Nephropathy induced by BKV or co-infection?

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Dear Editor,

The prevalence of BKAN varies between 1 and 5.5% and leads to the loss of graft in 65% of those affected.[1] The active viral infection can be confused with or even coexist with cell rejection processes.[2] Diagnosis is based on the detection of Decoy cells in the urine, demonstration of viraemia and viruria via CRP and histological studies.

Adequate screening and a reduction in immunosuppressive treatment are currently effective strategies for preventing and managing BKAN.

Co-infection due to Cytomegalovirus (CMV) and polyomavirus is possible, although uncommon. The introduction of potent immunosuppressive drug such as tacrolimus and the use of endoluminal catheters[3] seem to contribute to the greatest incidence of these infections.

We present the case of a 50 year old male patient with advanced Chronic Renal Failure of uncertain origin who received a cadaveric kidney transplant seropositive for CMV. Cold ischaemia time: 18 hours. Ureteral anastomosis and insertion of double-J catheter. Induction and maintenance were performed with tacrolimus, MMF and prednisone. High levels of FK were maintained for the first two months (average: 17.9ng/ml.) Delayed graft function, with Cr 1.2mg% at 36th day. After the third month Glomerular Filtration (GF) began to deteriorate (Cr 2.45mg%), coinciding with the finding of CRP in the urine positive for BK virus (50 x 10^6 copies) and Decoy cells. Plasma BK CRP CMV antigenaemia and viraemia were negative. Microalbuminuria (561mg/24 h), proteinuria (1.26g/24 h) and haematuria were found. A biopsy was performed under the suspicion of BKAN. This revealed interstitial infiltration of T lymphocytes and macrophages with significant tubulitis. Several nuclear and cytoplasmic viral inclusions were observed in the cortical and medullary tubes and in the vascular endothelium, with marked cytomegalia. Immunohistochemistry was positive for CMV and SV40. HLA-DR expression was restricted to lymphoid cells.

The diagnosis was interstitial nephritis associated to CMV and the BK virus. Mycophenolate mofetil (MMF) was suspended, the dose of tacrolimus was reduced and ganciclovir was initiated. The double-J catheter was removed. The patient made satisfactory progress and the number of BKV copies in the urine decreased (10.)[6] Microalbuminuria, proteinuria and haematuria disappeared. Renal function improved and two months after diagnosis, reached Cr de 1.6mg%.

In the case in question, deterioration of renal function associated with the appearance of viruria due to BKV led us to initially consider BKAN. The findings of nuclear and cytoplasmic inclusions, typical of CMV, in the renal biopsies, presented the possibility of co-infection which was confirmed via positivity for SV40 and the anti-CMV monoclonal antibody.

Although the majority of the series relates the existence of nephropathy with high viral loads in the plasma,[4] in our case repeated negativity for viraemia for BK and CMV is to be noted despite using highly sensitive techniques. Moreover, it was thanks to the renal biopsy that we were able to reach the correct diagnosis and perform the correct treatment.

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Treating distal calciphylaxis with therapy associated with sevelamer and bisphosphonates

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Dear Editor,

Calcific uremic arteriolopathy (calciphylaxis) has an incidence of 1% and prevalence of 4% in the dialysis population. The pathogenesis is not clear and the different treatments (control of Ca-P metabolism, parathyroidectomy, adequate management of wounds, hyperbaric chamber, non-calcium based binders, bisphosphonates, sodium thiosulfate, etc.) did not show any improvements in the prognosis.

The clinical case of a male patient aged 55 diagnosed with Chronic Renal Failure (CRF) secondary to diabetic nephropathy and arterial hypertension is presented. The patient was admitted to Haemodialysis in May 2003.

He had antecedents of diabetes type 2 treated with oral hypoglycaemic drugs and then NPH insulin.

Nonproliferative diabetic retinopathy. Obesity (Body Mass Index [BMI] 36.) Dyslipidaemia. Ex smoker (2 packets a day.) Long-term AHTN (20 years) treated with Angiotensin Converting Enzyme inhibitors (ACE inhibitors) and calcium channel blockers. Peripheral vasculopa-

thy without amputation (Doppler study of the lower extremities with distal compromise and parietal calcifications in bilateral arterial vessels.) No Deep Vein Thrombosis (DVT.) Echocardiography and valvular Doppler with slight deterioration of the RVSD and calcifications in the aortic and mitral valves.

From 2003 to 2005, the patient presented with slight-moderate secondary hyperparathyroidism with hyperphosphataemia that was difficult to treat due to lack of compliance with diet and phosphate binders. A diet low in P was indicated with proteins and calcium binders (first calcium carbonate, then calcium acetate or aluminium sporadically.) Normocalcaemia. KT/V sp greater than 1.4 (15 hrs HD/week) with calcium dialysate 3mEq/l.

Laboratory Data: average haematocrit 35%; haemoglobin 11g/dl; Alb. 3.4g/dl; Ca 8.7mg/dl; P 7.3mg/dl; PTH 538pg/ml; FAlc 350 IU.

The patient was treated, on a discontinuous basis, with oral calcitriol, which was then suspended due to hyperphosphatemia.

In 2006 the patient presented with symmetric ulcers in the lower distal extremities (legs and feet), pruritic and very painful. Some advanced with eschar and bacterial overinfection due to scatching. The patient was treated with local antibiotic and systemic antibiotics.

Collagen disease tests and coagulation studies were normal, cryoglobulin and anticardiolipin negative.

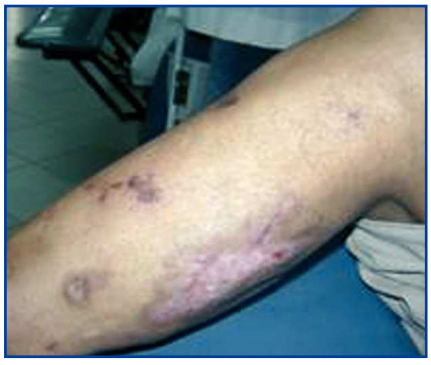

Figure 1. Resolution of calciphylaxis.

Skin biopsy showed necrosis of the superficial dermis and localised deposits of calcium in the middle arteriolar layer compatible with calciphylaxis.

Parathyroid hormone (PTH) levels were greater than 800pg/ml and the patient presented with hyperphosphatemia with normocalcaemia. Ultrasound of parathyroids only detected the lower glands. Scintography of the parathyroids with Tc99m and sestamibi detected hypercaptation in three glands.

Patient with caliphylaxis, PTHi greater than 800 and hight CaxP. Daily dialysis was indicated with dialysate calcium 2.5mEq/l. The patient did not improve, due to the persistence of injuries, and subtotal parathyroidectomy was indicated in 2006.

At the end of 2006, the lesions in the lower extremities persisted with PTHi 280pg/ml (range 150-435) and hyper-P. This was interpreted as persistence of HPT.

In February 2007, sevelamer was started, 6 capsules a day, daily dialysis and solution low in calcium (2.5mEq/l), low phosphate diet Oral ibandronate was added, 150mg/month.

Calcaemia controls remained within normal ranges. The lesions in the lower extremities improved and scarred after six months. However, the peripheral vasculopathy progressed and developed into dry gangrene.

Different results with the use of bisphosphonates are described in the literature. They have a potent inhibiting affect on osteoclastic activity and bone resorption, reducing vascular calcification. They also have an inhibiting affect on proinflammatory cytokines, allowing an improvement in the clinical picture.

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Hyperamylasaemia in a patient with multiple myeloma in haemodialysis

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Dear Editor,

An increase in amylase is a marker for acute pancreatitis. However in patients with Chronic Renal Failure (CRF) it is not uncommon to find increased levels, yet these rarely exceed two or three times the maximum normal limit.[1]

The link between hyperamylasaemia and neoplasia has been known for years and has been described in tumours of different histological strains[2] and in multiple myeloma also.[3,4] We present a patient with CRF secondary to myeloma kidney