Endotracheal tube as a nasogastric tube introducer

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To the Editor,

Nasogastric tube (NGT) insertion is a procedure performed routinely in critical care settings. However, NGT placement often proves to be a daunting task, especially in the setting of anesthetized/uncooperative patients with anatomic distortion (i.e., patients with cervical spine instability and/or restricted neck movement) and an endotracheal tube (ETT) already in situ for airway protection and support of the respiratory system. In fact, serious complications secondary to NGT placement appear often in the literature.¹ Therefore, NGT insertion may be a complex procedure that requires skill, experience, and the ability to improvise if it does not proceed smoothly.

A 63-year-old male patient, who was sedated and mechanically ventilated in our intensive care unit, had a hard cervical collar in place after sustaining severe traumatic brain injury, cervical spine fracture, and multiple long bone fractures in a motor vehicle accident. The NGT was unintentionally removed during routine patient care, and despite many gentle and prolonged attempts, the on-call physicians' efforts to re-insert the NGT were unsuccessful. The presence of the cervical collar created poor laryngoscopic views, even with the left molar approach,² and the patient's cervical spine injury did not allow maneuvers that could facilitate NGT insertion, such as neck flexion, turning the head laterally, lateral neck pressure, and forward displacement of the larynx.³ To this end, a number of techniques to advance the NGT were attempted without success, including blind insertion plus a combination of

direct laryngoscopy and use of Magill forceps, placement of fingers in the posterior pharynx to guide the NGT tip downward, deflation of the ETT cuff, and use of a frozen NGT.

Finally, a 9.5-mm internal diameter ETT ("conduit" ETT) was placed in the oropharynx and—under direct laryngoscopy—was continually kept in contact with the posterior pharyngeal wall and behind the ETT already in place while simultaneously being advanced gently and as far as possible into the esophagus. A well-lubricated 14-Fr NGT was threaded into the "conduit" ETT and was advanced into the full length of the stomach without difficulty during the first attempt. Afterward, the "conduit" ETT was withdrawn and the NGT was pulled back, positioned at the appropriate length, and fastened in the usual way. It is worth noting that no change of head or neck position, no ETT cuff deflation, and no involvement of an assistant were necessary during this alternative mode of NGT insertion. The only technical requirement was to ensure that the "conduit" ETT diameter could accommodate the NGT, including its funnel-shaped proximal end. We did not determine fibreoptically the point where the NGT met resistance and was successfully bypassed by the "conduit" ETT. However, it has been previously shown that the most common sites of resistance at the laryngeal level are the piriform sinuses and the arytenoid cartilages.⁴

In conclusion, the use of an ETT as an introducer can facilitate NGT insertion in difficult settings. This alternative mode of NGT insertion is easy, inexpensive, and widely available in the operating room and the intensive care unit. In our view, it is worth considering this blind approach before the physician resorts to other techniques (i.e., videolaryngoscopy)⁵ that are either more expensive or that necessitate the involvement of additional equipment.

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