

[NM-151] Thoracoscopic TEF repair: a novel approach or a new emerging standard?

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A term, 3 day old 2.5kg neonate without associated anomalies, presents for tracheo-esophageal fistula repair. The surgeon consults with the anesthesia team to discuss the safety and feasibility of attempting thoracoscopic repair. Diagnosis is based on the child having copious secretions, desaturation with feeding, inability to pass an orogastric tube and chest x-ray revealing orogastric tube in the proximal esophagus with distal bowel gas presence.

Spontaneous ventilation was necessary in order to perform rigid bronchoscopy to evaluate the fistula, and place a Fogarty balloon catheter occluding the fistula to allow safe positive pressure ventilation, and insufflation for thoracoscopy. To obtain lung isolation necessary for thoracoscopy, the patient was then intubated with a 2.5 uncuffed ETT that was advanced distal to the fistula and into the proximal left bronchus.

The patient tolerated insufflation and a thoracoscopic repair, was extubated at the conclusion of surgery after 2.5 hours, and discharged home 10 days later without complications.

The anesthetic management for thoracoscopic repair of a TEF can prove to be challenging. For over 60 years, TEF was repaired via open thoracotomy. However, some reports described adverse musculoskeletal sequelae following thoracotomy, as well as chronic pain issues. Thoracoscopic repair of TEF was previously described in sporadic case reports, but is now being performed on a more frequent basis.

The case will address the following learning objectives:

1. Describe the anesthetic management and specific considerations for Thoracoscopic TEF repair in the neonate
2. Review the peri-operative considerations of TEF repair
3. Compare peri-operative outcomes of Open vs. Thoracoscopic TEF repair





