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Evidence-based guidelines for the use of tracheostomy in critically ill patients: The role of bronchoscopy

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Dear Sir or Madam,

The recent evidence-based Iberic and Panamerican Federation of Societies of Critical and Intensive Therapy Care (FEPIMCTI) tracheostomy guidelines do not make a recommendation in favor or against the use of bronchoscopy during the performance of the percutaneous technique (PT) [1]. Furthermore, the Federation task force refrained from making claims or recommendations about benefits that were not supported by meaningful evidence. Smith and Loschner, however, are both concerned that the task force did not take a position in favor of a procedure that has not been shown to improve outcomes but rather increases the costs and complexity of the procedure while at the same time may potentially add risks [2].

The authors reference the study by Simon et al., reviewing all cases of PDT with fatal complications [3]. They highlighted 19 of the 71 cases to be associated with the lack of bronchoscopic guidance. Stating these numbers alone is by no means evidence of an increased risk of not using bronchoscopy, let alone causality. One could even use these numbers in the inverse argument, stating that 52 cases had fatal outcomes with the use of bronchoscopy. Moreover, when reviewing these cases, 11 patients had a tracheal perforation, 6 of whom had the procedure performed with bronchoscopy. Other 21 patients died of other airway complications, a vast majority occurring despite the use of bronchoscopy and only 6 without. Finally, 27 died from fatal hemorrhages, in 8 of them from the absence of bronchsocopic guidance was "retrospectively attributed as potentially relevant in these fatalities". In their study, Simon et al. used a false premise, namely that bronchoscopy is essential to perform the procedure safely and without any substantial evidence attributed the lethal complications to performing the percutaneous procedure without the aid of a bronchoscope [3].

As noted in the FEPIMCTI guidelines, previous randomized studies have shown a high incidence of complications including false passage of the tracheal tube despite the use of bronchoscopy suggesting that the operators' experience is a more important variable associated with complications [4]. The task force described multiple comparisons between PT with and without bronchoscopy in which no differences in outcome were reported [1]. Additionally, recent studies comparing the use of ultrasound (U/S) with bronchoscopy have failed to show any significant difference in outcomes; we could then argue that U/S is cheaper and much less invasive (e.g., no potential introduction of germs in the tracheobronchial tree, no obstruction of the airway with the bronchoscope, no need for additional personal at the head of the bed during the procedure, no need for expensive cleaning of the bronchoscope, etc.) [1]. Yet, the task force did not recommend abolishing bronchoscopy and let the decision up to the operators. The same could be said for the use of U/S [1,5,6].

In summary, the task force could not make a recommendation in favor or against the use of bronchoscopy during the procedure at the time of the publication of the guidelines. It is possible that in the near future, the role of the U/S would become much more important than the use of bronchoscopy to ensure more accurate placement of the tube and reduce airway complications; however, a recent systematic review of its use during bedside tracheostomies did not provide support to make a recommendation either.

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