

Case Report

Late Recurrence of Prostate Cancer Presenting as a Renal Mass

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Abstract

Introduction: Prostatic carcinoma has variable course of disease progression. Patients with metastasis from prostate cancer can present with varying symptoms.

Presentation of case: We report a rare case of prostate cancer with renal metastasis 16yrs following radical prostatectomy. Patient presented with rising PSA levels ten years after his prostatectomy. Although his disease stabilized for a three year period on androgen deprivation therapy, he ultimately died from progression of his renal metastasis.

Conclusions: While prostate cancer can take an indolent course, some patients can have metastatic disease even years after the initial “curative” treatment. Thus long-term follow-up is crucial in patients with prostate cancer, even many years following initial curative treatment.

Keywords: Hereditary paraganglioma syndrome; SDHD; SDHB; Pheochromocytoma

Peer Reviewers: Shi Wei, MD, PhD, Immunohistochemistry Laboratory, UAB Hospital, University of Alabama at Birmingham, United States; Nidhi Gupta, MD, Deptment of Oral Pathology and Microbiology, Rural Dental College, India;

Received: November 25, 2012; **Accepted:** March 21, 2013; **Published:** April 30, 2013

Competing Interests: The authors have declared that no competing interests exist.

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Introduction

In 2010, the American Cancer Society reports that 11% of cancer fatalities in men are due to prostate cancer, which makes it the second leading cause of cancer mortality (1). Prostate cancer can take an indolent or an aggressive course with metastatic potential. Common metastatic sites include lymph nodes, skeletal system, lungs and liver. Here we describe an unusual case of prostate cancer metastasizing to the kidneys 16 years after the initial curative treatment with radical prostatectomy.

Case Presentation

A 74 year old Caucasian gentleman with history of prostate cancer status post radical prostatectomy 16 years ago presented with increasing abdominal pain. Approximately 10 years following his prostatectomy, he was noted to have a rising PSA to 200ng/ml; therefore, androgen deprivation therapy (ADT) was initiated with leuprolide. His disease remained stable while he was on ADT for approximately three years until he developed worsening abdominal pain with alternating constipation and diarrhea, decline in his performance status, and an unintentional weight loss

of 30 pounds over a 2-month period. Metastatic workup with imaging demonstrated extensive mesenteric adenopathy, a large abdominal mass intimately involved with the left kidney (Figure 1), and a mass in the trigone of the bladder. Bone scan

was negative for metastatic lesions. Biopsy of the left renal mass and the bladder mass were positive for prostatic adenocarcinoma, Gleason score 5+5, consistent with androgen-refractory metastatic prostate cancer (Figure 2).

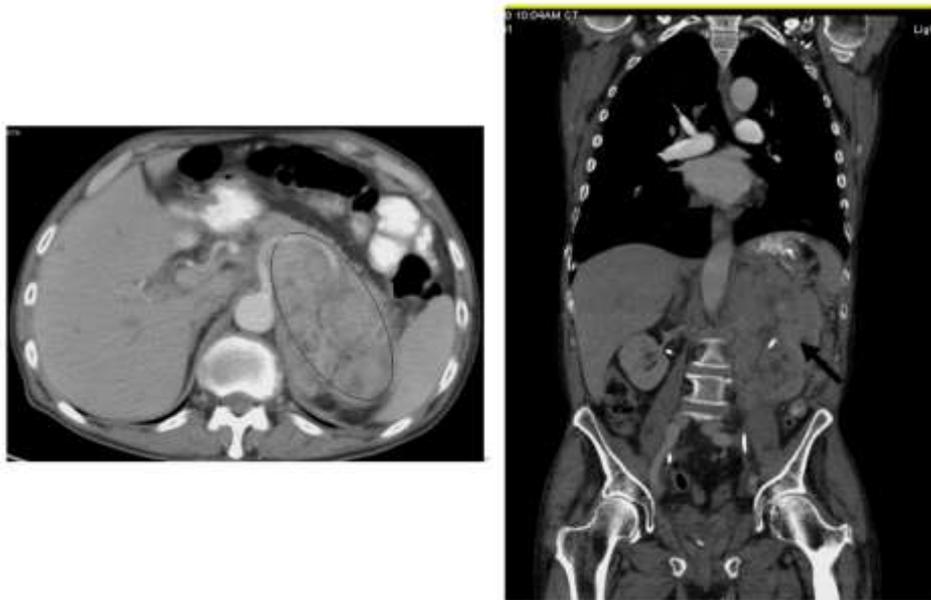


Figure 1 CT image of abdominal mass intimately involving the left kidney (arrow and circle demonstrate the infiltrative appearance of the left kidney, consistent with neoplasm)

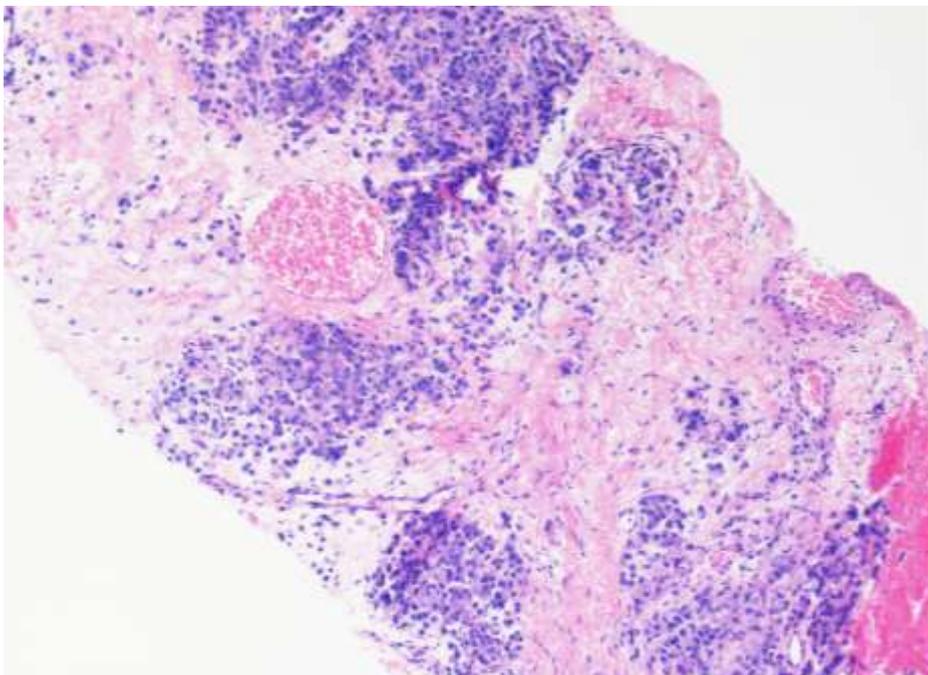


Figure 2 Biopsy of renal mass (hematoxylin-eosin stain). Immunostains were positive for PSA, PSAP, and PSMA, consistent with metastatic prostatic adenocarcinoma.

Imaging further demonstrated the large left renal mass compressing on bilateral ureters causing severe bilateral hydronephrosis with creatinine remaining at baseline. Bilateral stents were placed to relieve the hydronephrosis. Palliative radiation to the pelvis was administered followed by chemotherapy with Taxotere. Despite 5 cycles of Taxotere, patient's PSA continued to rise to 1300ng/mL. Repeat CT imaging revealed the mass involving the left kidney had significantly enlarged, with persistent 2 spiculated right upper lung lobe nodules and extensive abdominal lymphadenopathy. The patient was subsequently started on a tyrosine kinase inhibitor in an attempt to downsize his renal mass, with plans for a possible radical nephrectomy with retroperitoneal lymph node dissection. However, the patient passed away from progression of his androgen-refractory metastatic prostate cancer shortly following initiation of his chemotherapy treatment.

Discussion

This case captures the unpredictable nature of the progression of prostate cancer. The patient underwent curative radical prostatectomy and had no evidence of biochemical recurrence for over 10years. Once biochemical recurrence was noted, the disease was stabilized for 3 years on androgen deprivation therapy. However, this patient's prostate cancer progressed to an androgen-refractory state and continued to progress

despite radiation and chemotherapy. The patient subsequently passed away from wide spread metastasis of his disease, 16yrs after its primary presentation.

Prostatic carcinoma has widely variable course of disease progression. While prostatectomy are performed with curative intent, some patients will experience metastasis despite treatment, even many years after initial surgery; thus long-term follow-up of these patients are crucial. Common metastatic sites include regional and distant lymph nodes, bones, liver, and adrenal glands. Other sites of metastasis include lungs, brain, and in some rare instances, the gastrointestinal system (2).

To our knowledge, there has only been six published case reports of prostate cancer metastasizing to the kidney (3-7, Table 1). Patients with renal metastasis from prostate cancer can present with varying symptoms. In one of the very first cases published that involved renal metastasis, the patient presented with acute renal failure secondary to metastasis of prostate cancer to the kidneys (3). Gunlusoy et al reported a case where the patient with prostate cancer treated 5 years prior with total androgen blockage (orchiectomy and ciproterone acetate) presented with left flank pain, hematuria and vomiting for one month (6). Ibinaive et al presented an interesting case of a patient presenting with an infected renal cyst as a result of metastatic prostatic adenocarcinoma with widespread bony metastases (8).

Table 1 Published case reports of metastatic prostate adenocarcinoma to kidney

Article	Presentation
Galindo et al (1996)	acute renal failure
Inatomi et al (1996)	renal mass
Denti et al (1999)	renal mass
Gunlusoy et al (2004)	hematuria and flank pain
Sakata et al (2011)	renal mass
Ibinaive et al (2012)	infected renal cyst

While prostate cancer can take an indolent course, some patients will have metastatic disease even years after the initial "curative" treatment, as illustrated in this case report where metastatic disease was fatal

16years after radical prostatectomy. Krauss et al reported a case where the patient presented with metastatic disease 23years after his prostatectomy (9).

Conclusion

Patients with prostate cancer must continue to have long-term follow-up, even many years following initial curative treatment. A full workup is warranted when metastatic disease is suspected, as prostate cancer can metastasize to rare sites such as the kidneys as demonstrated in this case.

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