The Natural History of Untreated Sarcomatoid Renal Cell Carcinoma: An Autopsy Report

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Introduction

The natural history of renal tumors is not well known since most are surgically treated at the time of diagnosis. We report a case of an untreated sarcomatoid renal cell carcinoma (RCC) with a 9-year natural history that was discovered upon autopsy.

Case Report

An 86-year-old woman presented with acute cystitis at our office in July 1997. The patient was symptom-free after treatment for cystitis, but ultrasonography disclosed an incidental left renal mass measuring 2 × 3 cm. After 8.9 years, multiple liver metastases were detected on ultrasound. After 9.0 years, the tumor had increased by 3.5 cm from the initial size, and multiple lung metastases were also detected. After 9.1 years, the patient developed multiple metastases and died from progressive disease at the age of 95. On autopsy, metastases were found in both lungs, bilateral hilar lymph nodes of the lung, the liver, both adrenal glands and the bone marrow. Conclusion: This case showed a probable slow transition from typical RCC to sarcomatous elements that remained untreated for 9 years before the patient died.
Untreated Sarcomatoid Renal Cell Carcinoma

RCC is usually very poor. However, in this case, the small sarcomatoid RCC did not grow rapidly. At present, ablative therapy of small renal tumors might be acceptable for the elderly with limited life expectancy or/and patients with comorbidities. However, more prospective trials are needed to define the role of ablative treatment for these patients in the management of early-stage sarcomatoid RCC. For an 86-year-old Japanese woman in 1997, a 10-year life expectancy was 27% in a cohort from the Japanese National Cancer Center [1].

Sarcomatoid RCC, first reported by Farrow et al. [2], is a tumor of mixed form comprised of a differentiated cancer element and a spindle cell element showing solid sarcomatoid proliferation. Histopathogenesis of sarcomatoid RCC is believed to arise from the clear cell or chromophilic type [3]. Sarcomatoid carcinoma accounts for 1–6.5% of all renal cell carcinomas and is the type with the worst prognosis [4]. The median survival time after diagnosis is in the range of 6 months with a 3-year survival rate of only 19% [3]. In our case, the sarcomatoid RCC was discovered incidentally and remained asymptomatic for more than 8 years. Although the reason for this relatively long-term survival is not clear, it may be secondary to the slow transition from typical RCC to sarcomatous elements.

In the largest combined series to date, Chawla et al. [5] reported a meta-analysis of the available data on active surveillance. Nine single institutional series met the authors' inclusion criteria, accounting for 234 renal lesions undergoing a period of active surveillance. The overall mean lesion size was 2.60 cm. The overall mean duration of follow-up was 34 months. Observed mean growth rates

**Discussion**

Active surveillance of small, incidentally detected renal masses is increasingly viewed as a valid option in carefully selected patients. The prognosis of sarcomatoid RCC is usually very poor. However, in this case, the small sarcomatoid RCC did not grow rapidly. At present, ablative therapy of small renal tumors might be acceptable for the elderly with limited life expectancy or/and patients with comorbidities. However, more prospective trials are needed to define the role of ablative treatment for these patients in the management of early-stage sarcomatoid RCC. For an 86-year-old Japanese woman in 1997, a 10-year life expectancy was 27% in a cohort from the Japanese National Cancer Center [1].

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in individual series were 0.09–0.86 cm/year, with an overall combined mean of 0.28 cm/year.

In the present case, initial tumor size, duration of follow-up and tumor growth rate were 2.7 cm, 109 months and 0.35 cm/year, respectively. High-grade and/or sarcomatoid RCCs may grow rapidly and metastasize early. In our case, the average growth rate was not high compared with other reports. We noted, however, that whereas the initial growth was slow, the later growth accelerated in our case.

There are a number of treatment options for localized RCC. In 1997, arterial embolization of the tumor as a palliative approach could have been beneficial in this patient. Cytokines and immunotherapy have limited efficacy, but possibly might have kept the patient alive longer. Currently, similar patients not suitable for open or laparoscopic surgery due to poor performance status with smaller peripheral tumors should be considered for thermal ablative techniques. At present, percutaneous or laparoscopic cryoablation and radiofrequency ablation have been suggested as alternatives to surgical treatment [6].

Conclusion

This case showed a probable slow transition from typical RCC to sarcomatous elements that remained untreated for 9 years before the patient died.

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References


