

**Transvenous lead extraction: procedural outcomes and in-hospital mortality in octogenarian patients**

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**Background:** Managing elderly patients with infection or malfunction deriving from a cardiac implantable electronic device (CIED) may be challenging. The aim of this study was to evaluate safety and efficacy of mechanical transvenous lead extraction (TLE) in elderly patients.

**Methods:** Patients who had undergone TLE in single tertiary referral center were divided in two groups (Group 1:  $\geq 80$  years; group 2:  $< 80$  years) and their acute and chronic outcomes were compared. All patients were treated with manual traction or mechanical dilatation.

**Results:** Our analysis included 1316 patients (group 1: 202, group 2: 1114 patients), with a total of 2513 leads extracted. Group 1 presented more comorbidities and more pacemakers, whereas the dwelling time of the oldest lead was similar, irrespectively of patient's age. In group 1 the radiologi-

cal success rate for lead was higher (99.0% vs 95.9%;  $P < 0.001$ ) and the fluoroscopy time lower (13.0 vs 15.0 minutes;  $P = 0.04$ ) than in group 2. Clinical success was reached in 1273 patients (96.7%), without significant differences between groups (group 1: 98.0% vs group 2: 96.4%;  $P = 0.36$ ). Major complications occurred in 10 patients (0.7%) without significative differences between patients with more or less than 80 years (group 1: 1.5% vs group 2: 0.6%;  $P = 0.24$ ). In the elderly group no in-hospital mortality occurred (0.0% vs 0.5%;  $P = 0.42$ ).

**Conclusions:** Mechanical TLE in elderly patients is a safe and effective procedure. In the over-80s, a comparable incidence of major complications with younger patients was observed, with at least a similar efficacy of the procedure and no procedural-related deaths.