



Canadian Agency for
Drugs and Technologies
In Health

RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS



TITLE: Chlorhexidine Gluconate versus Hydrogen Peroxide Oral Hygiene Rinse Preparations for the Prevention of Ventilator-Associated Pneumonia: Comparative Clinical Effectiveness and Safety

DATE: 25 April 2012

RESEARCH QUESTIONS

1. What is the comparative clinical effectiveness of 0.12% chlorhexidine gluconate oral rinse solutions versus hydrogen peroxide oral rinse solutions for the prevention of ventilator-associated pneumonia?
2. What is the clinical evidence regarding the safety of 0.12% chlorhexidine gluconate and hydrogen peroxide oral rinse solutions for ventilated patients?

KEY MESSAGE

No evidence was identified regarding the comparative clinical effectiveness or safety of 0.12% chlorhexidine gluconate oral rinse solutions versus hydrogen peroxide oral rinse solutions for the prevention of ventilator-associated pneumonia.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2012, Issue 3), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and abbreviated lists of major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. The search was also limited to English language documents published between Jan 1, 2007 and Apr 11, 2012. Internet links were provided, where available.

RESULTS

No health technology assessments, systematic reviews and meta-analyses, randomized-controlled trials, or non-randomized studies were identified regarding the comparative clinical

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effectiveness of 0.12% chlorhexidine gluconate oral rinse solutions versus hydrogen peroxide oral rinse solutions or the safety of 0.12% chlorhexidine gluconate oral rinse solutions and hydrogen peroxide oral rinse solutions for the prevention of ventilator-associated pneumonia. Additional references of potential interest on 0.12% chlorhexidine gluconate for the prevention of ventilator-associated pneumonia are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

No relevant literature was found regarding the comparative clinical effectiveness of 0.12% chlorhexidine gluconate oral rinse solutions versus hydrogen peroxide oral rinse solutions or the safety of these oral rinse solutions for the prevention of ventilator-associated pneumonia, therefore no summary can be provided.

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

No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-Analyses - efficacy of chlorhexidine gluconate

1. Labeau SO, Van d, V, Brusselaers N, Vogelaers D, Blot SI. Prevention of ventilator-associated pneumonia with oral antiseptics: a systematic review and meta-analysis. *Lancet Infect Dis.* 2011 Nov;11(11):845-54.
[PubMed: PM21798809](#)

Randomized Controlled Studies - efficacy of 0.12% chlorhexidine gluconate

2. Jacomo AD, Carmona F, Matsuno AK, Manso PH, Carlotti AP. Effect of oral hygiene with 0.12% chlorhexidine gluconate on the incidence of nosocomial pneumonia in children undergoing cardiac surgery. *Infect Control Hosp Epidemiol.* 2011 Jun;32(6):591-6.
[PubMed: PM21558772](#)
3. Bellissimo-Rodrigues F, Bellissimo-Rodrigues WT, Viana JM, Teixeira GC, Nicolini E, uxiliadora-Martins M, et al. Effectiveness of oral rinse with chlorhexidine in preventing nosocomial respiratory tract infections among intensive care unit patients. *Infect Control Hosp Epidemiol.* 2009 Oct;30(10):952-8.
[PubMed: PM19743899](#)
4. Munro CL, Grap MJ, Jones DJ, McClish DK, Sessler CN. Chlorhexidine, toothbrushing, and preventing ventilator-associated pneumonia in critically ill adults. *Am J Crit Care.* 2009 Sep;18(5):428-37.
[PubMed: PM19723863](#)
5. Scannapieco FA, Yu J, Raghavendran K, Vacanti A, Owens SI, Wood K, et al. A randomized trial of chlorhexidine gluconate on oral bacterial pathogens in mechanically ventilated patients. *Crit Care [Internet].* 2009 [cited 2012 Apr 18];13(4):R117. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2750165>
[PubMed: PM19765321](#)

Review Articles

6. Micek ST, Skrupky LP. Current concepts in the prevention and treatment of ventilator-associated pneumonia. *J Pharm Pract.* 2010 Feb;23(1):25-32.
[PubMed: PM21507790](#)
7. Beraldo CC, Andrade D. Oral hygiene with chlorhexidine in preventing pneumonia associated with mechanical ventilation. *J Bras Pneumol.* 2008 Sep;34(9):707-14.
[PubMed: PM18982209](#)

Additional References

Safety of 0.12% chlorhexidine gluconate

8. Technical patient safety solutions for ventilator-associated pneumonia in adults [Internet]. London: National Institute for Health and Clinical Excellence; 2008 Aug. [cited

2012 Apr 18]. Available from:

<http://www.nice.org.uk/nicemedia/live/12053/41684/41684.pdf>

-see section 5.3

9. Chlorhexidine: reminder of potential for hypersensitivity. Drug safety update [Internet]. 2012 Jan [cited 2012 Apr 18];5(6). Available from:
<http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON140701>