A case of invasive pulmonary aspergillosis in renal failure

Sir,

A 55-year-old ex-community care assistant was admitted with a 2 day history of increasing shortness of breath and productive cough. She suffered with chronic kidney impairment secondary to reflux nephropathy, and had undergone a nephrectomy 1 year previously. After gradually worsening uraemic symptoms, a peritoneal dialysis catheter had been inserted uneventfully 1 month prior to her admission. She was due to start training for peritoneal dialysis within the next few days (GFR 7 ml/min, serum urea 32 mmol/l, creatinine 1319 μmol/l). An ultrasonogram had showed the remaining kidney to be of normal size, and serum immunoglobulin levels were normal. She was a smoker of 20 cigarettes per day, but there were no medical antecedents of note. Her medications reflected uraemia, and the biochemistry otherwise had been unremarkable.

On admission, she was tachypnoeic (30 respirations per minute) and hypotensive at 108/60 mmHg. The right lung was clear on auscultation, but there was wheeze at the left base. Oxygen saturation on air was 86%, and an arterial blood gas analysis showed profound metabolic acidosis. The chest X-ray was normal, but there was a slight leukocytosis (12.7 × 10⁹/l), and the biochemistry showed end-stage renal failure (urea 49 mmol/l, creatinine 1319 μmol/l). She was managed with broad-spectrum antibiotics (intravenous ceftazidime 1 g OD) and haemodialysis via a femoral central catheter. Repeated arterial blood gases showed a normalized pH and base excess, but the hypoxia and clinical air hunger persisted. She was transferred to the High-Dependency Unit for non-invasive ventilatory support and was given inotropic medications reflected uraemia, and the biochemistry otherwise had been unremarkable.

Fig. 1. Histology view of bronchial tree. H/E section view (a) shows carpet of fungal organisms coating luminal surface. Silver stains (b) highlight fungal hyphae of Aspergillus. Scales: larger, 0.4 mm for (a); smaller, 0.1 mm for (b).

The increasing seniority of our uraemic population, as well as their frequently diabetic background [6,7], contribute to further immune dysfunction. This report emphasizes the message that renal physicians should keep a low threshold for diagnosing opportunistic infection in their patients.

Conflict of interest statement. There are no conflicts of interest associated with the publication of this case report.

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