**Right Atrial Metastasis of Renal Cell Carcinoma: A rare presentation**

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**Introduction:** Renal cell carcinoma (RCC) is an aggressive and lethal tumor that has a high frequency of metastatic spread to unpredictable sites. One quarter of patients have either distant metastases or significant local-regional disease with atypical symptoms on presentation. Intravascular tumor growth into the renal vein and inferior vena cava is seen in about 15% of patients, with extension into the right atrium in approximately 1% of cases.

**Case:** We present a 41-year-old patient with progressive symptoms of right heart failure. Transthoracic echocardiogram and follow up cardiac MRI showed a large mass extending into the inferior vena cava that was suspicious for malignancy. CT showed left renal and adrenal gland masses. Adrenal biopsy confirmed the diagnosis of RCC with papillary features. Final diagnosis was RCC with right atrial metastasis and right heart failure, renal vein thrombosis and pulmonary embolism secondary to malignancy induced hypercoagulable state.

**Discussion:** The classic triad of hematuria, flank pain, and flank mass only occurs in about 10% of cases of renal cell carcinoma. Common sites of metastasis include the lungs, adrenals, intestines, brain, and other intra-abdominal organs, though other rare sites have been reported. RCC often invades local vasculature, as in this case with the renal vein, and tends to grow as a solid column of cells that can extend quite far, even to the right atrium. Long-term prognosis of metastatic RCC is poor and survival is limited to months even with surgery and immunotherapy.

**Conclusion:** Renal cell carcinoma can metastasize to unpredictable sites and may present with atypical symptoms. In these cases, it is often only discovered incidentally on imaging studies. A high index of suspicion is required to diagnose RCC with atypical presentations.