

HNE Area Intensive Care

Equipment Guideline

Guideline approved for :JHH ICU only

Instructions For Use:

MALLINCKRODT LINTON-NACHLAS TUBE

DESCRIPTION:

The Linton-Nachlas Tube is a nasogastric tube with a large pear-shaped, silicone balloon, tamponades fundal varices and simultaneously interrupts the blood supply to the oesophagus and the stomach. Self-sealing valve, with separate pressure monitoring outlet, helps to ensure maintenance of correct pressure. The tube length is 115cm.

INDICATIONS FOR USE:

The Linton-Nachlas Tube is indicated for use in clinical situations for the control of haemorrhage from the oesophageal/fundal varices. The nasogastric tube may be used simultaneously for irrigation, drainage or decompression of the stomach, withdrawing specimens for diagnostic analysis, flushing the stomach, to remove toxic substances (lavage) and treating upper tract bleeding. Nasal intubation is the method of choice; however the tube can be passed orally if required.

CONTRAINDICATIONS:

The tube is contraindicated in patients with known oesophageal diseases such as oesophageal tumours and oesophageal diverticula/strictures.

WARNINGS AND PRECAUTIONS:

Maximum Inflation Volume; 300 – 500mls of air.

SUGGESTED DIRECTIONS FOR USE:

1. In most patients in intensive care the patient will require intubation and ventilation. The Linton tube is then placed under direct vision with a laryngoscope generally orally.
2. Carefully remove the tube from its sterile package.
3. Carefully identify the inflation lumen and main lumen.
4. Insert sealing plugs into pressure monitoring lumen. Insert a 50ml leuc syringe and test inflate balloon.
5. After test inflation, evacuate all air in each balloon with the syringe.
6. Estimate the length of the tube to reach the stomach by measuring the distance from the bridge of the nose to the earlobe and adding the distance from the nose to the xiphoid process(if nasal insertion). Note the total distance by utilising the printed depth markings on the tube for reference, or place a small piece of adhesive tape on the tube.
7. Provide the patient with an emesis basin and tissue (the tube maybe inserted under sedation or general anaesthesia as dictated by the clinical situation).
8. Lubricate the distal 10cm of the tube with water-soluble lubricant.

9. Slightly hyper-extend the patient's head and, using gentle pressure, slowly insert the tube into one nostril. Minimal rotation deflects the tube downward when it reaches the posterior pharyngeal wall.
10. If during insertion an obstruction is encountered, do not force the tube. Remove and use the other nostril.
11. Advance the tube steadily through the oesophagus and into the stomach. Swallowing the tube can be facilitated by having the patient take small sips of water.
12. For oral intubation, refer to the appropriate section of this instruction sheet.
13. Inflate gastric balloon with 80ml of air. Measure pressure with manometer a reading 15mmHg high than initial pressure means in the balloon is in oesophagus and should be repositioned.

Check position of gastric balloon with xray.

14. When position confirmed inflate balloon with 300 – 500ml of air or as clinical judgement indicates. The volume of air used should be noted in the patient's record.
15. Firm traction is applied manually at the nostril or mouth so that the gastric balloon is firmly adjacent to the diaphragm. Continuous and intermittent suction is then applied to the gastric lumen.
16. Low-pressure continuous suction is applied to the oesophageal aspirate lumen to remove oral secretions entering the oesophagus.
17. Firm traction should be maintained on the device. The patient is nursed with the head of the bed elevated 30cm. Alternatively a 500ml bag of saline is attached via cord to the Linton tube and allowed to freely provide traction (care must be provided so that inadvertent 'catching' of this weight does not allow excessive traction to be applied).
18. The traction should be rechecked approximately two hours after intubation. If bleeding continues, check that:
 - a) The balloon is inflated and pulled firmly against the diaphragm.
 - b. Another lesion has not been overlooked.
19. After approximately 24 hours, or as clinically indicated, the balloon is deflated to avoid mucosal injury. If possible, the tube is left in position for a further 24 hours.
20. Discard device. Considerations should be given to the specific WARNING/PRECAUTIONS stated in the instruction insert.

ORAL INTUBATION CONSCIOUS PATIENT:

1. Place tube over the centre and back of the tongue.
2. Instruct the patient to suck on it, as they might on a straw, and to swallow. After about 15cm of the tube has been passed, place it in the left buccal area between the teeth and the cheek to reduce gagging.
3. Advance the tube as the patient swallows. The remainder of the procedure is the same as in nasal intubation.

Minnesota or Sengstaken & Blakemore tube(with oesophageal balloon)

If bleeding persists after placement and traction of gastric balloon and under instruction of gastroenterologist or Upper GI surgeon, inflation of the oesophageal balloon may be necessary.

1. Connect a pressure manometer to one arm of oesophageal balloon port
2. Attach 50 ml toomey syringe to other oesophageal balloon port

3. Inflate oesophageal balloon to pressure 20-30mmhg(27 - 40.5 cmH₂O)
 4. Replace toomey syringe with stopcock
 5. Connect oesophageal suction port to continuous or intermittent suction as ordered
 6. Oesophageal balloon must be deflated every 8 hours for 30 minutes
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Created: 8/2005 by Dr K Havill Reviewed: 8/2007 by Dr K Havill b Guideline to be reviewed before : 8/2009

Disclaimer: These guidelines are intended for and to be used only by experienced critical care staff under direct supervision of Hunter Health Area Intensive Care Specialists in designated Hunter Health Area Critical Care Areas. The Authors will not be responsible for inappropriate use of these guidelines.