Catheter inversion technique for ablation of parahisian accessory pathway

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Parahisian accessory pathways are generally superficial and can be successfully ablated using a direct approach in the great majority of cases with only rare complications. Our case is unusual because even though it was superficially located on the epicardium, it could not be eliminated by a direct approach using repeated high-energy ablation. Instead, it was successfully ablated by curving the ablation catheter underneath the septal leaflet of the tricuspid valve and back towards the annulus to gain direct contact with the pathway.

A similar technique has also been described for successful ablation of left ventricular outflow tract tachycardia and anteroseptal accessory pathway under the aortic cusps. A recognized alternative technique is the superior approach via a jugular or subclavian vein.

In this report we wish to show that the success of the ablation is not only dependant on the stability of the ablation catheter, but also that the proximity of the ablation catheter to the accessory pathway plays an important role. We hypothesize that with the catheter inversion technique, we were in closer proximity to the accessory pathway as evident by selective contact pathway block. At the last ablation procedure with the catheter inversion technique, it was possible to achieve deflection of the tip to a parallel orientation to the septum under the hinge of the tricuspid valve, in a way that would be challenging to achieve for a cryoablation catheter, to avoid repeated contact pathway block. This allowed electrogram monitoring of pathway elimination by lower RF energy without the need to resort to higher power delivery.

The full-length version of this report can be viewed at: http://www.escardio.org/Guidelines-&-Education/E-learning/Clinical-cases/Electrophysiology/EP-Case-Reports.

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