# Electrograms guided his bundle pacing implant: moving from radiology to electrical signals

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**Funding Acknowledgement:** Type of funding source: None

**Background:** The standard technique to His Bundle Pacing (HBP) based on a fluoroscopic approach might be challenging and fluoro consuming. The electrical signals could lead to a precise and rapid lead implant, thus reducing the fluoroscopy time (FT) and X-ray dose.

**Objective:** To evaluate the feasibility, efficacy and safety of the electrogram-guided technique to obtain His Bundle pacing (HBP) with minimal or no fluoroscopy use.

**Methods:** Between October and December 2018, 41 consecutive patients with indication for pacing underwent HBP with the electrogram-guided approach.

**Results:** Successful HBP was obtained in 39/41 (95%) pts, which is the study population (mean age 78±10 years). S-HBP and NS-HBP were achieved in 23 (59%) and 16 (41%) pts, respectively. Final HBP lead position was achieved in 31/39 (79.4%) pts with zero fluoroscopy, only guided by the electrical signals. In the remaining 8 pts a minimal dose of fluoro (mean 8 sec) has been required to locate the His. Fluoroscopy has been routinely used to remove the sheath and to ensure the slack. The atrial lead has been implanted in a standard fashion. No difference was observed in the FT for HBP lead placement in patients with S-HBP and NS-HBP (mean 8.1±25 sec vs 7.5±20 sec, p=0.8; median value 0 sec vs 0 sec). Moreover, no significant differences were observed in the FT needed for the entire procedure, total Dose Area Product (DAP) and total procedural time among both S-HBP and NS-HBP. The His lead dislodgement occurred in 1 (2.6%) patient one day after the procedure.

**Conclusion:** HBP could be performed safely and efficiently using the electrograms, with minimal or no fluoroscopy. Fluoroscopy was required during sheath removal and atrial lead placement.