Hepatocellular carcinoma presenting as right heart failure

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A 59-year-old Afro-Caribbean woman with a history of tuberculosis, hepatitis C, and excessive alcohol consumption presented to our institution for investigation of her breathlessness, worsening peripheral oedema, acute renal failure, and deranged liver function tests. She had elevated jugular venous pressure, hepatomegaly, gross peripheral oedema, ascites, and signs of chronic liver disease. Despite diuretic therapy and oral fluid restriction, her oedema persisted. Echocardiography demonstrated normal biventricular size and function with no valve pathology. In addition, a large homogeneous mass was seen in the right atrium (Panel A), with finger-like projections extending into the right ventricle during atrial systole and caudal extension into the inferior vena cava (Panel B). She had neither a central venous catheter nor other obvious prothrombotic cause for atrial thrombus formation. It was initially proposed that the mass was most likely atrial myxoma in an unusual position. Ultrasound of the liver, however, demonstrated several nodules consistent with malignancy (Panel C). Computed tomography demonstrated the typical appearance of hepatocellular carcinoma, with associated thrombus, extending from the right lobe of the liver into the hepatic vein and inferior vena cava and into the right atrium (Panel D). Multiple pulmonary nodules, in keeping with pulmonary metastases, and bilateral pulmonary emboli were also seen. She remained unresponsive to diuretic therapy and was discharged home for palliative care.

(Panel A) Echocardiogram (apical four-chamber view) showing a large mass in the right atrium with finger-like projections into the right ventricle. (Panel B) Echocardiogram (subcostal view) appearing to show the right atrial mass extending caudally into inferior vena cava. (Panel C) Ultrasound showing multiple nodules within the right lobe of the liver. (Panel D) Contrast-enhanced computed tomogram demonstrating tumour in the right lobe of the liver and in the right atrium.