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Letter to Editor

Checking the Patency of Nasogastric Tube: An Overlooked Practice

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ABSTRACT

Nasogastric tube insertion is a day-in-day-out procedure done by anesthesiologists during perioperative period and in critical care units. Checking the patency of NG tube is not considered a routine practice prior to its insertion unlike CVC, epidural catheters, etc. Though the medical devices are manufactured under strict vigilance, there is always the potential of them being defective or damaged at manufacturing, storing and transporting ends. Considering this factor, assessing the patency of NG tube beforehand can eventually lead to prevention of untoward complications.

Keywords:

Nasogastric tube; Patency; Manufacturing defect

Dear Editor,

Nasogastric (NG)/Ryle's tube is a medical grade PVC tube that is passed from nostril through the nasal cavity, pharynx, esophagus into the stomach of a patient. NG tube insertion is a common procedure done by anesthesiologists during peri-operative period and care of critically ill patients.

We report a case of intestinal perforation in a 6 years old male child posted for exploratory laparotomy. He was hemodynamically stable and his routine investigations were within normal limits. The child was administered general anesthesia with intravenous induction and endotracheal intubation. After lubricating with 2% lignocaine jelly, a sterile NG tube of 10 Fr (STERILENE®, Sterimed Medical Devices Pvt. Ltd.) was inserted via the right nostril. It was inserted up to a length of 28 cm as calculated by approximating the length from nostril to tragus to xiphisternum. To confirm the placement, stethoscope was placed over the stomach just below the left side ribs and 5 ml air was pushed via the NG tube by a fresh syringe. Neither the whoosh could be heard, nor the aspiration of gastric contents could be done [1]. Next attempt was made through the other nostril but failed. Following attempts were taken by senior anesthesiologist in each nostril but in vain.

Eventually the tube was removed and inspected closely for any defect. The distal end was intact with clear visible side openings. The proximal end was connected to a 10 ml syringe and air was pushed. The air could not be pushed indicating an obstruction in tube. A PCNL guide wire was then passed to locate the site of obstruction. The guide wire could not be negotiated till the end. On close inspection, a manufacturing defect was found near the guide wire tip proximal to side openings of the tube (Figures 1-3).

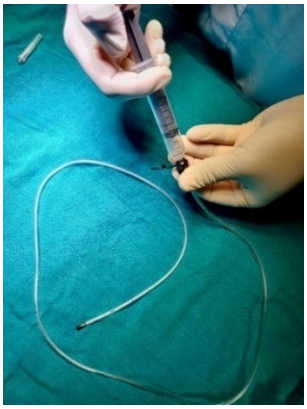

Figure 1: Attempt at pushing air via 10 ml syringe through the NG tube.

Medical devices are manufactured under strict vigilance, with stringent guidelines laid down by the International Organization of Standardization. Similarly, NG tubes are also covered by the same, under ISO 20695:2020(en) guidelines [2]. We should, therefore, consider all components, from all manufacturers, as

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having the potential of being damaged or defective and should be checked before start of any case.

It is a regular practice to check the patency of central venous catheter, epidural catheter, endotracheal tube cuff etc. prior to insertion. But checking the patency of NG tube beforehand is not done routinely. Having done that could have saved our patient from iatrogenic mucosal injury caused during multiple attempts. Considering manufacturing defects, we should therefore check the patency of NG tube prior to use.

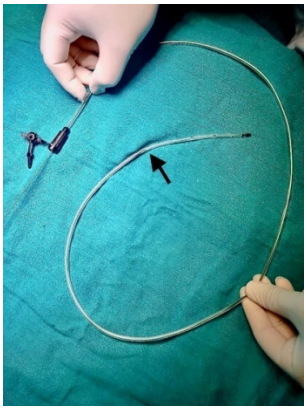

Figure 2: Arrow showing the extent up-to which PCNL guide wire could be passed.

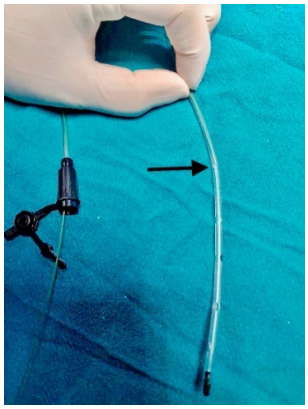

Figure 3: Arrow showing the manufacturing defect in NG tube.

DECLARATION OF PATIENT CONSENT

The authors certify that they have obtained all appropriate patient consent forms.

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