TITLE: Intrapocket Antibiotics to Prevent Infections from Implantable Cardioverter-Defibrillator and Pacemaker for Adult Patients Undergoing Device Insertion: A Review of Clinical Evidence and Comparative Clinical Effectiveness

DATE: 6 January 2012

RESEARCH QUESTIONS

1. What is the clinical evidence for using intrapocket antibiotics in order to prevent device infections in adult patients undergoing implantable cardioverter-defibrillator (ICD) or pacemaker insertion?

2. What is the comparative clinical-effectiveness of intrapocket antibiotics versus intravenous antibiotic administration for adult patients undergoing ICD or pacemaker insertion?

KEY MESSAGE

Limited evidence was identified regarding both the clinical evidence for using intrapocket antibiotics in order to prevent device infections and the comparative clinical-effectiveness of intrapocket antibiotics versus intravenous antibiotic administration for adult patients undergoing implantable ICD or pacemaker insertion. Therefore, no definitive conclusions can be made.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 12), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and abbreviated list of major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and December 15, 2011. Internet links were provided, where available.
The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.

One non-randomized study was identified regarding clinical evidence for using intrapocket antibiotics in order to prevent device infections in adult patients undergoing implantable ICD or pacemaker insertion. Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One non-randomized study\(^1\) sought to determine the rate of cardiovascular implantable electronic device (CIED) implantation success and CIED infection in procedures employing the AIGIS(Rx) antibacterial envelope to the generator pocket with the CIED. The authors found that CIED procedures that used the AIGIS(Rx) antibacterial envelope had a high rate of CIED implantation success and a low rate of infection.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified

Systematic Reviews and Meta-analyses
No literature identified

Randomized Controlled Trials
No literature identified

Non-Randomized Studies


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APPENDIX – FURTHER INFORMATION:

Non-randomized studies (method of antibiotic prophylaxis not specified)


Review Articles
