



Clinical Image of the Month

Comparative images between CCTA and IVUS on the Nutcracker syndrome

Imágenes comparativas entre angio TAC e IVUS en el síndrome de Nutcracker

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CASE REPORT

This work aims to relate the findings obtained using IVUS and CCTA in a same patient with Nutcracker syndrome. Different sections are shown where both the IVUS and CCTA images correlate, calculating the centerline of the left renal vein. Its purpose is to correctly understand and interpret the findings obtained using IVUS (Figs. 1 and 2).

DISCUSSION

Nutcracker syndrome is a clinical entity that is still not well resolved from a diagnostic or therapeutic point of view. It frequently constitutes an incidental radiological finding in the context of an abdominal

study. The consequences of a diagnostic error can have great significance, as endovascular treatments using stents or bypasses with open surgery carry risks, whether due to stent migration or surgical complications.

In this context, there is frequently a diagnostic disparity between transabdominal ultrasound, CCTA or MRA, phlebography, IVUS, or pressure gradients. The last 3 imaging modalities are used to make therapeutic decisions and perform intraoperative controls. Therefore, it is increasingly important to gain experience in interpreting intravascular images to make a more precise diagnosis.

As can be observed, the findings obtained when calculating the vein centerline with CCTA have a good correlation with IVUS. However, IVUS has a steeper learning curve due to image interpretation.

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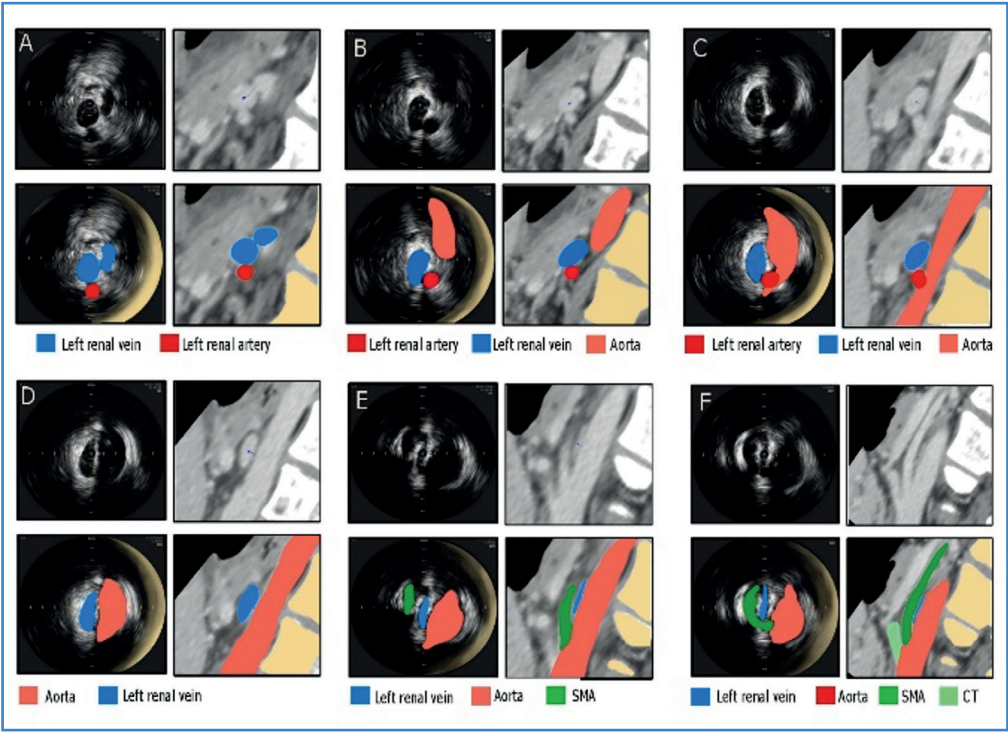


Figure 1. Different cross-sections are shown correlating IVUS and CCTA images in the same cut plane, calculating the centerline of the left renal vein. Image A corresponds to the renal vein closest to the kidney, and F, to the aortomesenteric clamp.

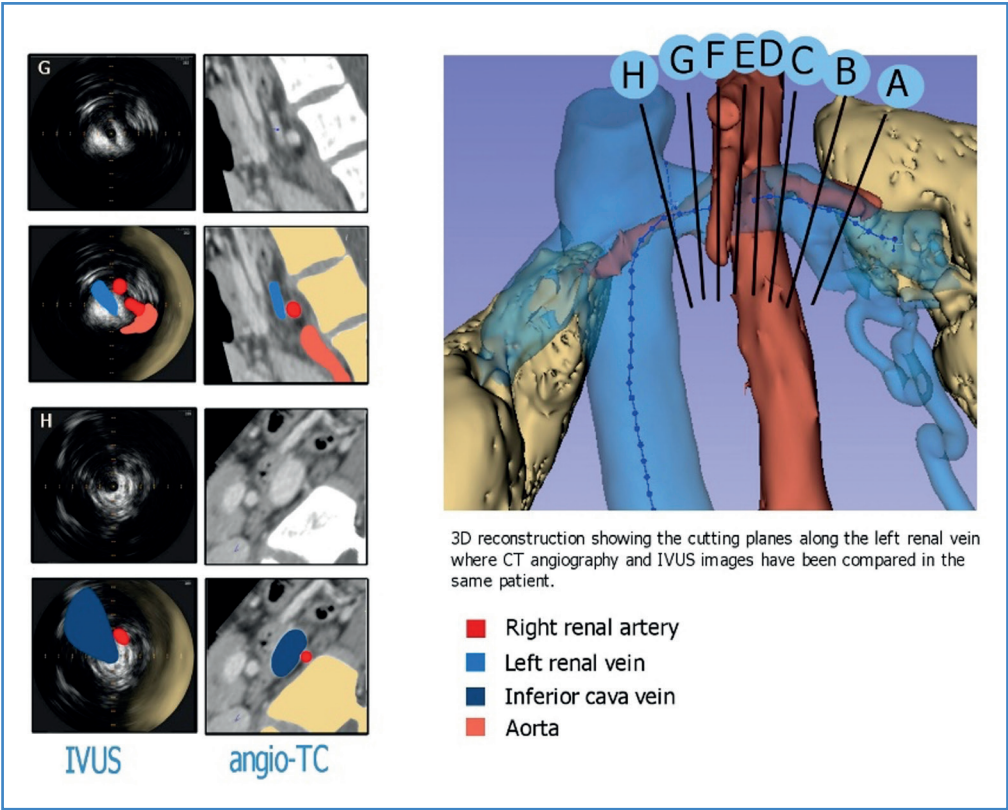


Figure 2. 3D reconstruction showing the cross-sections along the left renal vein.