Abstract:

Background: Over the last decades, the implanting indications for cardiac electronic Implantable devices (CIED) have expanded, especially in patients with heart failure due to the proven benefits in survival and quality of life. Although these devices are highly reliable, transvenous leads remain a weak spot in CIED systems, lead failure and CIED infection are complications that may require device and/or lead removal. Nowadays there are different techniques available for lead extraction, including mechanical and powered sheaths. Extraction with laser sheaths is a safe and effective option, even in patients with long standing implanted electrodes. In this paper we describe the experience in our center.

Methods: Between January 2015 and March 2019 69 patients required lead extraction with a laser sheath, the demographic data, comorbidities, indications and characteristic of the procedure as well as the outcomes were obtain through revision of clinical history. Patients users of CIED with more than one year of implantation of transvenous leads and with indication of lead removal according to current guidelines were included.

Results: 69 patients required lead extraction with laser between January 2015 and March 2019, 49 (71%) males and 20 (29%) females, the median age was 61 ± 17 years, 31 (45%) patients had leads with more than 10 years of implantation, the most frequent indication for lead removal was infection (pocket infection and/or endocarditis) in 70% of the patients, follow by lead dysfunction in 25% of the cases. Complete lead extraction was achieve in 84.5% of the cases (60 patients). Death related with the procedure was 2.8% (2 patient).

Conclusion: Lead extraction with excimer laser is an effective, safe and useful method even in long standing implanted leads.