FIBREOPTIC INTUBATION

Indications:
An intubation technique that can maintain patient's own spontaneous breathing until definitive airway is secured and minimize cervical spine manipulation. It is indicated in potential or known difficult airway. For example:

- Patients with post RT of neck or unstable cervical spine (trauma, rheumatoid arthritis)
- Patients with upper obstruction: airway burn, epiglottitis, Ludwig's angina
- Obestity

Procedure:

- Explain to patient the indication and procedure. Patient's co-operation is very important
- Full PPE
- Can be used for both oral or nasal endotracheal intubation
- Equipment
    - Sterile fibreoptic scope with light source
    - Oral bite block or Ovassapian/Behrman airway if oral route chosen
    - Topical anaesthetics – lignocaine, cocaine 5%
    - Vasoconstrictors eg xylometazoline (tradename: Otrivin adult preparation)
    - Suction
    - Endotracheal tube (for nasal intubation, choose size 0.5 smaller, put the tube in warm water to soften it)
    - Lubricant jelly, silicon spray
    - Equipment and resuscitation drugs standby as for any intubation
    - Manual resuscitator
    - Oxygen

- Technique
    - Administer supplemental oxygen
    - Determine patency of nasal auditus
    - Prepare nasal mucosa with cocaine or xylometazoline drops to prevent bleeding

- Anaesthetize pharynx with lignocaine
  - Several techniques depending on operator preference eg lignocaine spray, nebulized lignocaine, instill lignocaine "spray as you go" technique, transtracheal injection, nerve block, aspiration of lignocaine etc
  - The lignocaine spray available in our hospital is a 10% solution at a dose of 10 mg per spray
  - Recommended maximum adult dose should not exceed 4 mg/kg of lignocaine without adrenaline (NB. caution in patients with dysrhythmias)
- Load the endotracheal tube on the bronchoscope. Secure the endotracheal tube by taping its proximal end onto the bronchoscope. Attach suction tubing to suction port
- Advance scope into trachea under direct vision
- Stabilize the scope and advance endotracheal tube over scope into trachea, tip of ETT should be above the carina, and then remove scope
- Confirm ETT placement by $ETCO_2$, auscultation and CXR

Reference: Thomas Heiddeggel, NEJM 364;20