

Endotracheal Tube Positioning in Critical Care

Aim To ensure correct endotracheal tube (ETT) position and minimise risks of premature extubation or endobronchial intubation

Scope All intubated adult patients in Critical Care

Definitions

ETT Length: ETT length marking in midline at teeth or gums (cm)

Correct ETT Length: ETT length that is not too long (risks endobronchial intubation) or too short (risks extubation), keeping the ETT tip around 2-5 cm above the carina in typical adults.

Varies with age and size, but in adults is typically:

- 20-21 cm for females
- 22-23 cm for males

1. Set Correct ETT Length

Who & When: Following intubation in ICU, this is set by the intubating doctor.
If admitted to ICU with ETT in situ, this is set by the admitting doctor.

How: Check the distance from ETT tip to the carina on chest x-ray. This should be around 2-5 cm in typical adults. Ensure proper securing and consider repeat chest x-ray after any adjustments.

Communication: Inform the bedside nurse of Correct ETT Length and record in CIS



2. Monitor Correct ETT Length

Who & When: Current ETT length should be recorded once per shift by the bedside nurse.

How: Check length at the teeth/gums and compare with documented Correct ETT Length. Document current ETT length in CIS and inform doctor of any change.

ETT Cuff Leak Despite Appropriate Cuff Pressure

Beware: Persistent/ recurrent cuff leaks indicate cuff herniation above the larynx.
This patient is at risk of accidental extubation and loss of airway.

Actions

1. Give 100% and call senior doctor for review
2. Bring intubation trolley to bedside
3. Suction NGT and apply head up tilt to reduce aspiration risk
4. Assess and reposition ETT at discretion of airway-trained doctor.

Prepare for urgent re-intubation before attempting to reposition the ETT.

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