EXTUBATION OF THE DIFFICULT AIRWAY OVER AN AIRWAY EXCHANGE CATHETER: RELATIONSHIP OF CATHETER SIZE & PATIENT TOLERANCE

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Abstract 124

Introduction: Tracheal extubation in a known or suspected difficult airway should be approached with caution since reintubation may be required. An airway exchange catheter allows reintubation of the trachea and offers use of jet ventilation if reintubation proves to be difficult. Previously, a pediatric airway exchange catheter was shown to be well tolerated, following extubation, in the adult patient.1 Larger diameter catheters may possibly be a better alternative, as an airway conduit, for reintubation. However, patient tolerance of these larger diameter devices has not been evaluated. Methods: 101 patients, with risk factors for difficult reintubation, were extubated using either a 4mm (n=56, A) or 5.2mm (n=45, B) airway exchange catheter. Patients were assessed for the ability to phonate, discomfort, and cough strength. Statistical analysis included Chi-square univariant analysis, Fisher's exact test and Student t-test. Cook Airway Exchange Catheters (CAEC) were used. Results: Disregarding one patient who had the CAEC for 72 h (A), the mean duration of placement (3.0 h-A vs. 2.93 h-B, range of 5 min-72h) were similar, but more males received the larger CEAC (40 of 45 pts.-B, 89% vs. 29 of 56 pt.-A, 52%). Disregarding the 12 neurologically impaired pts., only 7 of 97 pts. (6%) were unable to phonate (4-A, 3-B). Phonation was similar between the two catheters (strong-50%-A vs 54%-B, weak-42%-A vs 43%-B). Cough effort was present in 100% with group A (62% strong, 38% weak) similar to group B (61% strong, 39% weak). Only 3 patients complained of significant discomfort (1-A, 2-B) and 62%-A vs. 64%-B experienced relatively no discomfort (NS). Controlling for the number of males with the larger CAEC, no difference in cough, phonation or discomfort was found. Conclusion: This review suggests that reasonable phonation capabilities, the ability to generate a cough and limited patient discomfort are similar for each catheter. The "stiffer" 5.2mm catheter may be a reasonable choice in the larger individual without compromising patient tolerance.

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References
2. Can J Anaesth 43,1:90-93, 1996 [Context Link]

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