

Left Renal Cell Carcinoma Extending into Inferior Vena Cava and Right Atrium

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Renal cell carcinoma propagation into the inferior vena cava is rare, occurring in less than 10% of cases, with 10–25% of these patients presenting an extension above the hepatic vein up to the right atrium or even into the right ventricle. (1, 2)

Figure 1 A-D and Figure 2 belong to a 58-year old woman with a left renal cell carcinoma invading the renal vein and the inferior vena cava with extension to the right atrium. The tumor was removed using cardiopulmonary bypass by a team of urologists and cardiovascular surgeons working in collaboration.

The acquisition of images plays a key role to determine the exact extension of the tumor in order to plan the surgical strategy that may involve cardiovascular surgeons. Computed tomography

scan and magnetic resonance imaging are considered the most useful tools to detect tumor extension, the degree of vena cava occlusion and to exclude abnormalities of the renal vein or an eventual extension to the infrarenal vena cava. The possibility of heart surgery with cardiopulmonary bypass and hypothermia might even require the need of a preoperative coronary angiography. (3, 4)

Surgery included a median sternotomy and incision in the right atrium. The tumor extended up to the level of the tricuspid valve plane and into the right ventricle. The patient had a favorable early postoperative outcome: she was extubated within 24 hours and was transferred to the internal medicine ward 48 hours after surgery.

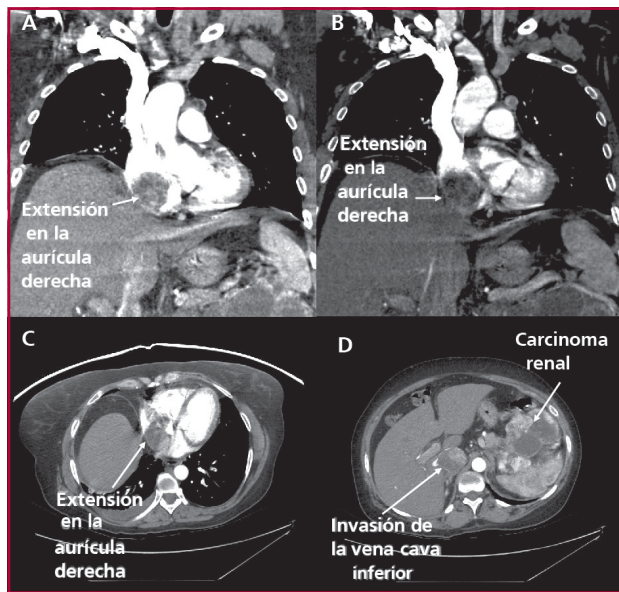


Fig. 1.

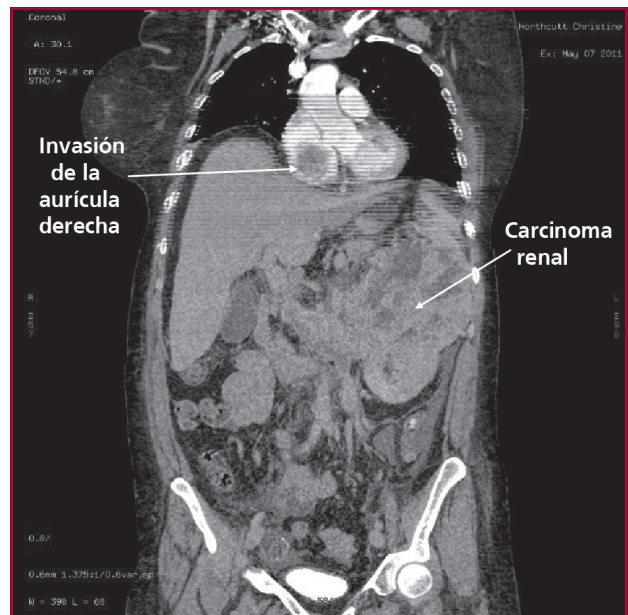


Fig. 2.

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