Sunitinib Relieves Renal Cell Carcinoma Spinal Cord Compression

Quoc-Dien Trinh, Étienne Cardinal, Andrea Gallina, Paul Perrotte, Fred Saada, Pierre I. Karakiewicz

1. Case report

A 66-year-old woman presented at our institution in May 2006 with a 3-mo history of lower back pain without neurologic symptoms. She had a history of hypertension and hypercholesterolemia, treated with indapamide and atorvastatin, respectively. Physical examination was not contributory. Magnetic resonance imaging (MRI) of the spine revealed osteolytic lesions compatible with bone metastases invading the bodies of T4, T6, and T10 vertebrae. Computed tomography (CT) of the abdomen performed with intent of identifying the primary tumor (Fig. 1A) demonstrated a lower pole left renal mass, 7.0 × 7.8 cm in size, with areas of necrosis, which was compatible with renal cell carcinoma. A chest CT revealed absence of lung metastases. External beam radiotherapy (20 Gy in five fractions) successfully relieved the symptoms for 4 wk. When the pain reappeared, it was accompanied by paresthesiae and weakness of both legs, which over 4 d progressed to complete inability to walk and prompted an emergency room (ER) visit. The ER diagnosis was that of spinal cord compression at the level of the 10th thoracic vertebra (T10), which was confirmed with an MRI (Fig. 2A and B). Two additional
Fig. 1 – Primary tumor prior to sunitinib treatment (panel A) and after two cycles of sunitinib treatment (panel B).

Fig. 2 – Metastatic lesion within the body of the 10th vertebrae with spinal cord compression prior to sunitinib treatment (panels A and B) and after two cycles of sunitinib treatment (panels C and D).
metastases, without compression, were seen at T4 and T6 levels. Further radiotherapy was requested, but the treatment was not delivered because of low expected benefit in the context of radiation to the same area within the past 4 wk. Because of the extent of disease within the spinal cord, the neurosurgical team did not consider surgical cord decompression as a valid option. Consequently, the patient was discharged from the ER with the recommendation of palliative therapy.

Oral sunitinib malate (SUTENT) therapy was started the next day in an outpatient urologic oncology clinic. Within 2 d of sunitinib initiation, partial function returned to the lower limbs, but weight bearing was not possible. By the end of the first 6-wk cycle, weight bearing was accomplished with assistance. At the end of the second cycle, partial tumor regression (Fig. 1B) and partial regression of the vertebral lesions (Fig. 2C and D) were recorded. The patient is fully ambulatory (Eastern Cooperative Oncology Group [ECOG] 2 now vs. ECOG 4 prior to treatment) and tolerated the treatment with minor side effects, which consisted of three episodes of epistaxis toward the end of the second cycle and of grade I fatigue.

EU-ACME question

Please visit www.eu-acme.org/europeanurology to answer the below EU-ACME question on-line (the EU-ACME credits will then be attributed automatically). The answer will be given in Case Study of the Month: Part 2, which will be published in next month’s issue of European Urology.

Question:

Do tyrosine kinase inhibitors represent effective therapy for renal cancer patients with radiotherapy-refractory bone metastases?

A. Yes, but only in patients with good performance status (ECOG 0–1)
B. Yes, regardless of performance status
C. No, bone metastases generally do not respond to this form of therapy
D. No, bone metastases and poor performance status represent predictors of poor response