Accepted Manuscript

Permanent His Bundle Pacing (HBP): Recommendations From A Multi-Center HBP Collaborative Working Group For Standardization Of Definitions, Implant Measurements And Follow-Up

Pugazhendhi Vijayaraman, MD, FHRS, Gopi Dandamudi, MD, FHRS, Francesco Zanon, MD, FHRS, Parikshit S. Sharma, MD, MPH, Roderick Tung, MD, FHRS, Weijian Huang, MD, FHRS, Jayanthi Koneru, MBBS, Hiroshi Tada, MD, PhD, FHRS, Kenneth A. Ellenbogen, MD, FHRS, Daniel L. Lustgarten, MD, PhD, FHRS

PII: S1547-5271(17)31310-3

DOI: 10.1016/j.hrthm.2017.10.039

Reference: HRTHM 7372

To appear in: *Heart Rhythm*

Received Date: 13 August 2017

Please cite this article as: Vijayaraman P, Dandamudi G, Zanon F, Sharma PS, Tung R, Huang W, Koneru J, Tada H, Ellenbogen KA, Lustgarten DL, Permanent His Bundle Pacing (HBP): Recommendations From A Multi-Center HBP Collaborative Working Group For Standardization Of Definitions, Implant Measurements And Follow-Up, *Heart Rhythm* (2017), doi: 10.1016/j.hrthm.2017.10.039.

Criteria for His Bundle Pacing

Baseline	Normal QRS	His-Purkinje Conduction Disease	
		With correction	Without correction
Selective HBP	• S-QRS = H-QRS with isoelectric interval • Discrete local ventricular electrogram in HBP lead with S-V=H-V • Paced QRS = native QRS • Single capture threshold (His bundle)	• S-QRS ≤ H-QRS with isoelectric interval • Discrete local ventricular electrogram in HBP lead • Paced QRS < native QRS • 2 distinct capture thresholds (HBP with BBB correction, HBP without BBB correction)	• S-QRS ≤ or > H-QRS with isoelectric interval • Discrete local ventricular electrogram in HBP lead • Paced QRS = native QRS • Single capture threshold (HBP with BBB)
Non-selective HBP	• S-QRS < H-QRS (usually 0, S-QRS$_{end}$ = H-QRS$_{end}$) with or without isoelectric interval (Pseudodelta wave +/-) • Direct capture of local ventricular electrogram in HBP lead by stimulus artifact (local myocardial capture) • Paced QRS >native QRS with normalization of precordial and limb lead axes with respect to rapid dV/dt components of the QRS • 2 distinct capture thresholds (His bundle capture, RV capture)	• S-QRS < H-QRS (usually 0, S-QRS$_{end}$ < H-QRS$_{end}$) with or without isoelectric interval (Pseudodelta wave +/-) • Direct capture of local ventricular electrogram in HBP lead by stimulus artifact • Paced QRS ≤ native QRS • 3 distinct capture thresholds (HBP with BBB correction, HBP without BBB correction, RV capture)	• S-QRS < H-QRS (usually 0) with or without isoelectric interval (Pseudodelta wave +/-) • Direct capture of local ventricular electrogram in HBP lead by stimulus artifact • Paced QRS > native QRS (see text) • 2 distinct capture thresholds (HBP with BBB, RV capture)