TITLE: Chlorhexidine Impregnated Wipes for Pre-Operative Skin Preparation: Clinical Evidence and Guidelines

DATE: 13 December 2012

RESEARCH QUESTIONS

1. What is the clinical evidence regarding the use of chlorhexidine impregnated, non-rinse wipes for skin preparation in pre-surgical patients?

2. What are the evidence-based guidelines regarding the use of chlorhexidine impregnated, non-rinse wipes for skin preparation in pre-surgical patients?

KEY MESSAGE

One systematic review, one randomized controlled trial, and five non-randomized studies were identified regarding the use of chlorhexidine impregnated wipes for skin preparation in pre-surgical patients. No evidence-based guidelines on this subject were identified.

METHODS

A limited literature search was conducted on key resources including PubMed, CINAHL, The Cochrane Library (2012, Issue 11 of 12), ECRI (Health Devices Gold), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and 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 December 1, 2007 and November 28, 2012. 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.

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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, non-randomized studies, and evidence-based guidelines.

One systematic review, one randomized controlled trial, and five non-randomized studies regarding the use of chlorhexidine impregnated, non-rinse wipes for skin preparation in pre-surgical patients were identified in the literature search. No health technology assessments or guidelines were identified. Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

The systematic review\(^1\) assessed five studies that focused on the incidence of surgical site infections following use of washcloths impregnated with chlorhexidine gluconate. The abstract did not specify how the cloths were used, the timing of their use, or the comparators, but stated that the risk of surgical site infection was significantly reduced.

The randomized controlled trial\(^2\) compared patients using chlorhexidine cloths at home prior to shoulder surgery, with patients showering with soap and water at home prior to the surgery. The patients using the chlorhexidine cloths had a statistically significant lower positive culture rate prior to surgery.

Four of the non-randomized studies\(^3,5,6,7\) evaluated patient use of chlorhexidine cloths the evening before and the morning of surgery, compared with patients using in-hospital protocol. The surgeries included knee arthroplasty,\(^3,5\) hip arthroplasty,\(^6\) and orthopedic surgery.\(^7\) All four studies stated that the use of the chlorhexidine cloths resulted in statistically lower rates of surgical site infections, but they did not state if the results were statistically significant. A fifth non-randomized study\(^4\) evaluated patients undergoing hip arthroplasty, who used chlorhexidine cloths pre-admission, but did not specify the timing of cloth use. Compared with patients who underwent in-hospital perioperative skin preparation, the patients using pre-admission cloths had a statistically significant lower incidence of infections.

Overall, the included studies indicated that pre-hospital use of chlorhexidine impregnated cloths resulted in statistically lower incidence of surgical site infections compared with in-hospital perioperative skin preparation. No evidence-based guidelines on this subject were identified.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Non-Randomized Studies


Guidelines and Recommendations
No literature identified.

PREPARED BY:
Canadian Agency for Drugs and Technologies in Health
Tel: 1-866-898-8439
www.cadth.ca
APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-Analyses (chlorhexidine wipes not specified in abstract)


Non-Randomized Studies (multidisciplinary approach)


Review Articles


Additional References
