

Oral Presentation – 07

Comparison of Hi-Lo Evac Endotracheal Tube with Conventional Endotracheal Tube for Prevention of Ventilator-Associated Pneumonia in Toxicological Intensive Care Unit: A Randomized Clinical Trial

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Abstract

Objectives: Ventilator associated pneumonia (VAP) is the most common healthcare-associated infection. Aspiration of subglottic secretions using Hi-Lo Evac endotracheal tube (Evac ETT) is a recommended intervention for VAP prevention. However, there are some reports of Evac ETT dysfunction. Our objective in this study was to compare the probable incidence of VAP (per ventilated patients) in severely ill poisoned patients, using the Evac ETT versus conventional endotracheal tubes in our TICU.

Method: In this clinical randomized trial study, 91 eligible patients with an expected duration of mechanical ventilation >48 hours were recruited and randomly assigned in two groups: 1- subglottic secretion drainage (SSD) group (n = 43). 2- Control group (n = 48). The two groups were similar at the time of randomization with respect to demographic characteristics and type of poisoning. Endotracheal aspirates (EA) were performed 2-3 times per week during the endotracheal intubation period.

Results: Of the 91 eligible patients, 56 (61.5%) were male. VAP probable incidence and ICU length of stay were not significantly different between the two groups, but the duration of intubation was statistically different, and in the SSD group was longer than the control group.

The most frequently isolated microorganisms were *Staphylococcus aureus* (54.10%). Although mortality rate in the SSD group was lower than control, there was no statistical difference between the two groups (p value= 0.68).

Conclusions: Subglottic secretion drainage does not significantly reduce the incidence of VAP in patients receiving mechanical ventilation. This strategy appears ineffective in preventing VAP among ICU patients.