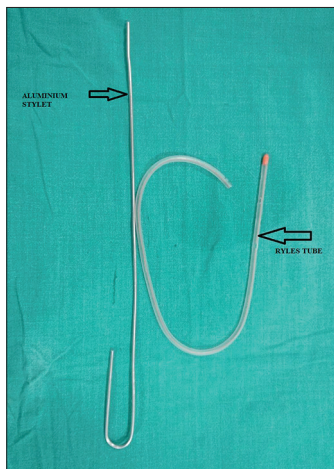


## Saviour of stylet injuries: 'Ryle's tube'

Sir,

The endotracheal tube (ETT) stylet is commonly used in difficult airway management. Although its use can increase the success rate of difficult tracheal intubation,<sup>[1]</sup> this comes at the risk of complications such as tracheal perforation, soft palate perforation, tonsillar injury and mucosal injury. Stylets can be rigid or malleable. A malleable stylet like Mallinckrodt's intubating stylet has a soft polyurethane covering over the aluminium wire. Chances of injury are lower with malleable stylet when compared to a rigid stylet. However, they are costly and not meant for reuse, thereby restricting their widespread use in the developing countries like India. Hence, we suggest an alternative cheap method of converting such rigid intubation stylets into a much safer airway adjunct,



**Figure 1:** Appropriately cut Ryles tube for the stylet

wherein a nasogastric (Ryle's) tube was mounted over an ETT as a stylet guard.

In this technique, a Ryle's tube was cut at an appropriate length for the stylet [Figure 1]. After lubrication jelly application, the Ryle's tube was mounted slowly and carefully over the aluminium stylet, in such a way that the stylet tip was kept well behind the tip of Ryles tube [Figure 2]. Special care should be taken while selecting Ryles tube size. Ryle's tube should fix snugly over the stylet, such that it does not slide over the stylet itself. In our case, we have used 16 F Ryle's tube for the medium size aluminium stylet. Stylets come in different sizes and the width can vary based on its manufacturer. For adult stylets, either 16 F or 14 F Ryle's tube fits snugly over the stylet, and similarly, for paediatric stylet, either 8 F or 10 F Ryle's tube fits snugly over the stylet.

Our technique combines the benefit of malleability and rigidity of aluminium with the protective covering of Ryles tube. Most of the stylet-induced injuries are either caused by its blunt tip or by the brittle broken piece of the stylet. Stylet-induced injuries can occur when resistance is encountered while inserting the ETT, thus exposing the stylet tip to the subglottic structures or while withdrawing the stylet, when the



**Figure 2:** Mounted Ryles tube over the stylet with the stylet tip well behind the Ryles tube

acute hockey stick angle, the ETT can cause injury to the anterior part of the trachea.<sup>[2]</sup> There are many cases where either a broken stylet piece or torn sheath covering the stylet were found causing the airway obstruction.<sup>[3,4]</sup> These may occur due to usage of an old brittle stylet or reusing the same stylet more than the recommended number of times.

With our technique, both stylet tip injuries and airway obstruction resulting from the broken brittle stylet can be taken care of as the tip of the stylet is well behind the Ryle's tube tip. Another advantage is that the same stylet can be reused making our approach highly cost-effective. However, we suggest to change the Ryles tube, covering stylet after each use and proper sterilisation of the stylet before mounting a new Ryle's tube. To reduce stylet-induced soft-tissue injuries, in addition to our technique, we also suggest avoiding excessive bending of stylet tip, use of adjustable rubber cock and proper jelly application before introducing the stylet into the ETT.<sup>[2,5]</sup> We have been regularly using this technique in our institute. However, we suggest larger trials before this technique can be used widely.

#### Financial support and sponsorship

Nil.

#### Conflicts of interest

There are no conflicts of interest.

**Rafat Shamim, Gaurav Sindwani, Vansh Priya<sup>1</sup>,  
Aditi Sur<sup>2</sup>**

Department of Anesthesia, Institute of Liver and Biliary Sciences,  
<sup>2</sup>Department of Oncoanesthesia, AIIMS, New Delhi, <sup>3</sup>Department  
of Anesthesia, TS Mishra Medical College and Hospital, Lucknow,  
Uttar Pradesh, India

#### Address for correspondence:

Dr. Gaurav Sindwani,  
Department of Anesthesia, Institute of Liver and Biliary Sciences,  
New Delhi - 110 070, India.  
E-mail: drsindwani25@gmail.com

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Access this article online	
Quick response code	Website: www.ijaweb.org
	DOI: 10.4103/ija.IJA_25_18

**How to cite this article:** Shamim R, Sindwani G, Priya V, Suri A. Saviour of stylet injuries: 'Ryle's tube'. *Indian J Anaesth* 2018;62:399-400.

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