ULTRA MED شركة الترا للمنتجات الطبية

ULTRA FOR MEDICAL PRODUCTS CO.

INSTRUCTION FOR USE

Material Used:

- P.P. (Polypropylene)
- Medical grade phthalate free P.V.C. (Poly Vinyl Chloride).

Indications:

- A double lumen endotracheal tube (DLT) is an endotracheal tube designed to isolate the lungs from one another anatomically and/or physiologically.

USES

- Anatomical lung separation (this isolates a diseased lung from contaminating the non-diseased lung)
- Massive hemoptysis (protect normal lung from blood)
- Whole lung lavage for pulmonary alveolar proteinosis (lavage worst lung first)
- Copious secretions (e.g. bronchiectasis, lung abscess) (protect normal lung from pus)
- Physiological lung separation (ventilates each lung as an independent unit)
- Unilateral parenchymal injury:
    - Aspiration
    - Pulmonary contusion
    - Pneumonia
    - Unilateral pulmonary edema
- Single lung transplant (post-operative complications)
    - e.g. COPD patient with lung transplant requiring different ventilation strategies for each lung
- Bronchopleural fistula
    - allow ventilation of normal lung without worsening leak through fistula
- Unilateral bronchospasm
- Thoracic surgery e.g. pneumonectomy
    - right-sided DLT only used if left pneumonectomy or surgery on left main bronchus (e.g. to avoid disruption of anastomosis on left lung transplant)

DESCRIPTION

- DLTs may be “left” or “right” depending on bronchus they are designed to intubate
- right sided tubes have a slit to be positioned to facilitate ventilation of RUL but are more difficult to position, so left DLTs are more commonly used
- size = external diameter of tube (French Gauge – 26-41 Fr)
- males; 39-41 Fr
- females; 37-39 Fr
- children use bronchial blocker technique
- remember in an emergency (ie. pulmonary haemorrhage) a standard ETT can be advanced into non-diseased lung (a bougie may help facilitate this)
- Table below give diameter of bronchus (usually left) measured on PA CXR (magnifies air bronchogram by 10%). Measurement can also be made on CT.

XR size (mm) 110% actual					
28Fr	**32Fr**	**35Fr**	**37Fr**	**39Fr**	**41Fr**
8.2	9.3	11.3	12.2	12.5	13.0

- bronchoscope must be a narrow scope (<4 mm diameter) to pass down the lumens of a DLT
- Features of a Mallinckrodt DLT
    - high volume, low pressure cuff, bronchial tube and pilot balloon blue
    - radio opaque marker stripe running to tip of bronchial lumen
    - broncho cuff tubes have a radio-opaque line circling the tube proximal to the bronchial cuff, 4 cm from the tip of the bronchial lumen (should be positioned above the carina)

Contraindications:

- Patients Who Are At An Increased Risk Of Gastric Aspiration
- Patient With A History Of Obesity,
- Hiatal Hernia,
- Gastro Paresis
- Bronchospasm
- Morbid Obesity Results In High Airway Resistance Pulmonary Edema
- In premature babies
- May be traumatic to the oro-pharyngeal or esophageal route.
- It may cause sinusitis and esophagitis infections

Instruction for Use:

- ***preparation***
  - ❖ Before an endotracheal tube is placed, your jewelry should be removed, especially tongue piercings. People should not eat or drink before surgery for at least six hours to reduce the risk of aspiration during intubation.
- ***During the procedure***
  - ❖ An endotracheal tube is often placed when a patient is unconscious. If a patient is conscious, medications are used to ease anxiety while the tube is placed and until it is removed.
- ***Intubation***

Blind technique for a left DLT:

- ensure lumen are patent and individual cuffs are working
- anaesthetise and paralyse patient
- perform direct laryngoscopy
- insertion of endotracheal tube with bronchial concave curve facing anteriorly
- as tip passes through larynx rotate the ETT anti-clockwise 90 degrees until resistance met (usually about 29 cm at the teeth in an average height adult)
- once trachea cannulated and tracheal cuff just below the vocal cords, inflate tracheal cuff and ensure ventilation of both lungs via inspection and auscultation
- check ventilation through bronchial lumen (clamp off gas flow to tracheal lumen at Y connector and open the tracheal sealing cap to air) – inflate bronchial cuff 1mL at a time until leak stops
- check whether can isolate other lung via tracheal lumen – close the sealing cap, remove Y connector and ventilate
- confirm position with bronchoscopy (auscultation alone is unreliable)
  - via tracheal lumen to confirm that:
    - endobronchial portion is in the left main bronchus
    - the bronchial cuff is just visible ~5mm below the carina, without cuff herniation above the carina
    - the RUL bronchus is identifiable via the right main bronchus, with 3 lobar branches (apical, anterior and posterior)
    - identify the radio-opaque line encircling the bronchial lumen (if present) above the carina
  - via endobronchial lumen:
    - identify origins of the left upper and lower lobe bronchi

Insertion of a right DLT:

- overview
  - must take into account the location of the right-upper lobe bronchus and the potential for obstructing its orifice
  - the right mainstem bronchus is shorter than the left bronchus
  - the right-upper lobe bronchus originates at a distance of 1.5 to 2 cm from the carina so the right-sided DLT incorporates a modified cuff, or slot, on the endobronchial side that allows ventilation for the right-upper lobe
  - absolute contraindication for right-sided DLT use is the presence of an anomalous right upper lobe take off from the trachea (present in 1/250)
- similar overall approach to insertion of left-sided DLT, however use of bronchoscope is more important

- after the right-sided DLT enters the trachea, the fiberoptic bronchoscope is advanced through the endobronchial lumen
- Before advancing the DLT identify:
  - the tracheal carina
  - the right mainstem bronchus
  - the takeoff of the right-upper lobe bronchus
- rotate clockwise/ 90º to the right (opposite to a left-sided DLT) and advance with the aid of the bronchoscope
  - patient can be moved from supine to lateral decubitus position to facilitate this
- confirm position with bronchoscopy (auscultation alone is unreliable)
  - ensure good alignment between the opening slot of the endobronchial lumen relative to the take off of the right-upper lobe bronchus and distally (endobronchial lumen) a free view of
  - via the tracheal lumen:
    - identify the edge of the blue cuff (the endobronchial balloon) when inflated just below tracheal carina
    - identify the entrance of the right main bronchus
  - via endobronchial lumen:
    - identify good alignment between the opening slot of the endobronchial lumen relative to the takeoff of the right-upper lobe bronchus
    - identify the bronchus intermedius and the right-lower lobe bronchus distally

- ***<u>After the procedure</u>***
  - ❖ After the endotracheal tube is in place and a patient connected to a ventilator, health care providers will continue to monitor the tubing, settings, and provide breathing treatments and suctioning as needed. Careful attention to oral care will also be provided.
- ***<u>Removing the Endotracheal Tube</u>***
  - ❖ The tape holding the endotracheal tube on the face is removed, the cuff is deflated, and the tube is pulled out.

Warning:

- For single use only; Reusing can be associated with Cross infection, Device Malfunction and Reactions to endotoxins as sterilization will not inactivate toxins produced by the breakdown of Gram-negative bacteria even if the bacteria themselves are killed.
- The device is Gram-negative bacteria even if the bacteria themselves are killed.; **Cautions:**
- Single use only.
- Sterile if package is unopened or undamaged.
- Do not re-sterilize.
- Do not expose to temperatures above 49 ^{O}C.

Conditions of Handling, Preservation and Storage:

- Not more than 5 cartoons on each other.
- Nice Ventilated place.
- Out of Sun light.
- Room temperature.

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CE 2803

STERILE EO — Sterilized by Ethylene Oxide

For Single Use Only

See Instruction for use

Non-Pyrogenic

Don't use if package is not intact

LOT — Lot No.

Date of Manufacturing

Use by / Expiry date

REF — Catalogue No.

PHT NON-DEHP — Non-phthalate

ULTRA FOR MEDICAL PRODUCTS CO.

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