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Neck auscultation: a simple new method for confirming tracheal intubation

To the Editor:

I read Dr. Christodolou's recent letter¹ regarding neck auscultation with keen interest, and have concerns regarding several issues with this technique. Firstly, Dr. Christodolou suggests that neck auscultation, for the purpose of confirming tracheal tube position, may be beneficial for emergency resuscitation in settings outside of the operating room. Most motor vehicle accident casualties requiring tracheal intubation are considered to have potential cervical spine injury contraindicating cricoid pressure. Secondly, the described neck auscultation maneuver requires advancement and withdrawal of the endotracheal tube over a distance of 1–2 cm. In some instances, this maneuver could lead to extubation and ensuing disastrous consequences. Thirdly, this maneuver could also result in mucosal injury when the tip of the endotracheal tube strikes the tracheal mucosa. Furthermore, in addition to the individual performing tracheal intubation and the person responsible for applying cricoid pressure, the maneuver requires an assistant for neck auscultation. This may not be feasible in emergency situations. Finally, auscultation may be difficult in patients with thick necks.

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Reference

- 1 Christodoulou C. Neck auscultation: a simple new method for confirming tracheal intubation (Letter). *Can J Anesth* 2007; 54: 854–5.

Reply:

"There are many hypotheses in science which are wrong. That's perfectly all right; they're the aperture to finding out what's right. To be accepted, new ideas must survive the most rigorous standards of evidence and scrutiny."
- Dr. Carl Sagan.

I thank Dr. Farooq for the questions he has raised regarding the technique I have described. Firstly, the application of cricoid pressure to augment the sound emanating from the endotracheal tube striking the cricoid cartilage and tracheal rings is an observation rather than a formal component of the technique. It should never be applied in settings where cricoid pressure is contraindicated. The advance and withdrawal maneuver is a confirmatory sign that need only be applied if doubt exists as to the sounds created by the original passage of the endotracheal tube. Given that many clinicians are involved in the actual intubation, the advance and withdrawal maneuver becomes the sole confirmatory test. The issue of inadvertent tracheal extubation is an important one. Caution should be exercised not to withdraw the endotracheal tube beyond a depth considered to be consistent with subglottic tube placement. A subset of patients may exist in whom the technique is not suitable. Two prospective studies, with an enrolment of over 200 patients, have been completed. The findings should provide further clarity as to the utility of this technique.

The accepted gold standards for confirmation of tracheal intubation are not available to many clinicians in underprivileged settings. A stethoscope is usually always available.

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Rupture de la membrane trachéale après intubation par une sonde double lumière droite [Tracheal rupture after intubation with a right double lumen tube]

Au rédacteur en chef,

La rupture trachéobronchique est une complication rare de l'intubation par sonde double lumière sans éperon (0,04%).¹ Nous rapportons le cas d'un patient âgé de 60 ans, programmé pour une résection du lobe supérieur gauche pour tumeur bronchique.