Renal cell carcinoma: complete response

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A 63-year-old male, ex-smoker since 2000 underwent left radical nephrectomy in June 2004 after being diagnosed with stage II, pT3bN0M0 clear cell carcinoma. In June 2006, a control CT showed a nodule in the superior lobe, on a peripheral location, and another nodule in the base of the right lung. The patient underwent atypical resections of both nodules, confirming the presence of metastatic disease. In August 2006 the patient started treatment with sunitinib (50 mg/day for 4 weeks, with 2 weeks of rest). A total of nine cycles were administered. Periodic monitoring showed good tolerance, only presenting grade 2 erythrodisesthesia and grade 2 thrombocytopenia. CT studies performed every three cycles showed no evidence of disease recurrence. The last cycle was administered in September 2007 and PET imaging confirmed the absence of recurrence. With the patient s consent, treatment was interrupted and periodic radiological and clinical examinations were performed. The patient remained asymptomatic until March 2008 when a control CT revealed an objective progression of the disease at the left lung and mediastinum level. Treatment with sunitinib was restarted at the same doses, completing a total of three cycles, achieving a complete response. The patient is still under treatment. *Anti-Cancer Drugs* **21 (suppl 1):S17–S18**

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Case report

A 63-year-old male, ex-smoker since 2000 with a cumulative consumption of 20 packs/year underwent surgery in June 2004. A left radical nephrectomy was performed with a pathological–anatomical diagnosis of 7-cm clear cell carcinoma affecting the hilus of the kidney, renal vein, and tumoral thrombosis (stage III pT3bN0M0). Subsequent patient follow-up involved periodical visits to the Urology Service. In July 2006, a control computed tomography (CT) showed a nodule in the right superior lobe on a peripheral location, measuring 1.5 cm, and another nodule in the right base of the lung. After an assessment by the Thoracic Surgery Service, atypical resections of superior right lobe lung nodules and the middle lobe nodule were performed. Likewise, a wedge resection of the right inferior lobe was performed, with a pathological–anatomical diagnosis found to be compatible with metastatic and primary renal clear cell carcinoma. The patient was referred to the Medical Oncology Service in August. He presented a generally good health status, and his physical examination was within normal limits. Treatment with sunitinib was started at a 50 mg/day dosage for 4 weeks, with 2 weeks of rest. According to this dosage scheme, nine cycles were administered. Periodic monitoring showed good tolerance, only presenting grade 2 palmar-plantar dermatosis and grade 2 thrombocytopenia.

CT studies were performed every three cycles and showed no evidence of disease recurrence. The last cycle took place in September 2007, and PET imaging was completed confirming negative results. At that moment, given the cutaneous toxicity and the patient's will, an agreement was reached with the patient to interrupt the treatment and perform periodic radiological and clinical control examinations. The patient remained in generally good health, being asymptomatic. In March 2008, a control CT revealed an objective progression of the disease at the left lung and mediastinum level. Treatment with sunitinib was restarted at the same doses, completing a total of three cycles. After that, the patient presented a complete response. He is still receiving treatment.

Discussion

Sunitinib is an oral multiselective tyrosine kinase inhibitor. It is active against vascular endothelial growth factor receptor-2 and platelet-derived growth factor-B, which have a direct influence on angiogenesis, as well as activity against KIT, RET, and fms-related tyrosine kinase3, which are involved in cell proliferation. Two phase II assays have shown sunitinib's activity against metastatic renal cancer with response rates between 34 and 40% [1,2]. These results were confirmed in a phase III study comparing sunitinib versus a treatment with interferon. The response rate rose to 31% with a progression-free survival of 11 months [3]. The update of the results regarding this study shows a 47% response rate in patients receiving sunitinib, including 11 patients who showed a complete response [4]. Cases of complete or near-complete response with sunitinib have been published [5–7].

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In our case, the patient presented a metastatic disease at the pulmonary level. A complete resection of lesions was performed. After that, treatment with sunitinib was begun until completion of nine cycles. Subsequently, CT and PET imaging showed no evidence of disease. In agreement with the patient, and given the toxicity observed, treatment was suspended. A control CT study revealed the presence of disease recidivation at the pulmonary level. Therefore, treatment with sunitinib was restarted. After three cycles, the patient presented a complete response.

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