

Authors' reply

Resposta dos Autores

To the Editor:

It was with great interest that we read the comments submitted in relation to our manuscript.⁽¹⁾ Silvestri et al. added relevant additional information on the importance of selective digestive decontamination (SDD) in reducing the frequency and mortality associated with nosocomial pneumonia in ICU patients. However, as stressed in our objectives, the aim of our paper was to discuss, by means of a review of the literature, the importance of the oral environment in the pathogenesis of nosocomial pneumonia and the impact of essentially oral measures. All information regarding the therapeutic measures was based on recent oral microbiological concepts on oral biofilm formation and the possible concomitant colonization of respiratory pathogens, and we emphasized the importance of controlling oral biofilms through the use of mechanical measures involving chemical substances that are not associated with bacterial resistance. As described in detail by Silvestri et al., there is sufficient evidence that SDD can reduce the frequency of ventilator-associated pneumonia (VAP), as well as the associated mortality. However, certain questions have yet to be fully clarified, and there are still some unresolved issues regarding the most effective SDD protocol and the impact that SDD has on bacterial resistance, as well as in terms of the critical analysis comparing clinical trials and

the use of SDD in other hospital-acquired infections.⁽²⁻⁵⁾ In addition, there is no hard evidence that SDD effectively reduces or controls oral biofilm formation, or that it even inhibits the colonization of pathogens protected by biofilms in the oral and dental environment.

It is also of note that ventilator-associated oral dryness predisposes to the colonization of pathogens on the oral surfaces, especially on the dorsum of the tongue. Data in the dental and periodontal literature clearly demonstrate that, in these situations, only local approaches, including mechanical and chemical measures (e.g., chlorhexidine solution and gel) are capable of controlling bacterial colonization, since they inhibit the establishment of oral and dental biofilms as reservoirs for potential oral and respiratory pathogens. Similarly, patients presenting uncontrolled periodontal disease, a known risk group for VAP, should also essentially be managed through the use of mechanical and chemical measures.

The suggestion of the use of a protocol including oral rinsing with chlorhexidine to decrease the incidence of nosocomial pneumonia—and as an (albeit unproven) means of reducing the related mortality—is not meant to be exclusive. It could be combined with other local, systemic, enteral and parenteral protocols, since it seems

that various concomitant factors are associated with the pathogenesis and outcome of the disease. A review of previous studies showed that one of the most important limiting features is the absence of a well-established protocol on chlorhexidine use, whether accompanied by other preventive measures or not. Oral rinses with 2% chlorhexidine appear to be more appropriate in this clinical setting, and randomized controlled studies in this field are warranted.⁽⁶⁾

Simone Macedo Amaral
Masters Student in Dentistry,
Estácio de Sá University,
Rio de Janeiro, Brazil

Antonieta de Queiróz Côrtes
Professor of Periodontics and in the
Masters Program in Dentistry,
Estácio de Sá University,
Rio de Janeiro, Brazil

Fábio Ramôa Pires
Professor of Pathology/Stomatology and
in the Masters Program in Dentistry,
Estácio de Sá University,
Rio de Janeiro, Brazil

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