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Extraction of electrodes with mechanical sheath at Hospital Dr. Carlos Alberto Studart Gomes

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Introduction: Pacemaker extraction involves the removal of implanted electronic devices, such as pacemakers, implantable cardioverter defibrillators and cardiac resynchronizers, whether due to infections, as well as damaged or inadequately functioning devices, such as failures in cardiac stimulation or detection of arrhythmia. Pacemaker extraction is already well-established as a safe procedure. Still, it presents a significant potential risk requiring high expertise from the team and an adequate structure for possible procedure complications. Management of these older electrode cables, especially those firmly adhered to tissue, can be complex and requires specialized technical skills. Expertise was developed at the Messejana Hospital service, and sharing this experience is essential to foster and expand local region technical development. **Objective:** To portray the indications and reality of extraction with the aid of a mechanical pacemaker lead extractor in a specialized service from SUS [Brazilian - Unified Health System], a regional reference in establishing an endovascular lead extraction service. Methods: This is an observational, quantitative and descriptive cross-sectional study in which data were collected from device extraction procedures at Hospital Messejana from 2012 to 2023. **Results:** Of the 61 patients included in the survey, 90.1% (55) were eligible for the procedure, 8 were excluded because they did not have a well-established indication. 12.7% (7) of eligible patients had more than one indication for endovascular extraction, performed openly by conventional heart surgery. The most frequent indication, following data from the literature, was infection: 41.8% (23). This group includes extrusion of the pacemaker pocket to endocarditis with significant systemic involvement. Electrode fracture comprised 36,3% (20) of cases, following Upgrade (5) and system dysfunction (including increased thresholds (5) and inappropriate shocks (2) appeared in 21.8% (12) of cases, ending with 1 (1.8%) of the extractions due to the need for chemotherapy due to cancer surrounding the generator site. Mortality was zero. **Conclusion:** Open surgeries for electrode cable extraction were drastically reduced, from 100% to 12.7% of the service. It proves to be a safe procedure, with no deaths. The decision to perform the extraction must be individualized, considering the risks and benefits for each patient.