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TTS 2024

ISTANBUL TURKEY

September 22-25
+ Virtual October 21-23

Rapid reduction of mycophenolate mofetil and calcineurin inhibitor dose for treating BK polyomavirus virus infection in renal transplant patients

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Introduction



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- **BK polyomavirus virus (BKV) infection is an important cause of graft kidney loss in renal transplant patients.**
- **In previous reports, in incidence of BK viremia (BKV) were around 30% of renal transplant recipients.**
- **Current guidelines from the American Society of Transplantation Infectious Diseases Community of Practice suggested reducing immunosuppressants as primary intervention for biopsy proved BKV associated nephropathy.**



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Results

- **Common treatment for such groups including switching from tacrolimus to cyclosporine-A, from mycophenolate to mTOR inhibitors or prescribing leflunomide for the patients.**
- **However, currently study lack definite evidence on how best to switch drugs or reduce the dose of immunosuppressants.**





Methods

- **Transplant recipients from a single center, Chang Gung Memorial Hospital Linkou branch from 2015~2024 were included through medical records.**
- **The patient's basic characteristics including age, sex, Body mass index, renal function, BKV viral load were recorded.**
- **Biopsy proven rejection rate for the patients were calculated as our primary outcome.**





Results

- **The 2 groups: One with rapid reduction of mycophenolate mofetil (MMF) and calcineurin inhibitor (CNI) and another without.**
- **Lower BKV viral load was noted in the group with rapid reduction of MMF and CNI (no statistically significance was noted).**
- **The patients renal function (Glomerular Filtration Rate) and biopsy proven rejection rate showed no statistically difference between the 2 groups.**





Conclusion

- **Currently, no consensus was reached on how best to reduce immunosuppressants for renal transplant patients with suspected BKV nephropathy.**
- **Our study showed that rapid reduction of MMF and CNI may be potentially beneficial for such patient due to lower BKV viral noted in the group.**
- **Although no statistically significance was conducted from our study, our study still offer another approach for such patients and may invite further studies with potentially larger patient numbers.**

