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Abstract (poster session)

**Effectiveness of dental care for prevention of nosocomial respiratory tract infections among intensive care patients: a randomized clinical trial**

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Objective: to evaluate the effectiveness of a dental care program in preventing nosocomial respiratory tract infections (RTI) among intensive care patients. Methods: this is a randomized single-blind clinical trial. Patient blindness was unfeasible due to the nature of the intervention. Inclusion started in January, 1, 2010 and finished in November, 10, 2012. All adults patients admitted to a single intensive care unit (ICU) located in a tertiary university public hospital were considered eligible to the study, if they have a perspective of staying at least two consecutive days. Exclusion criteria were pregnancy and blood dyscrasia. After giving written consent, patients were randomised by the dental surgeon using a dice. Experimental arm was submitted to dental and periodontal care provided by a dental surgeon, as needed by the patient, at least three times a week until discharge from the ICU, additionally to the routine oral hygiene. Control group was submitted only to routine oral hygiene. Routine oral hygiene was provided by the ICU nurse staffing three times a day and consisted of mechanical cleaning of the oral cavity, followed by topical application of Chlorhexidine 0.12% solution for fully conscious patients or Chlorhexidine 2% gel for semi-conscious and unconscious patients. Although 2% gel was preferable, its inherent bitter taste precluded it to be used by conscious patients. Nosocomial RTI were diagnosed during ICU stay and until 48h after ICU discharge, by the hospital infection control team, who was blinded to the patient's allocation in the study, following the Centers for Disease Control and Prevention criteria. Data was analyzed by the Qui-square Yates corrected test, on the Stata® program (version 9.0). Results: we included 203 patients in the study, 101 of them in the experimental arm and 102 in the control arm, but full data could not be obtained for 26 patients who died or got discharged in the first 48h of the ICU stay. Both groups displayed similar baseline clinical features. Outcome analysis of the 177 patients fully evaluated revealed a RTI incidence of 21.6% (19/88) in the control group versus 11.2% (10/89) in the experimental group ( $p=0.06$ ). No severe adverse event related to dental care was detected during the study. Conclusion: we detected a trend toward dental treatment effectiveness for RTI prevention in the ICU setting, but due to our insufficient sample size larger studies are necessary to confirm this finding.