Clinical impact of antithrombotic therapy in transvenous lead extraction complications: a sub-analysis from the ESC-EHRA ELECTRa (European Lead Extraction ConTRolled) Registry

Authors:

Introduction: The complexity of candidates for transvenous lead extraction (TLE) has shown a parallel increase, both in terms of comorbidities, and of concomitant therapy, including antithrombotic therapy (AT). The management of candidates for TLE receiving concomitant AT is a debated issue, and only marginally the object of evidence-based recommendations in current guidelines. The ESC-EHRA European Lead Extraction ConTRolled Registry (ELECTRa) is a prospective registry of consecutive TLE procedures conducted by the European Heart Rhythm Association (EHRA) in order to identify the safety and efficacy of the current practice of TLE.

Purpose: The present study is a sub-analysis of the ESC-EHRA ELECTRa Registry conducted with the aim of evaluating the clinical impact of AT on TLE safety and efficacy.

Methods: All consecutive TLE patients enrolled in the ELECTRa registry were included. Success rate and procedural-related complications, including death, were compared between patients without AT therapy (No AT Group) and with different pre-operative AT regimens (AT subgroups), including antiplatelets (AP), anticoagulants (AC) or both (AP + AC).

Results: Out of 3510 TLE pts, 2398 (68%) were under AT pre-operatively. AT patients were older with more co-morbidities (p<0.0001). AT subgroups, defined as AP, AC or AP+AC, were 1096 (31.2%), 985 (28%) and 317 (9%), respectively. Regarding AP patients, 1413 (40%) were under AP, 1292 (91%) with a single AP and 121 (9%) with a dual AP therapy. AP was interrupted in 26% of pts 3.8±3.7days before TLE. Regarding AC patients, 1302 (37%) patients were under AC, 881 were under VKA (68%), 221 (17%) under DOAC, 155 (12%) under LWMH and 45 (3.5%) under UFH. AT do not seem to predict death but identifies a subset of fragile patients with a worse in-hospital TLE outcome.
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Clinical impact of antithrombotic therapy in transvenous lead extraction complications: a sub-analysis from the ESC-EHRA ELECTRa (European Lead Extraction ConTRolled) Registry

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On behalf: ESC-EHRA ELECTRa Investigators

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TLE clinical success rate was high (98%) in all subgroups. Only the incidence of overall death (1.4%), but not the procedure-related, was higher in the AT subgroups (p=0.0500). (Figure A) Age >65 years and NYHA Class III/IV, but not AT regimens, were independent predictors of death for any cause.

Regarding minor complications, hematomas were more frequently observed between AC "continued" patients (p=0.025), whereas pulmonary embolism in the No-AT group (p<0.01). (Figure B)

Conclusions: The AT subgroups showed a comparable TLE success rate, with a higher in-hospital, but non intra-procedural, mortality and more minor bleedings compared to no-ATs. Neither AT regimens or pre-procedural management strategies predicted major complications. AT therapy minimization seems to be safe in patients under chronic AT therapy who undergo TLE. AT do not seem to predict death but identifies a subset of fragile patients with a worse in-hospital TLE outcome.