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Letter to the Editor

Chemotherapy for small-cell lung cancer with paraneoplastic nephrotic syndrome

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Platinum-containing chemotherapy has been commonly used as standard therapy for small cell lung cancer (SCLC). However, platinum causes renal dysfunction.[1,2] We report a SCLC patient with paraneoplastic nephrotic syndrome who was successfully treated with platinum-containing chemotherapy. A complete tumour response could be achieved; however, his proteinuria did not decrease and renal function got worse every time he received the chemotherapy.

A 74-year-old male was admitted to our hospital with the oedema of the lower extremities that developed during the last three months. On physical examination, oedema was still present. Laboratory results were as follows: haemoglobin 10.6 g/dl, potassium 4.3 mEq/l, serum creatinine 1.0 mg/dl, blood urea nitrogen 34.2 mg/dl. Creatinine clearance was 43.0 ml/min and the urine sediment was free of casts and erythrocytes. However, serum albumin was 2.1 g/dl, and the 24 h urine collection revealed proteinuria of 10 g daily. Renal biopsy disclosed membranous glomerulonephritis. A chest X-ray on admission revealed mediastinal widening and a right hilar mass. Chest CT scan showed a large mass in the right middle lobe with mediastinal lymph node swellings. Small lung nodules up to 10 mm in both lungs were also observed. Transbronchial biopsies revealed SCLC in an advanced desease stage. Paraneoplastic nephrotic syndrome was diagnosed to be associated with SCLC. Chemotherapy for SCLC was started with carboplatin (AUC 5 mg/ml per minute, Calvert formula, day 1) and etoposide (100 mg/m2, days 1, 2, and 3). After two courses complete remission was achieved, however, oedema of both extremities did not disappeare. Serum creatinine and blood urea nitrogen increased every time he received the chemotherapy, and proteinuria did not decrease in spite of the complete tumour response. Because of the impaired renal function, no additional chemotherapy was indicated. Thereafter, the patient received supportive care, and he died from brain metastasis 8 months after from the initial treatment.

Since the introduction of platinum in the early 1980s, commonly used combination chemotherapy regimens for SCLC have been platinum analogy combined with etoposide.[3,4] Despite the advantage of the plat-

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inum-containing chemotherapy, the cyclophosphamide, doxorubicin, and vincristine regimen has still been commonly used for SCLC patients with paraneoplastic nephritic syndrome.[5-6] In our case, carboplatin-contaning chemotherapy could achieve a complete tumour response; however, paraneoplastic nephrotic syndrome was not improved and the renal function was deteriorated. Platinum is nehprotoxic and, therefore, platinum itself can induce nephrotic syndrome.[1,2] In comparison with cisplatin, the nephrotoxicity of carboplatin is reduced but not completely eliminated. We cannot conclude by insisting on the disadvantage of platinum-containing regimens for SCLC patients with paraneoplastic nephrotic syndrome, but by recommending to be careful in indicating the platinum-containing regimens, especially for SCLC patients with paraneoplastic nephrotic syndrome.

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