To the Editors:

BK virus vireamia and viruria among a group of post kidney transplant patients in Sri Lanka

K W Gunawardena[1], J S Jayamaha[2], E S Wijewickrama, R D Lanerolle[3]

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BK virus nephropathy is a challenge because it can cause allograft loss or permanent dysfunction after renal transplantation [1, 2]. Reactivation and progression of BK virus nephropathy is manifested only by an elevation of serum creatinine concentration. Hardly any symptoms and signs occur [2]. Screening for early detection and prevention of symptomatic BK virus nephropathy has shown to be effective in improving graft survival [1].

The incidence and prevalence of BK virus viraemia and viruria in the Sri Lankan transplant population is unknown. Recently BK virus polymerase chain reaction (PCR) testing has been made available at Medical Research Institute (MRI), Sri Lanka.

This study assessed BK virus viraemia and viruria among a group of post kidney transplant patients. Ethical approval was obtained from the Ethics Review Committee, Faculty of Medicine, Colombo. All patients gave written informed consent.

A prospective study was conducted including every third patient among post kidney transplant patients admitted for complications after kidney transplant to the University Professorial Unit at National Hospital Sri Lanka. If a patient didn't consent the next eligible consenting patient was included. BK viral load in their blood and urine was assessed by real time PCR.

Urine and venous blood samples of participants were transported in ice to the MRI. PCR included an internal control to assess the DNA extraction and PCR inhibition and samples with known viral concentrations to assess the accuracy of the test.

There were 15 post kidney transplant patients of which 12 were males. Median age was 42 years. At the time of the investigation median time after the kidney transplantation was 2.6 years. All patients had received live donor allografts.

The most recent median serum creatinine level was 208 micromol/litre. Microscopic haematuria was present in nine patients. One patient was positive for decoy cells in urine which was highly suggestive of BK virus infection.

BK virus was not detected in any of the blood samples. Urine was positive for BK virus in two patients. (Viral load – 8.97 × 105 and 5.53 × 105 per milliliter (ml) in urine)

There are no consensus guidelines to diagnose BK virus nephropathy. BK viral load >104 per ml in blood and viral load >107 per ml in urine is considered positive for BK virus nephropathy [1]. Viral loads in the above two patients' urine were < 107 per ml.

Surprisingly the patient who had decoy cells in urine was negative for BK virus in both blood and urine and both patients who were positive for BK virus in urine were negative for decoy cells.

Small sample size due to limited testing facilities is a limitation. Further studies need to be done to establish risk factors for BK virus nephropathy and to assess BK virus shedding at different time points after the kidney transplant.

Conflicts of interest

There are no conflicts of interest.

References

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[1]*National Hospital of Sri Lanka,* [2]*Department of Virology, National Influenza Centre, Medical Research Institute, Colombo and* [3]*Department of Clinical Medicine, Faculty of Medicine, University of Colombo, Sri Lanka.*

Correspondence: RDL, *e-mail: <rushikal@hotmail.com>.* *Received 17 March 2016 and revised version accepted 22 February 2017.*