REFERENCE


Review: Enhanced oral hygiene prevents respiratory infection in older persons in hospitals and nursing homes

Sjögren P, Nilsson E, Forsell M, Johansson O, Hoogstraate J.


QUESTION

In older persons in hospitals and nursing homes, does enhanced oral hygiene prevent respiratory infection?

REVIEW SCOPE

Included studies evaluated the effect of enhanced oral hygiene care or frequent professional oral care on respiratory infection in older persons in hospitals or nursing homes. Outcomes were respiratory infection, pneumonia, and death from pneumonia.

REVIEW METHODS

MEDLINE, Cochrane Central Register of Controlled Trials, and National Health Service Economic Evaluation Database (1996 to Nov 2007); and reference lists were searched for randomized controlled trials (RCTs) published in English, German, Dutch, or a Nordic language between 1996 and 2007. Studies involving patients with mechanical ventilation or tube-feeding were excluded. 3 RCTs (n = 807) met the selection criteria.

1 placebo-controlled trial was double-blinded. An additional crossover trial (n = 46) of uncertain randomization status did not provide useful data.

MAIN RESULTS

Meta-analysis was not done because of differences in interventions and outcomes. The Table shows the results of individual trials.

CONCLUSION

In older persons in hospitals and nursing homes, enhanced oral hygiene prevents respiratory infection and death from pneumonia.

Source of funding: No external funding.

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COMMENTARY

The review by Sjögren and colleagues was technically well done. Although a potential conflict of interest exists in that 4 of the 5 authors and the sponsorship of the review are from a dental care company, the findings agree with those of a previous, more extensive review, published in a dentistry specialty journal (1).
Both reviews found that assiduous oral hygiene may reduce respiratory infections in older adults living in nursing homes, with a number needed to treat of approximately 10.

It should be noted that 1 trial included in the review by Sjögren and colleagues did not involve nursing home residents, but rather hospitalized patients having heart surgery, with a mean age of only 64 years.

The 2 RCTs of nursing home residents were done in Japan. The intensity and frequency of the dental care provided are worth emphasizing. In the larger trial, caregivers cleaned patients’ teeth with a toothbrush, but not toothpaste, for 5 minutes after each meal, including brushing palatal and mandibular mucosa and tongue dorsum. If the toothbrush was “not efficient,” the oropharynx was scrubbed with an applicator with 1% povidone-iodine. In both trials, a dentist or dental hygienist administered professional care weekly, including plaque and calculus control as needed.

A few issues may affect interpretation of the findings. In the larger nursing home trial, 51 of the original 417 patients were excluded from analysis because they “died from causes other than pneumonia.” This exclusion precludes analysis for the possibility that the treatment was harmful. Also, the trials did not include controls for specific aspects of care, other than cleaning, that might explain the findings. For example, attention from additional providers might have resulted in earlier detection of medical problems, leading to earlier treatment, or exercising the oropharynx without cleaning might have decreased aspiration.

The clinical bottom line is that assiduous oral care may reduce respiratory infections in older adults in hospitals and nursing homes. The specific elements of oral care that are effective are not clear, but teeth brushing or oral cleansing after meals and before surgery and frequent professional dental treatment are supported by the literature.

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REFERENCE

Review: Inhaled corticosteroids do not reduce mortality but increase pneumonia in chronic obstructive pulmonary disease

Drummond MB, Dasenbrook EC, Pitz MW, Murphy DJ, Fan E.


QUESTION
In patients with stable chronic obstructive pulmonary disease (COPD), what are the harms and benefits of inhaled corticosteroid (ICS) therapy?

REVIEW SCOPE
Included studies compared an ICS with placebo or other inhaled medications in patients ≥ 40 years of age with stable COPD.

Outcomes were all-cause mortality at 1 and 3 years, pneumonia, and fractures.

REVIEW METHODS
MEDLINE, EMBASE/Excerpta Medica, Cochrane Central Register of Controlled Trials, CINAHL, Web of Science, and PsycINFO (to Feb 2008); and references were searched for published, double-blind, randomized controlled trials (RCTs) with duration ≥ 6 months. 11 RCTs (14 comparisons, n = 14 426) met the selection criteria. 8 comparisons were placebo-controlled; most other trials compared an ICS plus a long-acting β2-agonist (LABA) with the LABA alone. 7 trials reported concealment of allocation, and all trials had blinding of outcome assessors. Mean study duration was 24 months (range 6 to 40 mo).

MAIN RESULTS
ICS therapy did not reduce mortality at any time point (Table).
ICS use increased risk for pneumonia but not fracture (Table).