

Letter

Role of chlorhexidine gluconate in ventilator-associated pneumonia prevention strategies in ICU patients: where are we headed?

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We read with interest the recent study by Scannapieco and colleagues [1], which concluded that twice-daily oral rinse with 0.12% chlorhexidine failed to reduce the number of potential respiratory pathogens in dental plaque, mortality, the incidence of ventilator-associated pneumonia (VAP), the length of intensive care unit (ICU) stay and the duration of mechanical ventilation in trauma ICU patients.

Trauma ICU patients are similar to mixed ICU patients with respect to risk factors for developing VAP, unlike patients undergoing elective cardiac surgery. Use of 0.12% chlorhexidine decreases the incidence of VAP in patients undergoing elective cardiac surgery. In mixed ICU patients, chlorhexidine at concentrations less than 0.2% has consistently been shown to have no benefit [2]. A randomized trial using 2% chlorhexidine has, however, demonstrated a reduction in VAP rates in these patients [3]. A previous study showed that 12-hourly application of chlorhexidine has a sustained preventive effect on biofilm formation [4]. The lack of benefit from twice-daily oral cleansing with chlorhexidine in the present study may be due to the lower concentration of chlorhexidine.

The authors' recommendation for investigation into mechanical plaque removal with chlorhexidine would conceptually have some added benefit. Mechanical plaque removal with chlorhexidine, however, has not affected outcomes in ICU patients in two studies [5,6].

We therefore suggest that further studies using oral chlorhexidine in ICU patients should be conducted using higher concentrations (2%) to test the most appropriate frequency of use, since oral cleansing is a nursing-driven intervention

and clinical trials with chlorhexidine are yet to demonstrate a mortality benefit.

Competing interests

The authors declare that they have no competing interests.

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ICU = intensive care unit; VAP = ventilator-associated pneumonia.