



Durable response with medroxyprogesterone acetate in metastatic renal cell carcinoma: Case report

Bekir Muhammet Hacıoğlu^{a,*}, Osman Kostek^a, Bulent Erdogan^a, Hilmi Kodaz^b, İlhan Hacibekiroğlu^c, Esmâ Turkmén^d, Sernaz Uzunoglu^a, İrfan Cicin^a

^a Department of Medical Oncology, Faculty of Medicine, Trakya University, Turkey

^b Department of Medical Oncology, Dumlupınar University Evliya Celebi Training and Research Hospital, Turkey

^c Department of Medical Oncology, Sakarya University, Training and Research Hospital, Turkey

^d Department of Medical Oncology, Kocaeli Derince Training and Research Hospital, Turkey

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1. Introduction

Approximately 90% of all renal malignancies are renal cell carcinoma (RCC). About 30% of all patients are diagnosed with metastatic disease although improvements in diagnosis, especially improved imaging techniques and the incidental diagnosis of many tumors.¹ Treatment of metastatic RCC is changed after approval of sorafenib in 2005, six more drugs were introduced.² In first line therapy for patients with favorable or intermediate risk clear cell RCC, sunitinib and pazopanib are approved. TKIs or m-TOR inhibitors are the treatment options in the second-line. Recently, improved overall survival benefit has been shown of nivolumab, a programmed death-1 (PD1) checkpoint inhibitor.³ In a recent study response rate with medroxyprogesterone acetate was 9,7% (partial response and stable disease) compared with lapatinib.⁴ In earlier studies with small numbers of patients response rate with medroxyprogesterone was reported between 2% and 15%.^{5–7}

We aimed to present a case report with metastatic renal cell cancer who had durable response with medroxyprogesterone acetate therapy after developed progression with multiple targeted therapies.

2. Case

59-year-old male was admitted to the urology clinic with right flank pain. Thorax-abdominal computed tomography (CT) detected multiple suspicious nodules in the lung, and a renal mass favoring malignancy in the right kidney. Patient underwent surgery of right radical nephrectomy, and postoperative pathological examinations revealed renal clear cell tumor with fuhrman grade 2 exceeding the geroto fascia. Interferon-alpha was initiated subcutaneous 6 MU three times a week dosing. After one year of therapy, interferon-alpha was stopped since the patient achieved a stable disease confirmed by imaging methods. However, 3 years after the completion of interferon-alpha therapy, a new right adrenal mass 3.5 cm in diameter, and multiple mediastinal lymphadenopathies were determined in control abdomen and chest CT. Pathological findings of the right adrenal metastasectomy material were compatible with metastatic RCC. Sunitinib was commenced on 50 mgr daily with standard schedule of 4 weeks on and 2 weeks off. Despite an initial positive clinical and radiological response to sunitinib, patient had disease progression at the 18th month of treatment. Therefore, everolimus was initiated at 5 mgr twice daily as the second line treatment of metastatic RCC. After an 18 months of partial response, patient developed disease progression on everolimus therapy. Patient was ultimately started on axitinib 5 mgr twice daily, with a good initial radiological response after 2 month of treatment. However, patient had disease progression at the 5th month of axitinib therapy. Medroxyprogesterone acetate 160 mgr three times daily was commenced on as the 4th line treatment in metastatic setting, with an ongoing favorable clinical and radiological response at the 11th month of treatment. Patient is still on medroxyprogesterone acetate treatment, with an ongoing clinical and radiological response.

3. Discussion

Patients with metastatic RCC generally have a poor prognosis. Treatment of metastatic disease has dramatically changed with the

* Corresponding author. Department of Medical Oncology, Faculty of Medicine, Trakya University, 22030, Edirne, Turkey.

E-mail address: mbekirhacioglu@yahoo.com (B.M. Hacıoğlu).

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advent of new treatment options such as tyrosine kinase inhibitors, m-TOR inhibitors, immunotherapy, and VEGF-based treatments. In patients with advanced cancers, medroxyprogesterone acetate improves quality of life by increasing appetite and energy.^{8,9} In metastatic renal cell cancer, medroxyprogesterone acetate have a response rate of 2%–15%.^{4–7,10} Furthermore durable response longer than 6–9 months with medroxyprogesterone is reported very rarely. In the era of targeted therapies and immunotherapy in metastatic RCC, it is highly important to note that we observed an ongoing clinical and radiological response with 11 months treatment of medroxyprogesterone acetate. Thus, despite the low response rates, we would like to emphasize that medroxyprogesterone acetate should be kept in mind not only as a palliative option but also as a therapeutic agent in the metastatic setting of metastatic RCC.

Conflict of interest

None.

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