

Renal cell carcinoma with extension to the heart

Ather Anis MD¹, Pierre Maldjian MD², Marc Klapholz MD¹, Muhamed Saric MD PhD¹

A 59-year-old woman with hypertension presented with right flank pain. Magnetic resonance imaging of the abdomen revealed a 9 cm × 8 cm right renal mass and a filling defect (tumour extension) in the inferior vena cava (IVC), with protrusion into the right atrium (Figure 1).

Transthoracic echocardiography showed a large mobile mass (Figure 2) protruding from the IVC into the right atrium. The patient underwent radical right nephrectomy and excision of the mass from the IVC and right atrium. Microscopic examination of the renal mass and its intracaval and intracardiac extension demonstrated renal cell carcinoma of clear cell type. The patient remained stable on follow-up examination.

Malignant renal tumours represent approximately 2% of all malignant neoplasms (1). Patients with renal cell carcinoma and extension into the atrium have a significantly worse prognosis than those with other levels of vena caval involvement (2). Echocardiography plays an important role in diagnosing tumour clot extension into the right heart through the IVC.

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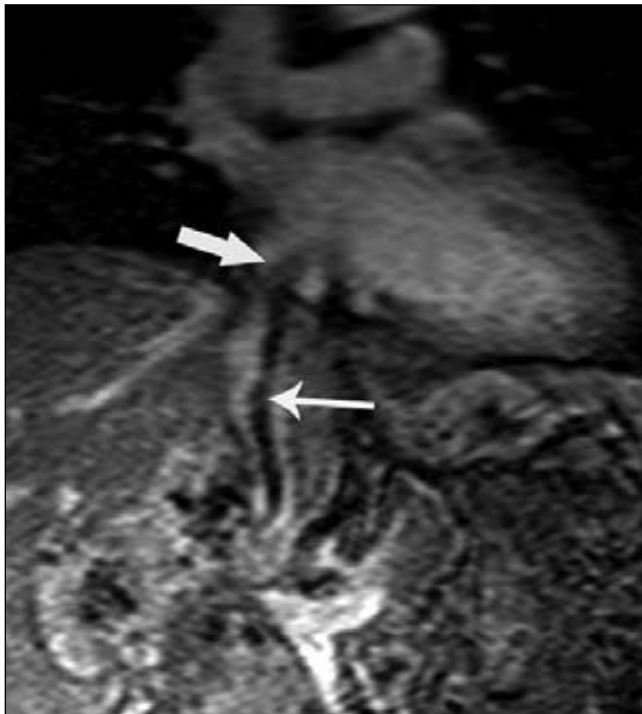


Figure 1) Magnetic resonance imaging of the abdomen showing a 9 cm × 8 cm right renal mass and a filling defect (tumour extension) in the inferior vena cava (thin arrow) with protrusion into the right atrium (thick arrow)

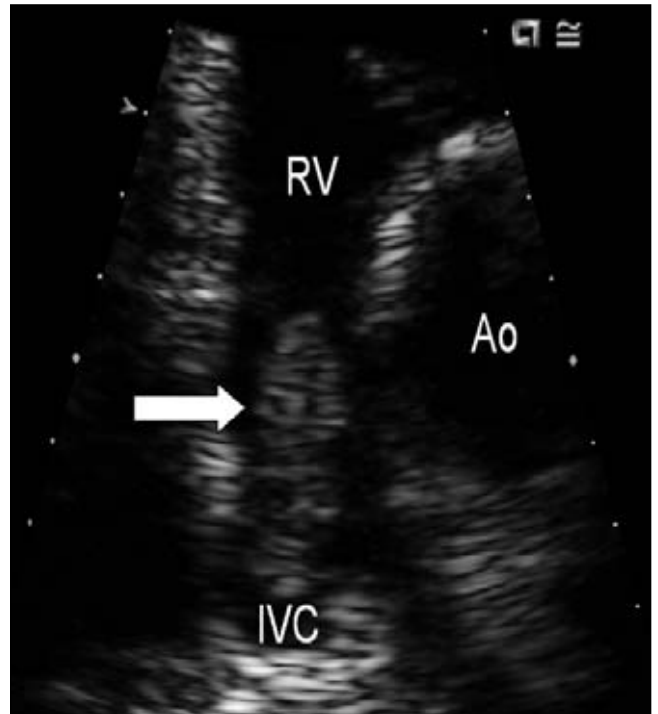


Figure 2) Transthoracic echocardiogram showing a large mobile mass (arrow) protruding from the inferior vena cava (IVC) into the right atrium. Ao Ascending aorta; RV Right ventricle

¹Department of Medicine; ²Department of Radiology, New Jersey Medical School, Newark, New Jersey, USA

Correspondence: Dr Ather Anis, Division of Cardiovascular Diseases, New Jersey Medical School, 185 South Orange Avenue I-538, University Heights, Newark, New Jersey 07103, USA. Telephone 973-972-4731, fax 973-972-7414, e-mail ather_anis@hotmail.com

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