

## Use of Schroeder directional stylet to enhance navigability during nasotracheal intubation

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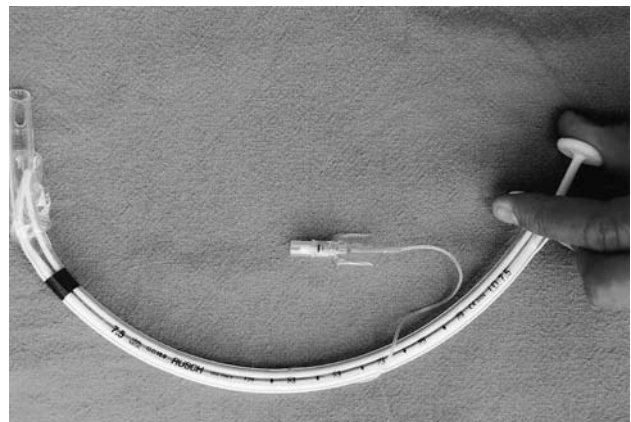
To the Editor:

During nasotracheal intubation, the distal end of the tracheal tube is introduced from the nares into the oropharynx and can impinge on the posterior wall of the nasopharynx, where the nasal passage curves perpendicularly. Posterior pharyngeal wall laceration can occur as a result of anatomical abnormality and can result in dissection of retropharyngeal mucosa. Retropharyngeal laceration is a serious complication of nasotracheal intubation [1]. Henceforth, a number of methods have been described to enhance the navigability of the tracheal tube, which include use of the nasopharyngeal airway, a nasogastric tube or gum elastic bougie, or using a digitally assisted technique [2–5].

We describe here the use of the Schroeder directional stylet (SteBar Instrument Corp., Grand Rapids, MI, USA) to enhance navigability through the nasopharyngeal passage. A 19-year-old girl was scheduled for bilateral genioplasty for temporomandibular joint ankylosis. Physical examination revealed a 45-kg girl with micrognathia and retrognathia with mouth opening of 1.5 cm. Mentohyoid and mentothyroid distances were 2 and 4 cm, respectively. Patient was premedicated with oral midazolam 7.5 mg, ranitidine 150 mg, and intramuscular glycopyrrolate 0.2 mg. After applying routine monitoring, inhalation induction was carried out with sevoflurane in oxygen. Blind nasotracheal intubation was planned. The right nares was found to be more patent and xylometazoline 0.05% nasal drops were instilled into the nares. A well-lubricated 6.5-mm ID Portex Blue line cuffed tracheal tube could be

smoothly passed via the right nares. However, resistance was felt to its passage after 5–6 cm was negotiated via the nasal passage, which was attributed to impaction of the tube against the posterior pharyngeal wall. The tracheal tube was pulled back for a short distance and the patient's head was extended to facilitate passage beyond this point. However, three attempts at this maneuver failed. Anticlockwise rotation of the tube and tilting the patient's head to the side of intubation also failed to disimpact the tube [5]. The digital maneuver described by us earlier was not feasible because of the restricted mouth opening [4].

It was decided to use the Schroeder directional stylet (Fig. 1) to disimpact the tracheal tube from the posterior nasopharyngeal wall. The nasotracheal tube was withdrawn for a short distance and a well-lubricated Schroeder directional stylet was passed into the tube. The lever on the proximal end of the device was depressed, which led to alteration of the curvature of the stylet with consequent anterior flexion of the tube leading to its smooth



**Fig. 1** Schroeder directional stylet

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navigability anteriorly into the oropharynx. The Schroeder directional stylet was then removed and the nasotracheal tube was further guided into the larynx, achieving successful nasotracheal intubation.

We have used this Schroeder directional stylet for assisting nasotracheal intubation in 30 cases and found it extremely helpful to overcome the impaction of the tube against the posterior pharyngeal wall. In none of these cases have we encountered any complication attributable to use of this stylet.

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