The Safety and Benefits of Left Bundle Branch Pacing In Patients With Atrioventricular Block

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Introduction: The application of His bundle pacing (HBP) on patients with atrioventricular (AV) block should be of concern. Left bundle branch pacing (LBB pacing), pacing beyond the site of block will be considered for infra-nodal block. The study is to access the clinical benefits and safety of LBB pacing in patients with AV block, especially for infra-nodal block.

Methods: 183 patients diagnosed with AVB were included. The Select Secure lead (model 3830; Medtronic) was used. Characteristics of LBB capture are summarized as following: 1) The paced QRS morphology of RBBB pattern with unipolar pacing; 2) LBB potential could be recorded; 3) Selective and non-Selective LBBP; 4) Stimulus to peak left ventricular activation time (LVAT); 5) Pacing threshold and Echocardiographic measurements were assessed during 1 year follow-up.

Result: All patients were success achieved LBB area pacing. The detailed baseline characteristic and follow-up were shown in the Table 1. Thresholds of intra and infra-nodal patients remained stable during 1 year follow-up. Echocardiographic measurements showed that LBB pacing remained the cardiac function. There was one case who occurred dislodgment and revised LBBP lead after 1 month post-implantation.

Conclusion: LBB pacing had ideal pacing parameters and preserve cardiac function and may be an excellent alternative for AVB patients.