

HIS BUNDLE PACING, THE FINAL FRONTIER OF PHYSIOLOGICAL PACING? – A SINGLE CENTER EXPERIENCE



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BACKGROUND:

His bundle pacing (HBP) may prevent ventricular desynchrony and its long-term consequences by preserving normal electrical activation of the ventricles when compared to right ventricular pacing. The reporting of procedural and clinical outcomes to date is not uniform between centers.

OBJECTIVES: TO DESCRIBE OUR INITIAL EXPERIENCE WITH HIS BUNDLE PACING.

METHODS:

Retrospective registry including 35 consecutive patients referred to His bundle pacing between September 2017 and July 2020. The implant procedure was performed using a 69 cm Medtronic SelectSecure 3830 pacing lead. The region with a His bundle (HB) potential was targeted for detailed unipolar pace mapping to evaluate the paced QRS duration and morphology. After identifying HB potential and confirming HB capture, the lead was torqued 5 to 10 times to fix the lead to the target site. Baseline, procedural and follow-up were collected.

RESULTS:

PATIENT CHARACTERISTICS (N=35)

Age (years)	74±9
Males	23 (66%)
INDICATION	
Advanced AV block	4 (11%)
Upgrade from RV pacing	17 (49%)
Complete LBBB + depressed EF	14 (40%)

Table 1. Overall demographics (AV – atrioventricular; RV – right ventricle; LBBB – left bundle branch block; EF – ejection fraction)

HBP SUCCESS IMPLANTATION IN 25 (71%) PATIENTS.

HBP IMPLANTATION

Mean procedure time	122±62min
Mean fluoroscopy time	14±17min
Complications	None

Table 2. Procedure characteristics

MEDIAN QRS BEFORE AND AFTER HBP: 180MS VS 138MS, P VALUE <0.05

VARIABLES	IMMEDIATELY POST IMPLANTATION (N=25)	AT FOLLOW-UP (14±9 MONTHS) (N=24)
Mean pacing threshold	1.06±0.66 V @0.4ms	1.04±0.62 V @0.4ms
Pacing threshold ≤1.5V	86% patients	79% patients

Table 2. Study variables at baseline and at follow-up

PERMANENT HBP WAS SUCCESSFULLY ACHIEVED IN 71% OF PATIENTS AND WAS ASSOCIATED WITH A SIGNIFICANT REDUCTION IN QRS DURATION.