



COMUNICAZIONI ORALI 4: DEVICE

CO.4.01

TECHNIQUES OF CARDIAC LEADS EXTRACTION: 17-YEARS SINGLE CENTER EXPERIENCE

M. Straito¹, G. Schiaffini¹, M.V. Mariani¹, M. Magnocavallo¹, M.C. Gatto², M. Alfarano¹, G. Giunta², A. Ciccaglioni², A. Piro¹, C. Lavalle²

¹ La Sapienza, Roma, ITALY

² Policlinico Umberto I, Roma, ITALY

Background: Transvenous lead extraction (TLE) techniques used, although very effective, are not without risk.

Purpose: Our is a retrospective cohort single center study to determine the safety and the efficacy related to TLE with all currently available techniques and to define mortality at 30 days and 2 year follow-up (FU) and related predictive factors.

Methods: We enrolled 390 consecutive patients (mean age 71 ± 16 , 76% male and 24% female) undergoing TLE between December 2001 and February 2018. 776 leads were extracted (414 atrial, 318 ventricular and 44 left leads for coronary sinus). The indications for TLE were pocket infection (40%), sepsis (46%), lead failure (12%) and others causes (5%). The implant mean time was 93 ± 101 months. The TLE techniques used were divided in laser group (LG) and non-laser group (non-LG; simple manual traction, traction with self-locking stylets or mechanical sheaths). Have been defined the following endpoints: 1) complete radiological success (CRS); 2) partial radiological success (PRS); 3) radiological failure (RP); 4) clinical success (CS); 5) complications and mortality related to TLE; 6) all-cause mortality at 30 days FU; 7) all-cause mortality at 2 years FU; 8) 2-year FU mortality predictors.

Results: The effectiveness of TLE was higher in LG ($p = 0.001$). The CRS and PRS was achieved for 97% of the cases in the LG and in 66% of the non-LG. In 120 leads, a LG crossover was verified. Of these, 88% (106) were completely removed with laser while 4% (5) was only partially extracted. RF occurred in 34% of the non-LG and in 3.3% of the LG ($p < 0.001$). CS was achieved in 181 (95.9%) patients in the non-LG and in 188 (94.8%) patients in the LG ($p = 0.83$). The mortality and complications occurred in 3 (1.5%) and 8 (4%) patients treated with laser technique and in 1 (0.5%) and in 4 (2%) patients non-LG respectively ($p = 0.623$; $p = 0.383$). The total mortality for all causes at 30 days of FU was 2.3%. Mortality for all causes at 2 years of FU was 11%. The results showed a statistically significant prediction in patients with renal insufficiency (23 (53%) vs. 128 (38%), $p = 0.048$) and infectious indication (40 (93%) vs 242 (72%); $p = 0.048$).

Conclusions: The laser technique allows for greater RS. Complications and deaths related to the procedure are more frequent with use of laser, although not statistically significant. Long-term mortality still remains high, especially in patients with infectious indication and renal failure.