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BK virus nephropathy in renal transplant recipient: A single centre experience

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Introduction: Reactivation of BK virus in the transplant kidney can lead to BK virus nephropathy (BKVN) in upto 10% of kidney transplant recipients. This is a single centre study looking at BK virus nephropathy rate and appropriateness of current screening and management approach.

Methods: Retrospective analyses of 185 consecutive renal transplant recipients in a single centre, 2010-2012. Data Source: prospectively managed electronic patient record. Exclusions: any of death, graft failure or transfer in the first year. BKVN, BK viruria and BK viraemia rates were assessed.

Results: 185 patients (69% male, 31% female) with mean age of 49 years +/- 4.3. 32 (17%) patients had BK viruria out of which 12 (6.5%) patients developed BK viraemia. There were two (1.1%) cases of biopsy proven BKVN leading to graft loss in one (0.54%) patient at 12 months post transplant. 244 urine and 156 serum samples were tested for BK virus PCR with positivity rates of 12.7% and 7.69% respectively. 20 patients had their IS reduced, eight of which on the basis of BK viruria.

Discussion: Prevalence of BKVN at 12-month post transplant (1.1%) was similar to published prevalence of 0.85-6.4%. However, inconsistencies were identified vis-à-vis use of single diagnostic method, screening protocol and decision making around IS reduction. Based on these findings, we have developed comprehensive guidelines to adopt a uniform approach for screening and management of BK virus re-activation in renal transplant recipients and to treat BK virus reactivation before it causes irreversible graft damage.

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