Lymphangitis Carcinomatosa on Renal Biopsy

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Dear Sir,

Pulmonary lymphangitis carcinomatosa, caused by diffuse metastatic infiltration of pulmonary lymphatics, is a rare cause of dyspnoea, especially in the young [1]. Diagnosis is often very difficult when patients present with progressive dyspnoea and pulmonary infiltrates in the absence of a known primary tumour. We present an instructive case.

A 33-year-old man presented with a 2-month history of dry cough, progressive dyspnoea, malaise and weight loss. He had a past history of heavy smoking and gastric ulceration. On examination, he was unwell and dyspnoeic (respiratory rate 28/min), with a pulse of 100/min and temperature of 37.3°C. Inspiratory crepitations were heard in both lung bases and the midzones. the abdomen was mildly tender with voluntary guarding, and a tender spleen was palpable 3 cm below the costal margin. Ward urinalysis showed 2 + proteinuria.

Initial investigations revealed plasma creatinine 0.14 mmol/l (1.6 mg/dl), urea 8.7 mmol/l (24 mg/dl), normal electrolytes and liver function tests (apart from an alanine aminotransferase of 75 IU/l; normal < 55). Haemoglobin was 123 g/l (12.3 g/dl), white cell count $11.3 \times 10^9/l$ with neutrophilia and mild left shift, platelet count $249 \times 10^9/l$ and erythrocyte sedimentation rate 42 mm/h. Arterial pH was 7.48, pO₂ 6.5 kPa (49 mm Hg), pCO₂ 4.6 kPa (33 mm Hg) and bicarbonate 25 mmol/l. Urinary microscopy showed 16,000 white cells/ml, 25,000 glomerular red cells/ml and 14,000 casts/ml (comprising granular casts and hyaline casts variously containing

red cells, epithelial cells and granules). Urinary protein excretion was 0.73 g/day (normal < 0.15). The chest X-ray was reported as showing widespread interstitial lines and nodules with prominent Kerley lines and hilar adenopathy. Over the following 2 days, the patient's condition deteriorated inexorably. An attempt at bronchoscopy and biopsy had to be abandoned due to acute arterial oxygen desaturation. Empirical treatment with prednisolone 100 mg daily was commenced. In view of the marked abnormalities in renal function and urine microscopy and the desire to avoid the hazards of lung biopsy, a percutaneous renal biopsy was carried out.

Preliminary examination of the histology showed mild patchy interstitial fibrosis and tubular degeneration. An urgent open-lung biopsy was then performed because of the patient's rapid and relentless deterioration with progressive hypoxia and the frozen section showed lymphangitis carcinomatosa. The patient continued to deteriorate, suffered on hypoxic asystolic arrest and died.

Choyke PL, White EM, Zeman RK, et al: Renal metastases: Clinicopathologic and radiologic correlation. *Radiology* 1987;162:359-363.
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