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Clinical Images

Interrupted Inferior Vena Cava

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Abstract
This report highlights the importance of knowing anatomical anomalies, in this case, interrupted inferior vena cava, in order to avoid complications and/or delay of needed procedures.

Keywords: Congenital; Inferior vena cava; Right heart catheterization

Case Description

A healthy 28-year-old woman presented for evaluation of supraventricular tachycardia. She has had short-lived, sudden-onset palpitations since she was in high school. The echocardiogram did not show any structural heart abnormalities. She was taken for an electrophysiology study. Upon insertion of catheters (Figure 1), blue arrow, right atrium; black arrow, right ventricular apex; yellow arrow, coronary sinus; white arrow, ablation) via the right femoral vein, it was found that the catheters entered into the right atrium via the Superior Vena Cava (SVC). Venography revealed a persistent azygous vein opening into the SVC (Video 1). Electrophysiology study eventually revealed typical atrioventricular nodal reentrant tachycardia, which was successfully ablated. Interruption of the Inferior Vena Cava (IVC) with azygous continuation is a rare congenital anomaly in which the IVC is interrupted below the hepatic vein and venous return is via the azygous vein into the SVC [1,2]. This can cause procedural obstacles during right heart catherization, IVC filter placement, temporary pacing lead placement, and, as in this case, electrophysiology study. Awareness of this anomaly can aid in planning to avoid complications and/or delay of needed surgery.

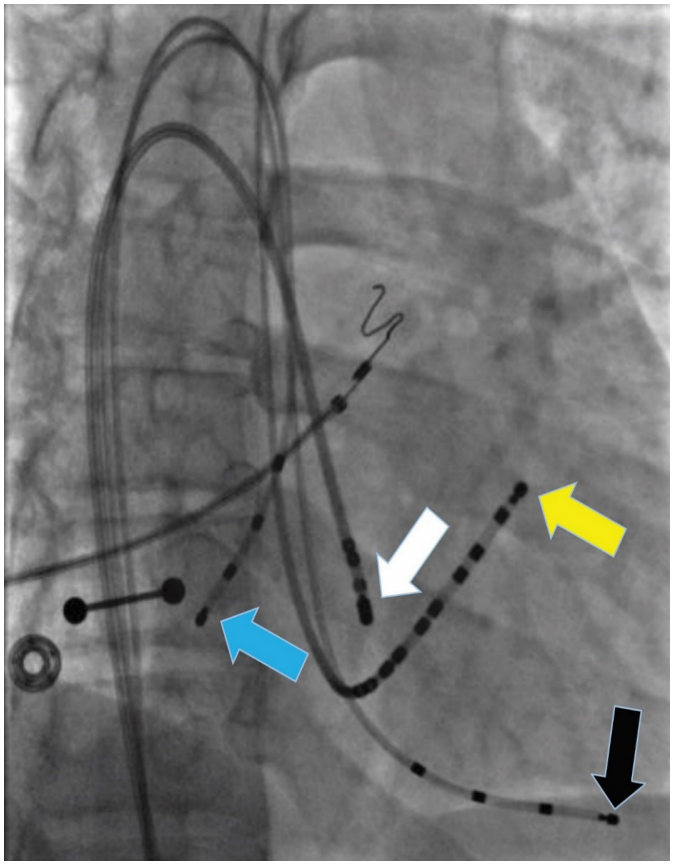

Figure 1: Catheters inserted via the right femoral vein into the right atrium via the superior vena cava are seen on fluoroscopy in the right anterior oblique view. Blue arrow, right atrial catheter; yellow arrow, coronary sinus catheter; black area, right ventricular apex catheter; white arrow, ablation catheter.

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