Permanent Para-Hisian Pacing. Indications and Follow-Up

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Background

It has been demonstrated that permanent right ventricular apical pacing produces left ventricular dyssynchrony and decreases contractile function. For this reason other sites of stimulation have been explored. The indications, outcomes and technical difficulties of parahisian pacing are currently under investigation.

Objectives

To analyze the indications, feasibility and follow-up in a group of patients undergoing para-hisian pacing.

Material and Methods

A total of 22 patients between 27 and 68 years with indication of permanent pacing, narrow QRS complexes and preserved intraventricular conduction were evaluated. Activefixation atrial leads and ventricular leads with a deflectable sheath for para-hisian stimulation were used. Pacing thresholds and R-wave amplitude were measured during implantation and follow-up.

Results

During implantation, pacing thresholds were <2 V/0.50 ms and R-wave amplitude was >5 mV. The average duration of placement of conventional leads and special leads were 30±10 min and 15±5 min, respectively. Mean follow-up was 24 months. Chronic thresholds were 2.5±1.5 Volts, and mean R-wave amplitude was 5±2 Volts. One lead displacement was reported during followup.

Conclusions

Para-hisian pacing presented a low rate of complications. The use of special leads and sheaths reduced the implantation time. Compared to conventional pacing, para-hisian pacing presented higher thresholds and lower R-wave amplitude. Para-hisian pacing would be a valid option to avoid ventricular dyssynchrony related to right ventricular pacing in patients with preserved intraventricular conduction.

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