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Short Term Extraction Profile of Cardiac Pacing Leads with Optim© Insulator: A Pilot Study

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Introduction:

Optim© Insulator is a co-polymer material that fuses the best attributes of silicone and polyurethane, offering improved handling and proven biostability. No data are available about the extraction performance of Cardiac Pacing Leads with Optim© Insulator (CLOI). Aim of the study was to evaluate the transvenous extraction profile of CLOI compared to non-CLOI.

Methods:

Seven consecutive patients (CLOI Group, 5 men, mean age 58±27 years) with 7 CLOI (mean implantation time 11±5 months) underwent a transvenous removal procedure. Indications to removal were local infection in 6 and malfunction in 1 patient. Procedural performances and outcomes were evaluated in comparison with 42 consecutive patients with 52 Cardiac Pacing Leads of the same model without Optim© Insulator (non CLOI Group).

Results:

In both groups, all leads were successfully removed without complications. All CLOI were successfully removed. MT resulted more effective in comparison to non-CLOI (100% vs 25%, p 0.0001). Extraction time (2.2±0.7 vs 5.6±5.5 min, p0.0001) and fluoroscopy time (1.5±3.2 vs 8±16 min, p=0.06) resulted shorter in CLOI Group in comparison to non-CLOI. No extraction performance differences were found between non-CLOI and additional leads. The prevalence of adherence sites was higher proximally than distally and the location rate was comparable at all sites, excepted for the right ventricle, where the non-CLOI showed a significantly lower rate (8% vs 31%, p0.001).

Conclusions:

CLOI, after mid-term implantation time, may be removed as effectively as Non-CLOI, with a lower necessity of MD. Optim© Insulator might reduce tissue in-growth facilitating transvenous lead removal.