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Patient and Renal Outcomes of Posttransplant Lymphoproliferative Disorder Following Solid Organ Transplantations - A Single Center Experience

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Introduction: Post-transplant Proliferative Disorder (PTLD) is a significant complication after solid organ transplantation (SOT). Major risk factors that contribute to the development of PTLD include Epstein-Barr Virus (EBV) infection and degree of immunosuppression. Despite novel therapies, the 5-year survival rate of PTLD only improved from 40% to 50% over the years. The reported 5-year survival rate of PTLD also remains significantly lower compared to around 90% in other malignancies such as breast and colon cancer. In our center, we hypothesize better transplant outcomes compared to those reported in preceding literatures.

Methods: We retrospectively reviewed the electronic medical records of all patients who had a SOT followed by the diagnosis of PTLD from the last 10 years. We collected donor and recipient characteristics, time interval between SOT and PTLD diagnosis, disease characteristics based on the WHO 2017 classification, response to treatment, and outcomes. We calculated the mortality rate and graft failure rate to evaluate patient survival and allograft survival outcomes.

Results: In our center, there were 32 patients that underwent a SOT and were later diagnosed with PTLD. Of them, 12 were female, and 8 were non-Hispanic blacks. PTLD was diagnosed in 18 kidney transplants, 11 liver transplants, 2 simultaneous kidney-pancreas transplants, and one simultaneous liver-kidney transplant. Mean time from SOT to PTLD diagnosis was 63 months, with 13 patients diagnosed in the 1st year post transplant. The main PTLD subtype was

monomorphic B-cell lymphoma (20/32 patients) and 16 of them were diffuse large B cell lymphomas (DLBCL). Three patients had graft involvement by PTLD. Mean serum creatinine was 2.29 mg/dL, with mean follow up time of 57.7 months. There were 11 deaths in the cohort (33%), and 5 graft failures (15%) at the five year follow up mark.

Discussion: Patient survival and allograft survival in PTLD patients are better in our center than reported in the literature. In our cohort, PTLD was not a significant cause of graft failure after 5 years of follow up. Further studies are needed to look at the disease characteristics that will help determine more specific prognostic factors.