

Feasibility and Safety of Zero-Fluoroscopy Left Bundle Branch Pacing: An Initial Experience.

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Abstract

Introduction Left bundle branch pacing (LBBP) has emerged in recent years as a new pacing modality, providing patients with a narrower paced QRS than conventional pacing and stable pacing parameters. At the same time, there is a growing concern about the use of fluoroscopy in pacemaker implantations, given its harmful effects to both patients and operators. However, there are no prior experiences of zero fluoroscopy in LBBP procedure. **Methods** We conducted an observational prospective study recruiting consecutive patients that underwent zero fluoroscopy LBBP pacemaker implantation. A 6-month follow-up visit was programmed for every patient. The main goal of our study was to assess the efficacy, feasibility and safety of the procedure. **Results** From January 2021 to February 2022, we included 10 patients, 8 males. The average age was 63 ± 4 years. The procedure was successful in all patients. We observed a significant reduction in paced QRS width compared with basal QRS width (149 ms vs 116 ms, $p=0.02$). All device parameters remained stable at 6-month follow-up: no significant differences in mean impedance (700.5 vs 494 Ohm, $p=0.09$), capture threshold (0.67 vs 0.83V @ 0.4ms, $p=0.27$) or R-wave amplitude (10.6 vs 13.92 mV, $p=0.19$). No complications were reported in any case. **Conclusion** Zero fluoroscopy LBBP is feasible and safe, and it may be considered an optimal election in cases where radiation exposure is contraindicated or especially undesirable and as an alternative in all other cases.

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