

ATRIOVENTRICULAR CONDUCTION MODULATION AND ABLATION: BETTER AT A DISTANCE FROM THE NODE?

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Abstract

New therapeutic possibilities open up in the nonpharmacological rate control of patients with atrial fibrillation, and an approach with an ablation line around the AVN could be useful both for modulating the ventricular response and for safer AV ablation if this is finally required.

LETTER TO THE EDITOR

TITLE: ATRIOVENTRICULAR CONDUCTION MODULATION AND ABLATION: BETTER AT A DISTANCE FROM THE NODE?

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To the editor,

We have read with great interest the manuscript by Lisa Lemke et al, entitled "AV-node isolation as an alternative to AV-node ablation in patients undergoing pace & ablate strategy"(1).

We agree in that the idea of preserving an atrio-ventricular nodal (AVN) escape rhythm after AVN ablation resulting in complete block is of interest.

We appreciate that the methodology used with the semicircular ablation line connecting the superior and inferior aspects of the tricuspid valve fibrotic ring is somewhat similar to that recently proposed by our group for AVN conduction modulation (2), in which an initial successful AVN modulation occurred in 88% of patients, and no case of persistent high-degree AVN block was observed (transient atrioventricular block in 12%). In this study, the procedures were performed during sinus rhythm and electroanatomical activation mapping of the right atrium was performed during ventricular stimulation to identify the right atrial breakthrough (presumably the main atrial insertion of the AVN), with radiofrequency applications always maintaining a distance of at least 0.5 cm from it.

In the study by Lisa Lemke et al, another reference is used for the ablation line, sites with His signals (His cloud) and the distance to these signals is not specified. The figures presented in the manuscript show that applications were performed at a short distance to the "His cloud" (1). We observed that the mean distance between the atrial breakthrough and the His bundle electrogram was 0.62 cm but this was highly variable (0.36 – 1.4 cm) (2).

It would be very interesting to know if, before achieving complete block, a progressive decrease in heart rate (or an increase in atrioventricular block cycle length in those patients who were in sinus rhythm during the procedure) occurred. Likewise, to know if there was a progressive prolongation of the PR interval. All of these would be data suggesting modulation prior to AV ablation.

New therapeutic possibilities open up in the nonpharmacological rate control of patients with atrial fibrillation, and an approach with an ablation line around the AVN could be useful both for modulating the ventricular response and for safer AV ablation if this is finally required.

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