was elected to proceed with donor evaluation. There were no contraindications for donation. She preferred to remain locally under the care of her urologist (J.V.T.) and underwent an uneventful flank nephrectomy. At surgery, the procurement team received the graft and prepared it for transport. A pre-selected recipient was successfully transplanted. The kidney functioned immediately. Both patients have done well post-operatively. The donor has had no further sequelae of the vesicovaginal fistula. The recipient has experienced continued graft function.

Comment. Unique potential donor sources continue to be discovered and should be utilized when appropriate (donors with small benign kidney tumours, sero-positive for hepatitis C and hypertension or stroke) [2]. Although the events with this particular patient were unique, it is likely that a number of similar cases annually could lead to positive outcomes for both donors and recipients.

Conflict of interest statement. None declared.

Obstructive bronchiolitis or opportunistic infection? A diagnostic challenge in a renal transplant patient

Sir,

We report a case of a renal transplant recipient who presented with recurrent bacterial lower respiratory infection and obstructive pulmonary function tests. She was thought by her respiratory physician to have bronchiolitis obliterans as a complication of immunosuppression and the suggested treatment was an increase in her corticosteroid dose. However, infection had not been excluded thoroughly and the opportunistic organism Nocardia nova was eventually isolated. With specific anti-nocardia treatment and reduction in immunosuppression, the patient improved both symptomatically and on pulmonary function testing.

Case. A 61-year-old female with renal failure secondary to autosomal dominant polycystic kidney disease received a primary cadaveric renal transplant in February 2000. Initial immunosuppression included cyclosporin A, prednisolone and basiliximab. Antiproliferative agents were not used due to mild, chronic thrombocytopenia. Her other past medical history was unremarkable, although she had a remote smoking history of 25 pack-years. She had no respiratory symptoms prior to transplantation.

Her early post-transplant course was complicated by two episodes of Banff IIa rejection, which were treated successfully with corticosteroids in the first instance. She was converted from cyclosporin to tacrolimus on the second occasion. Six months post-transplant she had good graft function, with a serum creatinine concentration of 0.11 mmol/l. Trimethoprim–sulphamethoxazole was given as prophylaxis for Pneumocystis carinii for the first 12 months.

One year post-transplant, she developed lingular pneumonia, which resolved with intravenous ampicillin despite no definitive microbiological diagnosis being made. There were three further hospital admissions over the subsequent 12 months with cough, purulent sputum production and breathlessness. Sputum cultures grew Pseudomonas aeruginosa, Moraxella catarrhalis and Enterobacter cloacae on separate occasions. Antibiotic therapy was given according to the sensitivities of the organism on each occasion. Resolution of her acute respiratory symptoms occurred following each treated episode.

She suffered progressive dyspnoea and a stepwise decline in measured pulmonary function: at 2 years post-transplant her forced expiratory volume at 1 s (FEV₁) was 1.271 (predicted 2.341) and her forced vital capacity was 2.741 (predicted 2.971), with no significant response to bronchodilator therapy. Gas transfer was reduced to 45% of predicted and chest radiography showed mild hyperinflation only. She had not recommenced smoking after her transplant. A high-resolution computed tomography scan of the chest and pulmonary function tests suggested a diagnosis of bronchiolitis obliterans. The advised treatment was an increase in her corticosteroid dose; however, she was referred back to the transplanting hospital for further investigation instead.

She was now 2 years post-transplant. A repeat chest radiograph showed faint, bilateral interstitial infiltrates in both upper zones and sputum cultured specifically for unusual organisms grew Nocardia nova after 5 days’ incubation. A fibre-optic bronchoscopy with broncho-alveolar lavage was performed and also yielded nocardia on microbiological culture. Mycobacterial cultures were negative. Treatment was instituted with trimethoprim–sulphamethoxazole and continued for a total of 6 months. Her prednisolone dose was reduced to 7 mg daily. Her tacrolimus dose was reduced to yield trough serum concentrations of 7–8 μg/l. Within 3 months, complete resolution of chest X-ray changes had occurred, accompanied by improvement in the respiratory symptoms. She is currently symptom-free with a markedly improved exercise tolerance. Her FEV₁ has improved to 1.71 l.

Comment. This case serves to highlight the importance of thoroughly investigating immune-suppressed patients for the possibility of underlying infection, rather than making a clinical diagnosis of the rare bronchiolitis syndromes. Atypical or opportunistic infections (such as nocardiasis) are still much more common than the bronchiolitis syndromes, bronchiolitis obliterans and bronchiolitis obliterans organizing pneumonia (BOOP).

The bronchiolitis syndromes are characterized by inflammation in the small airways, usually with a degree of sparing of the interstitium. Pathologically, the bronchiolitis syndromes can be classified as constrictive or proliferative based on the predominance of obliteration and narrowing of bronchioles, as opposed to the degree of fibrosis and proliferation [1]. Constrictive bronchiolitis is seen most commonly due to inhalation injury, viral infection and connective tissue disease and as a manifestation of chronic

Conflict of interest statement. None declared.

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doi:10.1093/ndt/gfh583
rejection in lung [2], heart–lung and bone-marrow transplant recipients. The proliferative form can also occur in these settings [3,4], but can also be a primary idiopathic disorder (idiopathic BOOP). It is the more common of the two types of bronchiolitis and, generally, responds well to corticosteroid treatment.

Such immunological syndromes remain rare in renal transplant recipients, being reported as occasional case reports only [5]. Therefore, a high index of suspicion should be maintained for the possibility of underlying infection and diagnostic bronchoscopy (as in our case) or even open lung biopsy may be required. Only after infection has been excluded adequately should such diagnoses be entertained.

Conflict of interest statement. None declared.

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doi:10.1093/ndt/gfh580