

Renal Cell Carcinoma Metastasis to the Left Atrium

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Published: 05 May 2023

Only 13 cases of renal cell carcinoma metastasis to the left atrium (LA) of the heart have been described in literature. Our patient presented with LA metastasis 14 years after a nephrectomy for RCC. Because RCC rarely metastasizes to the heart, its diagnosis is difficult. In addition, affected patients are mostly asymptomatic and can present variably. Our patient had purely neurologic symptoms and none indicating cardiac involvement.

Although unlikely, it is possible that a mass found incidentally in a patient with RCC and metastasis is instead, an atrial myxoma. Our patient's mass had some features of an atrial myxoma (clear definition and pedunculation with a stalk); however, we were unable to confirm this histologically because surgical excision was not performed.

Given the risk of sudden cardiac death, most cardiac masses are removed surgically as soon as possible. For inoperable metastases, molecular targeted therapy is used. Our cardiologists had advised against surgical resection because of a poor prognosis. We prescribed the patient a 10-session regimen of 3-dimensional conformal radiation therapy, axitinib and pembrolizumab. At the 4-month visit, there was substantial improvement in memory recall and the radiotherapy had brought 70% to 75% subjective improvement.

Atrial masses can be detected in patients' years after nephrectomy and may not produce obvious symptoms, so patients with RCC should undergo regular cardiovascular evaluation and investigation of any cardiac mass. If surgery is inadvisable, the patient should be started on immunotherapy, and the cardiac mass should be monitored regularly for structural changes. Given that there is no established algorithm for managing cardiac metastases from RCC, a surgical approach seems most feasible. For inoperable metastases, molecular therapy is an alternative, although further studies are needed to determine efficacy and safety profiles.