

# A Facilitated Technique Of Retrograde Intubation

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## Abstract

We describe a facilitated way of retrograde intubation. We have placed an anterograde tracheal tube exchanger over the retrogradely placed guide-wire and subsequently an endotracheal tube was rail-roaded over it.

Retrograde intubation is an acceptable alternative technique whenever an airway is found difficult to access due to anatomical or technical reasons. Several techniques were mentioned to facilitate to rail-road the endotracheal tube through the guide-wire or catheter<sup>1</sup>, as well as for retrieval of the catheter through nose<sup>2</sup>. Tracheal tube exchanger with oxygen port is also an effective aid in scenarios of difficult intubation. Here we have depicted our experience of awake retrograde intubation facilitated by tracheal tube exchanger in patients of limited mouth opening.

The patients were premedicated with anticholinergics, antiemetics and mild sedation. Lubrication of the nasal passage with xylocaine jelly and bilateral superior laryngeal block was performed. After puncturing the cricothyroid membrane with 16 G epidural needle, 2ml of 2% xylocaine was injected through it intra-tracheally. A guide-wire (150 cm) used for ureteric catheterization was passed through the needle with bevel facing upwards to bring it out through the nose. It has a malleable soft end which avoids mucosal injury and can be threaded through the oxygen port of the tracheal tube exchanger or bougie. It is a fairly long guide-wire and has surpassed the disadvantage of commonly used smaller length guide-wires which falls short when the bougie is rail-roaded. The intra-tracheal position of the bougie over the guide-wire can be ascertained by palpation of its movement of its tip over the puncture site from outside. A well-lubricated PVC endotracheal tube was rail-roaded over the exchanger easily through the vocal cords. Bevelled end of the endotracheal tube should face posteriorly during mounting to facilitate entry through the glottis. Confirmation of the endotracheal position was done by capnography and auscultation of bilateral breath sounds.

Rail-roading of endotracheal tube over the guide-wire or

epidural catheter was found sometimes difficult. Misplacement of the tube may occur due to kinking of the guide-wire or catheter during insertion through the glottis. It can be partially prevented by maintaining sufficient traction of the guide-wire during rail-roading. The use of the anterogradely placed tracheal tube exchanger over the guide-wire can alleviate this problem due to comparatively rigid nature. We have used the tracheal tube exchanger of 60 cm in length and outer diameter of 5mm over which at least 6mm endotracheal tube can be rail-roaded. Trachlight assisted retrograde intubation<sup>3</sup> techniques as well as fluoroscope-aided retrograde placement of guide-wire<sup>4</sup> and fibreoptic bronchoscope guided retrograde intubation<sup>5</sup> was successfully described. Tracheal tube exchanger is cheaper, widely available and needs no expertise to use unlike fibreoptic bronchoscope. Use of this simple facilitated technique of retrograde intubation can be comparable with the use of fibreoptic bronchoscopy in patients with limited mouth opening.

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