This article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record.

Please cite this article as https://doi.org/10.4097/kja.d.19.00006

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Ambiguous pediatric endotracheal tube intubation depth markings: A need for standardization

- Letter to the Editor -

Uncuffed endotracheal tubes (ETT) are preferred in children for securing airway during conduct of general anesthesia or at intensive care unit. We noticed the difference in the depth marks in Uncuffed tubes as single line, double line, broader black line at different length and even no markings at all. (Fig. 1) Tube markings vary from 1.8 cms to 6.5 cms and there were no manufacturer recommendations regarding those markings. These need to be reviewed to improve the safety margins in pediatric intubations. [1] Adherence to guidelines for ETT insertion depth may not be sufficient to prevent malposition. [2] Endotracheal tubes have a black line (vocal cord marking) near the distal end which guides the proper placement of the tube. It is a simple, safe and reliable method for appropriate length and to avoid end-bronchial intubation. Many of the trainees are uncertain about the use of common vocal cord markings on endotracheal tubes. [3] Neonates and infants are at higher risk of end-bronchial intubation due to the short length of the trachea. A wide discrepancy in the placement of the intubation depth marker can create confusion. [4] Even positioning the ETT by auscultation may lead to deeper than the mid-trachea. [5] We are using tracheal palpation, PALS predictive formula and bilateral chest auscultation for equal breath sounds. [6] Further confirmation is done by ultrasonography, if required. [7] We have shown the variation in endotracheal tubes marking from different manufacturer. (Fig 1) We suggest standardizing endotracheal tube markings according to the sizes and clear manufacturer recommendations for the usage to avoid endo-bronchial intubations.
References


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