Selectra 3D- guided conduction system pacing: single-center experience

L. Marcantoni, G. Pastore, E. Baracca, S. Andreaggi, N. Pellegrini, E. Galuppi, M. Bartolomei, M. Centioni, G. Rigatelli, L. Roncon, F. Zanon

General Hospital of Rovigo, Rovigo, Italy

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Background: Conduction system pacing (CSP)is becoming increasingly popular thanks to the ability to both maintain physiological electrical activation in patients with narrow QRS and restore ventricular synchrony in patients with bundle branch block (BBB). The Selectra3D introducer is a new tool able to support the correct positioning and screwing of the catheter on the bundle of His (HBP) or on the left branch (LBBP). It does exist in 3 different shapes: S, M, L (Fig. 1) based on the radius of main curvature. The internal diameter of 7.3 Fr allows it to support both the 3830 lumenless catheter historically used for CSP, as well as standard 6Fr stylet-driven leads.

Objective: To evaluate the effectiveness of the Selectra3D introducer for CSP (including both HBP and LBBP), considering the procedural success rate and the lead stability (stability of electrical parameters or need for implant revision) in the medium-term follow-up.

Methods and results: The Selectra3D introducer was used in 56 patients' candidates for CSP (mean age 80±6 years). Pacing indications included A-V block in 21 patients, AF with slow ventricular response in 9 patients; SND in 8 patients and HF and severe ventricular dysfunction in 18 patients (of which 4 were PICM). The mean baseline EF was 40±15%. A PM was implanted in 40 patients and an ICD in 16. A standard stylet-driven lead was used in 48 cases, a fixed exposed screw lead was used in 8 patients. HBP was obtained in 21 cases and LBBP in 30 cases, while in 5 cases (8.9%) neither HBP nor LBBP could be obtained. Implants were performed via a left-sided approach in 55 cases and a right-sided approach in 1 case. The baseline QRS duration was 144±38 ms and the paced QRS duration was 118±21 ms. The electrical parameters were optimal with sensing 8.7±8 mV; impedance 625±276 ohm; threshold 1±0.5 V. During follow-up, 2 lead dislodgement (3.9%) (1 HBP and 1 LBBP) were recorded, both within 7 days after implantation. All the others showed stability of the electrical parameters at a mean follow-up of 8.4±4.2 months.

Conclusions: The new Selectra3D introducer supports effectively and safely the lead implant on conduction system catheters (HBP and LBBP), allowing the implant of both exposed fixed screw leads and standard stylet-driven leads, leading to procedural success>90%. The electrical parameters were optimal at implantation and remained stable during follow-up.

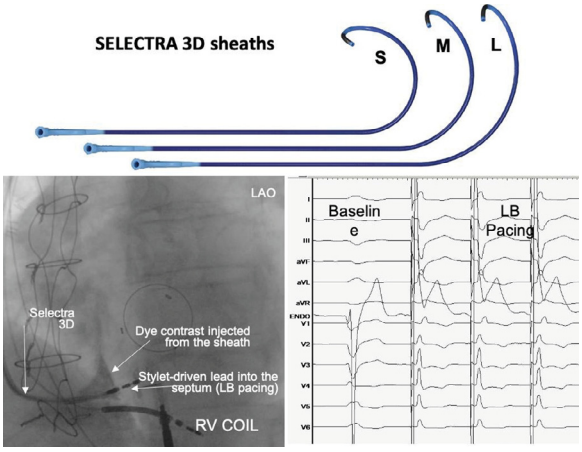

Figure 1