

CASE REPORT

Knotted Ryle's Tube: A Rare Complication

¹Tanya R Jha, ²Meenoti P Potdar

ABSTRACT

Ryle's tube (RT) insertion is a commonly performed procedure in emergency departments, intensive care units, and operation theaters. The complications associated with RT include ulceration, bleeding, misplacement of the tube in airway, and clogging of the tube. Intra-gastric knotting is a rare complication of RT insertion. The removal of such knotted RT should be done cautiously so as to avoid trauma, preferably under direct laryngoscopic vision.

Keywords: Intra-gastric tube, Knotted, Ryle's tube.

How to cite this article: Jha TR, Potdar MP. Knotted Ryle's Tube: A Rare Complication. *Res Inno in Anesth* 2017;2(2):71-72.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Ryle's tube insertion is a commonly performed procedure in emergency departments, intensive care units, and operation theaters. The complications associated with RT include ulceration, bleeding, misplacement of the tube in airway, and clogging of the tube.¹ Intra-gastric knotting is a rare complication of RT insertion.¹

We report a case of a 40-year-old man with gastro-intestinal stromal tumor posted for partial gastrectomy. The patient underwent a conventional general anesthesia technique and was intubated with a size 8 endotracheal tube as per protocol. A 16 F RT insertion was attempted post-intubation. The RT was inserted by a blind technique and was advanced up to 50 mark as no resistance was felt during insertion. However, while checking the placement of the tube by whoosh test, resistance was felt during injection and the confirmatory sound was not heard in the epigastrium on auscultation. Hence, direct laryngoscopy was done to check for the position of the tube. No coils were found in the oropharynx during laryngoscopy and the tube was found to be entering the esophagus. However, the position could still not be

confirmed by auscultation; hence, we decided to remove the tube. The proximal three-fourths of the RT could be removed without any problem, but resistance was felt toward the end. Hence, we pulled out the RT with greater force and the tube came out *in toto* without any trauma. On removal, a tight knot (Figs 1 and 2) was noted at the distal end of the RT.

Although this phenomenon of knotting has been reported in the literature, its incidence appears low.¹ Any difficulty during insertion or removal of a nasogastric tube should prompt immediate investigation to rule out possibility of knotting. When in doubt, a radiograph or an endoscopy can be performed to look for a knotted tube. The predisposing factors for knotting include narrow tube, multiple manipulations during insertion, deep

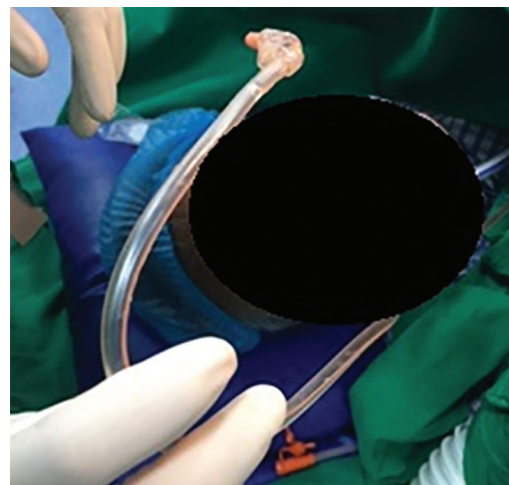


Fig. 1: Knotted RT

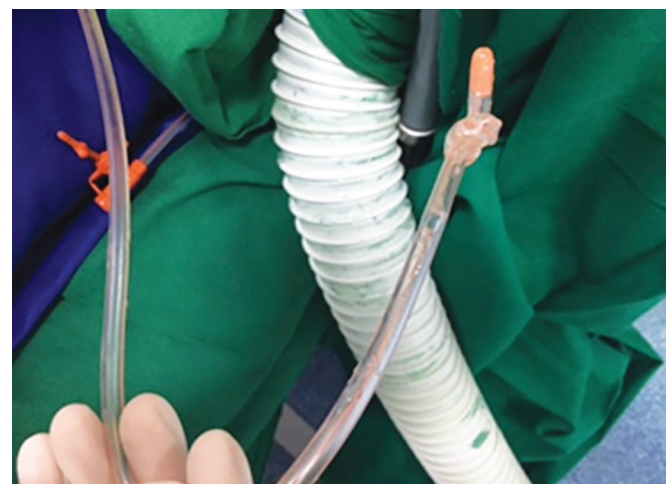


Fig. 2: Tight knot at the distal end of RT

¹Senior Resident, ²Consultant

^{1,2}Department of Anesthesia, Dr L H Hiranandani Hospital Mumbai, Maharashtra, India

Corresponding Author: Meenoti P Potdar, Consultant Department of Anesthesia, Dr L H Hiranandani Hospital Mumbai, Maharashtra, India, Phone: +912225763528, e-mail: meenoti@yahoo.com

insertion into stomach, and interference with endotracheal tube in an intubated patient.^{2,3} Knotting can result in respiratory distress, laryngeal and nasal trauma during removal attempts, and tracheoesophageal perforation.^{3,4} Knotting can be prevented by using larger diameter tubes and avoiding excess advancement into the stomach.

In our patient, the presence of an endotracheal tube was the only risk factor present. Though the insertion of the tube was smooth, on checking, we found resistance while injecting air. This indicated obstruction in the lumen of the tube and, hence, the tube had to be removed. The mistake that we did was that we pulled out the RT blindly through the nose despite having resistance. This might have tightened the knot all the more and could have traumatized the nasal mucosa and caused bleeding.⁵ Hence, it is a lesson that whenever there is resistance while pulling out the RT, it should not be done forcefully, but

under laryngoscopic vision. If a knotted tube is found, it can be cut and the knotted portion removed orally under laryngoscopic vision.

REFERENCES

1. Baskin WN. Acute complications associated with bedside placement of feeding tubes. *Nutr Clin Pract* 2006 Feb;21(1):40-55.
2. Dinsmore RC, Benson JF. Endoscopic removal of a knotted nasogastric tube lodged in the posterior nasopharynx. *South Med J* 1999 Oct;92(10):1005-1007.
3. Santhanam V, Margaron M. Removal of self-knotted nasogastric tube: technical note. *Int J Oral Maxillofac Surg* 2008 Apr;37(4):384-385.
4. Malik NW, Timon CI, Russel J. A unique complication of primary tracheoesophageal puncture: knotting of the nasogastric tube. *Otolaryngol Head Neck Surg* 1999 Apr;120(4):528-529.
5. Dasani B, Sahdev P. Knotting of a nasogastric tube: a case report. *Am J Emerg Med* 1991 Nov;9(6):565.