

SUCCESSFUL PERFORMANCE OF CARDIAC ELECTROPHYSIOLOGICAL PROCEDURES VIA A CONGENITAL INFERIOR VENA CAVA ANOMALY- REPORT OF 2 CASES

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ABSTRACT

Background: Femoral vein access is the preferred approach for advancing multiple catheters via the inferior vena cava (IVC) to the heart during routine cardiac electrophysiology study and catheter ablation. Compared to acquired venous abnormalities, congenital inferior vena cava anomalies are encountered rather infrequently in adult electrophysiology procedures and their presence may pose technical procedural challenges.

Presentation: We describe 2 cases in which we were able to successfully perform cardiac electrophysiological procedures in the presence of a complex congenital venous anomaly, the left sided IVC. First case was 30 year old gentleman presented with history of recurrent episodes of supraventricular tachycardia terminated with AV nodal blocking agents. Second case was 21 year old boy with WPW syndrome and recurrent supra-ventricular tachycardia.

Diagnosis and Management: We managed to pass the EP catheters in both cases with a bit difficulty and angulation, while given I/V heparin to reduce the risk of thrombosis and confirmed the position of catheters via subclavian venous placement of a guidewire. In first case, typical AV node reentry tachycardia was induced which was mapped and ablated in the slow pathway region. In second case, right posterior accessory pathway was ablated at 6 O'clock. CT angiography of the abdominal veins was performed which confirmed the finding of left sided IVC.

Follow-up and Outcomes: Abnormalities of the IVC are relatively uncommon. But it is an important condition that may be encountered by electrophysiologist. Catheter ablation of the slow AV nodal pathway and right posterior accessory pathway was safely and successfully performed with this unusual venous anomaly.

Keywords: SVT, LEFT IVC, RFA