
Effect of adhesive tape versus endotracheal tube fastener in critically ill adults



The securement method of endotracheal tubes should ideally prevent dislodgement and minimise complications. Endotracheal tube fastener can reduce complications among critically ill patients who are undergoing endotracheal intubation.

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A study was conducted with critically ill adults who required invasive mechanical ventilation for greater than 24 hours. Patients were randomised to adhesive tape or endotracheal tube fastener at the time of intubation. The primary endpoint of the study was a composite of the following: presence of lip ulcer, endotracheal tube dislodgement, ventilator-associated pneumonia, or facial skin tears between randomisation and earlier death or 48 hours after extubation. The secondary endpoint included the duration of mechanical ventilation and mortality.

500 patients were included in the study, out of which 163 patients had a mechanical ventilation duration of less than 24 hours over a 12-month period. 153 patients were randomised to the tube fastener, and 145 patients were randomised to adhesive tape.

The primary endpoint occurred 13 times in 12 (7.8%) patients in the tube fastener group and 30 times in 25 (17.2%) patients in the adhesive tape group. Lip ulcers occurred in 4 (2.6%) versus 11 (7.3%) patients. The endotracheal tube was dislodged 7 times in 6 (3.9%) patients in the tube fastener group and 16 times in 15 (10.3%) patients in the tape group. Facial skin tears were similar between the groups. Mechanical ventilation duration and ICU and hospital mortality did not differ.

These findings suggest that endotracheal tube fastener reduces the rate of a composite outcome compared to adhesive tape.

Source: [Critical Care](#)

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Published on : Wed, 15 May 2019