Complete Tracheal Transection in a 3-year old following Blunt Neck Trauma
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Introduction
• Pediatric laryngo-tracheal injuries from blunt force trauma are very uncommon.
• The pediatric larynx is positioned more superiorly in the cervical region as compared to adults and they have a relatively short neck which allows the mandibular arch to help shield the larynx (1).
• The greater flexibility of the cartilage decreases the possibility of fractures in this patient population (1,2). However, when these injuries occur, they can be challenging for the pediatric anesthesiologist due to the potential for an unstable airway and ensuing respiratory distress.

Clinical Course
A 3 year old girl was brought to the emergency department after she was traumatized by barbed wire across her neck while riding in an all-terrain vehicle (ATV). Paramedics at the scene noted extensive subcutaneous emphysema, significant swelling around her neck, and respiratory distress. Intubation in the field was unsuccessful and patient was brought to the emergency department where a 4.5 cuffed endotracheal tube (ETT) was placed after multiple attempts.

Clinical Course Continued:
• Initial chest x-ray revealed bilateral pneumothoraces and bilateral thoracostomy tubes were placed.
• A CT scan of the neck showed diffuse soft tissue gas dissecting through the neck and extensive pneumo-mediastinum. The trachea was found to be completely transected at the level of C7-T1 and the path of the ETT was in question.
• Once in the operating room, the surgical team began with a fiberoptic bronchoscopy through the existing endotracheal tube but the distal trachea could not be clearly identified and oxygen desaturation ensued.
• A decision was made to place the patient on Veno-arterial ECMO through the right neck to maintain oxygenation during tracheal repair.
• After further surgical exploration, it was noted that the ETT was sitting beyond the tracheal transection into a false passage in the anterior mediastinum but was still able to partially ventilate and oxygenate the distal trachea. Primary tracheal repair was performed while on ECMO and the oral ETT was exchanged to a 4.5 nasal ETT for prolonged intubation and airway stenting.
• The patient was taken off ECMO successfully and transported to the pediatric intensive care unit. The plan was to keep the patient intubated and sedated for one week to allow for the tracheal repair to heal.

Discussion
In cases where tracheal injury is suspected, a multidisciplinary team approach is required and should include pediatric anesthesiology, pediatric surgery, and the pediatric ENT services.

References