



## Use of tracheal palpation to assure correct placement of an endotracheal tube: Letter One

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### To the Editor,

We read with interest the recent paper by McKay *et al.* regarding the assessment of endotracheal tube (ETT) depth by tracheal palpation (TP).<sup>1</sup> The authors reported that the usage of TP resulted in more correct ETT placements (77% vs 57%;  $P = 0.037$ ) when compared with the practice of using a fixed distance at the teeth (21 cm for women, 23 cm for men). The authors defined correct placement as an ETT tip positioned  $> 2.5$  cm from the carina and  $> 3.5$  cm below the vocal cords. We commend the authors for their important work but caution the clinical implications of the reported results.

Our primary concern with the study design is the comparison of the TP method with the 21/23 method for correct ETT placement. Many clinicians consider the 21/23 method as an inefficient method that does not account for anatomical neck variations amongst patients. Several studies have now shown that this method results in the incorrect placement of ETTs and should not be considered the gold standard for locating an ideal tracheal depth.<sup>2-5</sup> Although not routinely performed, in our view, the gold standard for locating the correct ETT insertion depth for endobronchial intubation is via flexible bronchoscopy. The authors did utilize flexible bronchoscopy to confirm endobronchial depth (completed on 92% of patients) and found 71 (77%) ETTs in the correct position when utilizing

the TP method. It would be interesting for the authors to report whether a 33% ETT malposition rate is a clinically insignificant failure rate.

At our institution, we practice routine confirmation of ETT depth via a flexible bronchoscope in all patients predetermined by the anesthesiologist to undergo a difficult tracheal intubation (body mass index [BMI]  $\geq 30$ , Mallampati score  $\geq 3$ ). Indeed, the authors attest that confidently feeling (and thus identifying) the ETT was in only 65% of patients with the palpation method. We assume patients with large necks and an increased BMI were excluded from this exploratory study. Further research to confirm the efficacy of the TP method would require a randomized clinical trial where potential patients with a large BMI and neck size could be enrolled.

**Conflicts of interest** None declared.

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