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Cardioneuroablation in a patient with atrioventricular nodal re-entrant tachycardia

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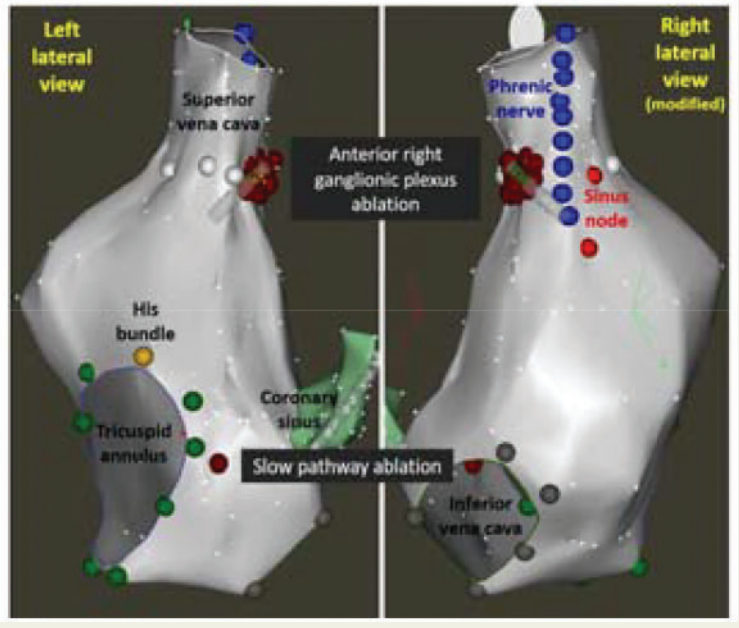

We present the case of a 32-year-old female patient with a history of chronic fatigue resulting from functional disorder of the sinoatrial (SA) and atrioventricular (AV) nodes, in addition to palpitations due to paroxysmal supraventricular tachycardia. During electrophysiological study, significant sinus and junctional bradycardia were seen and typical AV nodal reentrant tachycardia (AVNRT) induced. Due to transient complete AV block following the first radiofrequency energy application at the slow pathway region, the procedure was abandoned. However, the patient was offered a repeat procedure aiming at modulating the SA and AV nodal function with cardioneuroablation, with subsequent ablation of AVNRT. At the beginning of this second procedure, typical AVNRT was repeatedly and very easily inducible. Radiofrequency ablation was delivered at the posterior cavoatrial junction, i.e. the site of the anterior right ganglionic plexus (*Panel*). The sinus rate accelerated from 40–60 to 80 b.p.m., the Wenckebach point increased from 80 to 130 b.p.m., and the inducibility of AVNRT significantly changed—isoproterenol challenge and two atrial extrastimuli were needed for induction. Finally, a single ablation lesion at the slow AV nodal pathway rendered the arrhythmia non-inducible. At 12 month follow-up, the patient remained completely asymptomatic, with no further palpitations and no significant fatigue. Limited cardioneuroablation ameliorated bradycardia-related symptoms and allowed uneventful AVNRT ablation.

The full-length version of this report can be viewed at: https://www.escardio.org/Education/E-Learning/Clinical-cases/Electrophysiology.