

CLINICAL SUMMARY

Prevention of Ventilator-Associated Pneumonia (VAP) and Ventilator-Associated Conditions: A Randomized Controlled Trial with Subglottic Secretion Suctioning. Use of subglottic secretion drainage endotracheal tubes reduces incidence of VAP.

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AIM

The study aimed to determine the impact of subglottic secretion drainage on VAP rates. Additionally, it aimed to explore if this also had an impact on ventilator-associated conditions and antibiotic use.

METHODOLOGY

This study was conducted in five ICUs in a single hospital. It was a randomized controlled trial where 352 intubated patients with a tube that allowed subglottic secretion suctioning were randomly assigned to either undergo subglottic suctioning (n = 170, group 1) or not (n = 182, group 2).

RESULTS

Microbiologically confirmed ventilator-associated pneumonia (VAP) was detected with 15 patients in group 1 (8.8%) and 32 patients in group 2 (17.6%) (p = 0.018). Group 1 had a VAP rate of 9.6 per 1,000 ventilatory days while for group 2 it was 19.8 of 1,000 ventilatory days (p = 0.0076). Ventilator-associated conditions were observed in 21.8% and 22.5% in groups 1 and 2 respectively (p = 0.84). Of the 47 patients who developed VAP, 25 (58.2%) experienced a ventilator-associated condition. Lengths of ICU stay and mortality rates were similar between the groups; however, a ventilator-associated condition was associated with increased mortality. The total number of antibiotic days in group 1 was 1,696 of 2,754 ICU days (61.6%), and 1,965 of 2,868 ICU days in group 2 (68.5%) (p < 0.0001).