



TITLE: Prophylactic Cefazolin versus Other Antibiotics for the Reduction of Postsurgical Infection: Comparative Clinical Effectiveness

DATE: 26 January 2012

RESEARCH QUESTION

What is the comparative clinical effectiveness of cefazolin versus other antibiotics for the reduction of postsurgical infection?

KEY MESSAGE

The evidence suggests the effectiveness of cefazolin for the reduction of postsurgical infection may vary depending upon the type of surgery being performed and the clinical condition being studied.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2012, Issue 1), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, and non-randomized studies. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2007 and January 23, 2012. Internet links were provided, where available.

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.

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Two systematic reviews and meta-analyses, two randomized controlled trials, and three non-randomized studies were identified regarding the comparative effectiveness of cefazolin versus other antibiotics for the reduction of postsurgical infection. No relevant health technology assessments were identified. Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

1. Alfirevic Z, Gyte GML, Dou L. Different classes of antibiotics given to women routinely for preventing infection at caesarean section. *Cochrane Database Syst Revs* [Internet]. 2010 [cited 2012 Jan 23];(10): CD008726. Available from: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD008726/pdf>
-See pages 105-110 for comparison of 1st generation cephalosporins to penicillins
2. Tita AT, Rouse DJ, Blackwell S, Saade GR, Spong CY, Andrews WW. Emerging concepts in antibiotic prophylaxis for cesarean delivery: a systematic review. *Obstet Gynecol*. 2009 Mar;113(3):675-82. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2777725>
[PubMed: PM19300334](#)

Randomized Controlled Trials

3. Ozturk M, Koca O, Kaya C, Karaman MI. A prospective randomized and placebo-controlled study for the evaluation of antibiotic prophylaxis in transurethral resection of the prostate. *Urol Int*. 2007;79(1):37-40.
[PubMed: PM17627166](#)
4. Skitarelić N, Morović M, Manestar D. Antibiotic prophylaxis in clean-contaminated head and neck oncological surgery. *J Craniomaxillofac Surg*. 2007 Jan;35(1):15-20.
[PubMed: PM17296307](#)

Non-Randomized Studies

5. Shigemura K, Tanaka K, Matsumoto M, Nakano Y, Shirakawa T, Miyata M, et al. Post operative infection and prophylactic antibiotic administration after radical cystectomy with orthotopic neobladder urinary diversion. *J Infect Chemother*. 2012 Jan 17.
[PubMed: PM22249689](#)
6. Cantwell CP, Perumpillichira JJ, Maher MM, Hahn PF, Arellano R, Gervais DA, et al. Antibiotic prophylaxis for percutaneous radiologic gastrostomy and gastrojejunostomy insertion in outpatients with head and neck cancer. *J Vasc Interv Radiol*. 2008 Apr;19(4):571-5.
[PubMed: PM18375303](#)

7. Radu DM, Jauréguy F, Seguin A, Foulon C, Destable MD, Azorin J, et al. Postoperative pneumonia after major pulmonary resections: an unsolved problem in thoracic surgery. *Ann Thorac Surg.* 2007 Nov;84(5):1669-73.
[PubMed: PM17954082](#)

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APPENDIX – FURTHER INFORMATION:

Additional References

9. Anderson DJ, Sexton DJ. Overview of control measures to prevent surgical site infection [cited 2012 Jan 20]. In: UpToDate [internet]. Version 19.3. Waltham: Uptodate; c2005-. Available from: <http://www.uptodate.com> subscription required.
-see section on “Antibiotic Selection” on page 2 & tables from pages 14-21
10. Anderson DJ, Sexton DJ. Control measures to prevent surgical site infection following gastrointestinal procedures [cited 2012 Jan 20]. In: UpToDate [internet]. Version 19.3. Waltham: Uptodate; c2005-. Available from: <http://www.uptodate.com> subscription required.
-see Table 1 on page 6: “Antimicrobial prophylaxis for cardiac and gastrointestinal surgery”