

Off-label combination of leadless pacemakers and subcutaneous defibrillators in bilateral venous occlusion: a new reimplantation strategy after lead extraction

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Background: Subcutaneous implantable cardioverter-defibrillator (S-ICD) and leadless pacemakers (LPM) provide an alternative to transvenous implantable devices. Sometimes, after transvenous (TV) lead extraction, patients show a bilateral venous occlusion, resulting not eligible for TV reimplantation.

Purpose: This analysis was designed to provide preliminary data on feasibility and short-term outcome of an hybrid combination (Hyb) of s-ICD plus LPM after TV-ICD explantation, in patients without anatomical transvenous reimplantation options.

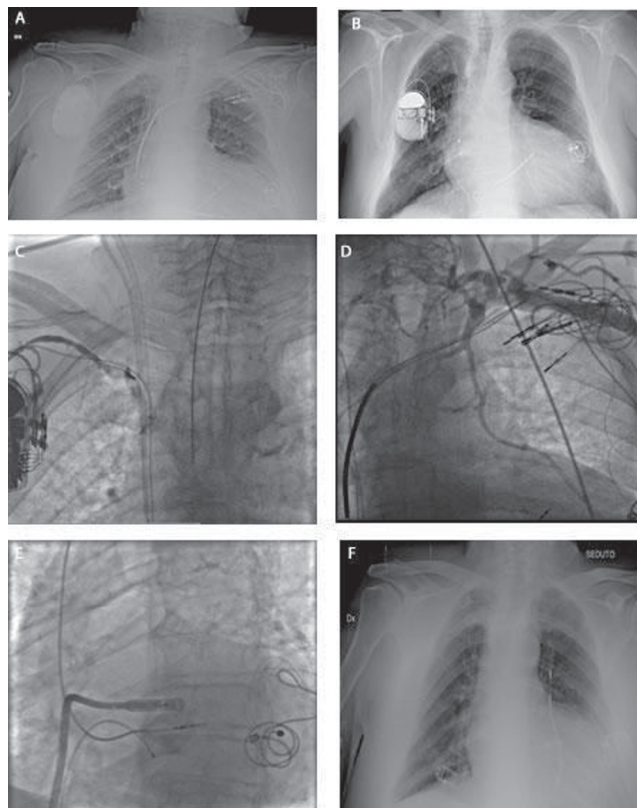
Methods: Among 2684 consecutive extracted patients, 31 (1.1%) were reimplanted with a LPM, 66 (2.4%) with a s-ICD and 6 (0.2%) patients with an Hyb combination. Hyb strategy was considered in patients with a pacing plus defibrillating indication, and an anatomical barrier, as bilateral superior venous occlusion or massive bilateral skin erosion.

Results: Hyb patients were old (72 ± 10 years), with a prevalent ischemic

disease (4/6) and a reduced ejection fraction ($43 \pm 16\%$). Extraction indication was infection in 4 and severe venous occlusion in 2, and included 2 single chamber, 2 dual chamber and 2 biventricular ICD. After extraction, reimplantation timing was 7 ± 6 days, LPM was implanted before and sICD the day after.

LPM reimplantation indication was sinus node dysfunction in 2 and AV block in 4. Implantation duration was 68 ± 23 and fluoroscopy time 9.4 ± 2.3 min. ICD reimplantation indication was primary prevention in 4 and secondary prevention in 2. Implantation duration was 118 ± 10 min. No complications were observed. At 1 year, no complications were observed, including device related cross-talks.

Conclusions: The Hyb strategy is a potential option after TV-ICD explantation in pacemaker dependent patients, when transvenous implantation is not available.



Extraction and Reimplantation Session