Massive right atrial metastasis from renal cell carcinoma without inferior vena cava involvement

Cardiac metastasis from renal cell carcinoma (RCC) without involvement of the inferior vena cava is very rare. A 50-year-old man presented with symptoms of dyspnea, fatigue, and weight loss. He underwent right nephrectomy due to RCC a year before. His past medical records did not suggest any cardiac involvement before the right nephrectomy. Physical examination revealed increased jugular venous distension and peripheral edema. The chest X-ray and electrocardiogram were normal. Transthoracic echocardiography revealed a right atrial mass, 5.9 cm x 4.9 cm in size, impairing the tricuspid inflow (Fig. A, B). Transvalvular maximal and mean gradients were 14 mmHg and 7 mmHg, respectively (Fig. C). Computed tomography showed no evidence for thrombus in the inferior vena cava. Despite the metastatic status, the right atrial mass was resected to relieve tricuspid obstruction. Histologic examination of the excised mass confirmed metastasis from RCC. The patient died shortly after surgery.

Figures. (A) Apical 4-chamber view demonstrating a right atrial mass with diameters of 5.9 cm x 4.9 cm. (B) Color Doppler image showing a diastolic gradient in the tricuspid inflow. (C) Continuous wave Doppler showed maximum and mean gradients of 14 mmHg and 7 mmHg, respectively.