Awake Fiberoptic Intubation

Preparation

1. Familiar with using the fiberoptic scope
2. Discuss the risks and benefits with patient about fiberoptic intubation and answer questions.
3. Calculation of the maximum dose of lidocaine (the recommended is 5mg/kg).
4. Preparation of the size and type of ETT: Parker Flex Tip, Nasal Ray, Reinforce …
5. Prepare bronchoscope: adult vs. peds scope, light source, white balance and focus, load ET tube onto proximal part of scope, lower the bed and use stools if needed.
6. Prepare drugs: All medications for general anesthesia, afran nasal spray as topical vasoconstrictors, 4% Lidocaine, lubricating jelly, Ovasappian airway, gauze. Have all the appropriate resuscitation drugs and equipment ready.
7. Monitor patient throughout the procedure.

Oral awake intubation

1. 5 ml of 4% lidocaine nebulizer with an oxygen flow rate of 8-10 L/min 15 min before intubation
2. Glycopyrolate 0.2mg IV to dry mouth if needed.
3. Administer topical anesthesia by spraying 4% lidocaine with an atomizer at increasing depths with 0.5-1 ml a time (Laryngo-Tracheal Mucosal Atomization Device).
4. Optimal sniffing position with tongue pulled out by assistant, or use Ovassapian airway which keeps patient from biting scope, guides scope midline.
5. Hold bronchoscope tip at length of 15 to 20 cm, stay in midline.
6. Advance only while recognizing structures. Pull back if you lost the view..
7. Spray epiglottis and cords with 4%lidocain 2-3ml when you find them, wait for cough and clear view.
8. Pass scope through cords and down to carina.
9. Lubricate the ETT tip with aqueous gel.
10. Passing ETT gently. If unable to pass, pull back and rotate.
11. Confirm scope is in airway and is easily removed.
12. Confirm EtCO2 and auscultation.
13. Induce general anesthesia.

Nasal awake intubation

1. Optimal chin lifting.
2. Identify the patient's most patent nasal passage if plan nasal intubation.
3. Spray nasal mucosal with vasoconstrictor Afran.
4. Nebulizing with 2ml of 4% Lidocaine.
5. Insert soak cotton bud into the nasal cavity (inferior nasal meatus and posterior nasal space), ensuring that the anterior part/entrance of the nostril is also anaesthetized, leaving it in situ for around 3 minutes.

6. Administer topical anesthesia by spraying 4% lidocaine with an atomizer at increasing depths with 0.5-1 ml a time (Laryngo-Tracheal Mucosal Atomization Device).
7. Pass bronchoscope smoothly.
8. When vocal cord is visible, spray with 2ml of 4% Lidocaine through scope.
9. Pass scope through cords and down to carina.
10. Lubricate the ETT tip with aqueous gel then passing gently.
11. Confirm scope is in airway and is easily removed.
12. Confirm EtCO2 and auscultation.
13. Induce general anesthesia.

Tips for performing endoscopy

1. Orientate the fiberscope before starting.
2. Keep the air cavity (the dark space) constantly in the centre of your visual field. The awake patient can assist in opening the airway by protruding the tongue (opens oropharynx), saying “eeh” (opens pharynx, and epiglottis comes into view), deep inspiration (opens glottis)
3. A view of blood-red out, secretions-white out, no cavity- pink out.
4. Introduce the fiberscope through the nostril, into the lower nasal meatus (inferior, largest). Identify nasal septum medial, floor of nose superior, turbinate lateral. Beyond the nasal septum, enter the nasopharynx.
5. Steer the fiberscope into the oropharynx, before which you may need to gently part the soft palate from the posterior pharyngeal wall. Once in the oropharynx, you may see the epiglottis.
6. Advance the fiberscope into the laryngeal opening. You will require the first dose of topical anesthetic when do awake. Alert the patient that they may cough at this point. Wait a few minutes.
7. Advance the fiberscope until it enters the subglottic space, and identify the trachea.
8. Apply your 2nd dose of local anesthetic. This again may cause the patient to cough. Retract to just before the laryngeal opening.
9. Advance the fiberscope again into the trachea, identifying the carina.
10. Keep the carina in the field of vision at all times to prevent dislocation of the fiberscope out of the larynx into the esophagus

Tips for passing ETT for intubation

1. Lubricate the tip of the ETT, and the fiberscope, so as to ease the passage of the ETT over the fiberscope and the ETT through the nasal passage and vocal cords.
2. At this point, ask your assistant to hold fiberscope in position, as you perform intubation.
3. Release the ETT and advance it with a gentle rotating motion through the nose, naso/oropharynx, pharynx and larynx.
4. Alert the patient of discomfort as the tube is passed through the nose.
5. If any resistance is felt, do not force the tube, but withdraw slightly, rotate the ETT 90 degrees anti-clockwise, and advance gently again.

6. Remove the fiberscope while visualizing, to ensure tip of the ETT is in the trachea, and maintaining the ETT in place, with the tip at 3-5cm above the carina.
7. Fix the ETT in place and connect to the anesthetic breathing circuit.
8. Confirm the ETT position by capnography, auscultation of bilateral air entry, observation of bilateral chest movement and misting of the tube, and feeling air movement at the tip of the tube. Inflate the ETT cuff.
9. Induce the patient using appropriate anesthetic agents (intravenous, inhalational, neuromuscular blockers).