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Surveillance Renal Allograft Biopsy on Diagnosis of BK Virus Nephropathy in Chinese Renal Transplant Recipients

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ABSTRACT

Objective: We prospectively investigated 121 renal allograft biopsy specimens performed in our center. Methods: BKVAN was diagnosed by light microscopic examination and a positive immunohistochemistry staining of anti-SV40 large T antibody in a biopsy specimen. Results: Of the 121 patients, nine were diagnosed with BKVAN (7.4%). Nine patients whith BKVN classically presents as allograft dysfunction with an asymptomatic rise in serum creatinine, about 3 to 39 months posttransplant. Urinary decoy cells are positive in two patients (22.2%). The histologic changes of BKVN are not pathognomonic, and can be mistaken for allograft rejection, ie, tubulointerstitial nephritis with varying degrees of inflammatory infiltrates, tubulitis and tubular atrophy, and fibrosis. Typical findings on histology are focal interstitial mononuclear inflammatory cell infiltrates, presence of plasma cells, necrotic tubular epithelium, and presence of homogenous intranuclear inclusion bodies. Immunohistochemistry with SV40 staining were positive in allograft. Graft loss occurred in one patient and the other 8 showed progressive allograft dysfunction. Conclusion: The definitive diagnosis of BKV disease requires renal biopsy. Immunohistochemistry with SV40 staining has been used as an indirect method to document the presence of BKVAN.

KEYWORDS

Renal Transplantation; Biopsy; BK Virus; BK Virus Associated Nephropathy; Diagnosis

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