A Novel Technique For His Bundle Pacing In Patients Undergoing Simultaneous Ablation Of The

Atrioventricular Node

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Abstract:

**Background:** His bundle pacing has emerged as a new, more physiological pacing technique. However, its utility

and safety in patients with atrial fibrillation undergoing simultaneous ablation of the atrioventricular node has

not been studied.

**Objective:** To investigate the safety of implanting a His bundle pacemaker in a patient undergoing ablation of

the atrioventricular node.

**Methods:** An 88-year-old gentleman with permanent atrial fibrillation and poorly-controlled ventricular rates

despite high doses of atrioventricular nodal blocking agents was referred to our clinic for further management.

He elected to proceed with His bundle pacemaker implantation and simultaneous ablation of the atrioventricular

node. We started by implanting a His bundle lead in a satisfactory position with selective His capture. We then

inserted another pacing lead in the right ventricular apex and attached the leads to a dual-chamber generator.

The His bundle lead was plugged into the atrial port and the right ventricular apical lead was plugged into the

ventricular port. The ventricular safety pacing feature was turned off. We then proceeded with ablation of the

atrioventricular node.

**Results:** The captured QRS after His pacing in the atrial channel was appropriately sensed in the ventricular

channel. Threshold testing was performed which revealed an excellent threshold in the His bundle lead followed

by right ventricular apical pacing after loss of His capture (Figure).

**Conclusion:** Implantation of a His bundle pacemaker and ablation of the atrioventricular node in the same

setting is feasible. The use of a right ventricular apical pacing lead and a dual-chamber generator provides a

safe and reliable backup.

