kidney disease had a kidney transplant from a deceased donor in June 2020. After transplantation, his nephrologist has started azathioprine (1x50 mg) and tacrolimus (2x4.5 mg) treatments to prevent rejection. In the tenth month of transplantation, he presented to the gastroenterology department with abdominal pain and loss of weight. After examination with gastroscopy and colonoscopy (with a sigmoid colonic biopsy), he was diagnosed with diffuse large B-cell lymphoma (DLBCL) and he was also EBV-positive. Then, the patient was admitted to the haematology department. A PET-CT scan demonstrated increased metabolic activities at the thyroid gland, neck (zone-II), right lung (lower zone), and right lobe of the liver, sigmoid colon, and caecum. He was evaluated as stage 4B-disease. We did not prefer chemotherapy at the first line. The nephrologist adjusted the immunosuppressive treatment to prevent graft rejection, taking into account the DLBCL treatment. Azathioprine was

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discontinued, half-dose tacrolimus was continued, and the mTOR inhibitor everolimus 2x1.25 mg was started. After three months, serum creatinine levels were stable. His complaints regressed, and a newly performed PET-CT scan demonstrated near-complete regression, so the treatment has proceeded. Another PET-CT scan after seven months of treatment revision didn't reveal any malignancy-associated metabolic activity. We considered the patient with stable renal function and no clinical complaints to be in remission.

Discussion

PTLD incidence is a variable of the type of SOT. This ratio is 1-3% after kidney transplantation. Studies suggest that this difference may be due to more aggressive immunosuppression in some solid organ transplantations in the early period. PTLD following kidney transplantation is not frequent, but it is more upfront relative to other SOTs because kidney transplantation is more common.[2,3]

PTLD can present itself either as a focal lesion in an organ or involvement of the allograft directly. The symptomatology of PTLDs differs according to the involved organ. Constitutional symptoms, lymphadenomegaly and hepatomegaly can be seen in patients with all PTLDs. However, organ-specific symptoms may occur if the allograft is involved. In the current approach, the goal is to reduce the usage of immunosuppressive therapy as a first-line treatment.[3,4] Most of the PTLDs are originated from the B-cells. Therefore, monoclonal antibodies are chosen for second-line treatment. Conventional chemotherapy is also an option for the treatment of PTLD.[4] As in our case, it would be beneficial to treat and monitor these cases with a multidisciplinary approach.

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Conflict of interest

The authors declared that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Authors' Contribution

Study Conception: TZT, OC; Study Design: TZT, OC; Supervision: TZT, FO; Materials: TZT; Data Collection and/or Processing: TZT, OC, FO; Statistical Analysis and/or Data Interpretation: TZT, OC; Literature Review: TZT, VO; Manuscript Preparation: TZT, YG; Critical Review: TZT, TE.

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