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A 61-year-old Filipino Male Post Kidney Transplant Patient with Increasing Creatininne Diagnosed with BKPV Nephropathy and Subsequently Developed Antibody-Mediated Rejection (Case Report)

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Objectives : 1. To discuss a case of a post kidney transnplant patient diagnosed with BK Nephropathy 2. To identify the signs of BK Nephropathy and antibody-mediated rejection 3. To find the balance between immunosuppresion and avoiding antibody-mediated rejection
Methods : Patient underwent BK PCR measurement, donor-specific antigen retesting, withdrawal of immunosuppression and slow reintroduction, and therapeutic plasma exhchange.
Results : A 61-year-old Filipino male who underwent living, non-related kidney transplantation last October 2023. He is a known case of Chronic Kidney Disease Stage V secondary to Diabetic Nephropathy since 2021. Pretransplant work-up revealed High Immunologic Risk and patient underwent Rituximab Infusion, IVIg infusion, therapeutic plasma exchange and Rabbit Anti-Thymocyte Immunoglobulin infusion pretransplant. Post transplantation, patient was maintained on Tacrolimus, Mycophenolate Mofetil and Prednisone and had a baseline creatinine of 1-1.2mg/dl. Five months after transplant, patient had increasing creatinine of 2-2.5mg/dl with trace proteinuria on Urinalysis. BK PCR revealed 2, 845, 845 copies/ml and DSA were unremarkable. Kidney biopsy done showed viral inclusion bodies and Acute tubulitis. Withdrawal of immunosuppresion was done, however, noted increasing creatinine trends were again noted 4 months after with more significant proteinuria. Patient then underwent repeat therapeutic plasma exchange.
Conclusions : BK virus nephropathy (BKVN) is a significant complication in kidney transplant recipients, caused by BK virus reactivation due to prolonged immunosuppression. It leads to tubulointerstitial nephritis and progressive allograft dysfunction, often diagnosed by viral load monitoring and biopsy findings of viral cytopathic changes. The primary treatment strategy involves reducing immunosuppression to allow the immune system to clear the virus; however, this carries a risk of acute rejection, particularly antibody-mediated rejection (ABMR) in patients with donor-specific antibodies. Careful immunosuppressive adjustments, combined with close monitoring of BK viremia, donor-specific antibodies, and allograft function, are crucial for optimizing long-term transplant outcomes.