A-P6 ENDOTRACHEAL TUBE INTRODUCER (BOUGIE)		First Responder EMT AEMT Paramedic

Indications

- See airway maintenance guideline [A-01]
- Predictable difficult intubation, but may used for any attempt.

Contraindications

- Introducer larger than ETT internal diameter

PROCEDURE

- Prepare, position and oxygenate the patient with 100% Oxygen.
- Select proper ET tube without stylet, test cuff and prepare suction.
- Lubricate the distal end and cuff of the endotracheal tube and the distal ½ of the Bougie.
- Using direct laryngoscopic techniques, visualize the vocal cords.
- Introduce the Bougie with curved tip anteriorly and visualize the tip passing the vocal cords (or above the arytenoids if the cords cannot be visualized).
- Once inserted, gently advance the Bougie until you meet resistance or “hold-up” (if you do not meet resistance the introducer is likely in the esophagus and insertion should be reattempted or the failed airway protocol implemented as indicated).
- Load the ET tube onto the introducer, and (while maintaining a firm grasp on the proximal Bougie) gently advance the tube to its appropriate depth.
- If you are unable to advance the ETT into the trachea:
    a. Make sure the Bougie and ETT are adequately lubricated,
    b. Withdraw the ETT slightly and rotate 90° COUNTER CLOCKWISE to turn the bevel of the ETT posteriorly.
    c. If this fails, you may attempt direct laryngoscopy while advancing the ETT (this may require an assistant to maintain the position of the Bougie).
- Once the ETT is correctly placed, hold the ET Tube securely and remove the Bougie.
- Confirm tracheal placement as usual, inflate the cuff with 3-10 cc of air, auscultate for equal breath sounds and reposition accordingly.
- When final position is determined, secure the ET Tube, reassess breath sounds, apply end tidal CO_2 monitor, and record the monitor readings to assure continued tracheal intubation.

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PEARLS

- The Bougie is a great <u>adjunct</u> for ETT placement when poor visualization of the vocal cords is encountered or expected, allowing for easier visualization/verification of placement.
- It should be used when some anatomy of the laryngeal opening can be identified but the vocal cords cannot be visualized well enough to ensure accurate placement of an ETT (i.e. you can see only a small portion of the cords/arytenoid cartilage).
- Always keep the tip of the Bougie angled anteriorly. This will increase the odds of tracheal placement even when the cords cannot be directly visualized.
- Once passed, you should feel “bumps” as the tip passes over the tracheal rings. The Bougie should also come to a “firm” stop as it encounters the bronchial tree. If the bumps and/or hard stop are not felt (i.e. there is smooth advance of the tube without a firm end point, you are likely in the esophagus.
- There are a few options for the use of a Bougie introducer:
    a. *Stand-alone* -- once in place, an ET tube can be placed on and advanced over the Bougie.
    b. *Preloaded* -- then ETT advanced after placement. This can be done in several different manners (**see right**).
- My personal preference is to place the Bougie (*alone*) using direct laryngoscopy. [NOTE: I find it easiest if it is kept straight--and it really needs to be stored this way if possible]. Once in & advanced (feeling for the tracheal rings and a firm endpoint--i.e. In the bronchial tree), I load and advance an ETT preferably with the help of a bystander while keeping the laryngoscope in place to avoid obstruction or kinking of the ETT.