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.

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).