Left septal slow pathway ablation for atrioventricular nodal reentrant tachycardia

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We report on a patient in whom right-sided ablation at the inferior part of the triangle of Koch was unsuccessful whereas ablation from the left septum was not possible due to ventriculoatrial (VA) block during radiofrequency (RF)-induced junctional rhythm. Successful ablation from the left septum was accomplished only after positioning of a trans-aortic catheter for recording of a left His bundle potential.

Case report

In patients with slow–fast atrioventricular nodal reentrant tachycardia (AVNRT), there have been reports of successful slow pathway ablation from the left septum, either retrogradely through the aorta or via a transeptal access. However, in the published left septal ablation case reports, the His bundle electrogram was not identified on the left side; this might increase the risk of inadvertent AV block.

A 48-year-old male with typical, slow–fast AVNRT in whom right-sided slow pathway ablation at the inferior part of the triangle of Koch was unsuccessful was subjected to left septal slow pathway ablation. Diagnosis of slow–fast AVNRT was according to standard criteria. We used this experience in order to guide left septal slow pathway ablation in patients in whom the conventional approach at the inferior part

Figure 1 Position of the left-sided ablation electrode (left panel) at the left anterior oblique (LAO) and right anterior oblique (RAO) projections. R His: right-sided His bundle, L His: left-sided His bundle, CS: coronary sinus, RV: right ventricle, RAbl: right-sided ablating catheter, LAbl: left-sided ablating catheter.
of the triangle of Koch had failed. Catheterization of the coronary sinus provides a useful anatomical landmark, and recording of His bundle potential on the left septum allows orientation of the transeptal electrode and reduces the risk of AV block. Depending on the anatomy and the thickness of the septum, the left-sided His recording electrode at the left septum may not appear in parallel and entirely corresponding to the right-sided His recording electrode (Figure 1). Thus, orientation of the ablating electrode at the inferior area and clearly away from the His bundle may not be easy without the aid of the left-sided His. We advocate its use in every case of left-sided slow pathway ablation.

Conflict of interest: none declared.

References