



Title	Lead Extraction of Pacemaker or Implantable Cardiac Defibrillator Leads Using Laser Excimer
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Aim

To assess the efficacy/effectiveness and safety of using excimer laser to remove pacemaker and automatic implantable defibrillator leads.

Conclusions and results

Using excimer laser to remove pacemaker or implantable cardiac defibrillator leads is considered effective and safe, with a low incidence of failure and complications. It enables leads to be removed in situations where other techniques fail or are contraindicated. In view of the learning curve involved, prior training is required at centers experienced in the technique before the procedure can be implemented and performed.

The bibliographic search retrieved 109 studies, 16 of which met the inclusion criteria. One clinical trial was located, with the remainder corresponding to case-series studies. The technique's efficacy – construed as complete removal of the lead – exceeded 90% according to most studies. Regarding complications, the results of the studies showed that using an excimer laser to remove leads entailed a low complication rate, not exceeding 4% for the most relevant complications.

Methods

A review of the scientific literature was conducted in October 2008 stipulating no time limit and covering the principal databases, which included:

- specialized systematic-review databases, eg, HTA (Health Technology Assessment), DARE (Database of Abstracts of Reviews of Effectiveness), NHS EED (National Health Service Economic Evaluation Database), and Cochrane Library Plus; and,
- general databases, eg, MEDLINE, EMBASE, and ISI Web of Knowledge (WoK).

Papers were reviewed and selected on the basis of pre-established selection criteria. The ensuing information was then summarized in evidence tables.