Extraluminal Endobronchial Blocker to Isolation Lung in 2 Month-Old

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Introduction: The Arndt pediatric endoblocker (Cook Critical Care, Bloomington, IN, USA) has been used to facilitate one-lung anesthesia in children. The smallest diameter end bronchial blocker currently available is 5-Fr and can be placed through an endotracheal tube with an internal diameter of 4.5 mm or larger. A 2.2–mm external diameter pediatric fiberscope (Olympus, Melville, NY, USA) is commonly used for placing the blocker. We report a case of a full term, 2 month-old male, 5.4 kg who presented with left lower lobe pneumonia and empayema. He was dyspneic and required O_2. Coarse breath sounds were heard on the left lung. He was scheduled for left video-assisted thoracoscopic surgery (VATS) for decortication. Anesthesia was induced with propofol and maintained with sevoflurane, oxygen and rocuronium One-lung isolation was achieved by placing a 5-Fr extraluminal endobronchial blocker.

Methods:

1. The endobronchial blocker was passed under vision through the cords.
2. The baby's head was turned to the right, and the blocker was blindly advanced until resistance was first encountered and the blocker's position was secured.
3. An uncuffed oro-tracheal tube, 3.5 mm internal diameter, was then placed under direct vision alongside the blocker and taped at 11 cm at the lip.
4. Correct positioning of the endoblocker was verified by fluoroscopy. The blocker was deep and had to be pulled out until its distal end was in the left main bronchus. Once the balloon was inflated, there were no breath sounds on the left lung.

Results: Lung isolation was successful, surgery uneventful, and the baby was extubated awake in the OR. In PACU, the baby was croupy and inhaled racemic epinephrine was administered.

Discussion: Currently, VATS procedures are commonly used in infants and newborns. Isolation of the lung for this age group is challenging for pediatric anesthesiologists. An endotracheal tube with an inner diameter less than 4 mm has to be used to secure the airway. A case report using a fiberscope to place an extraluminal endobronchial blocker through an endotracheal tube with an inner diameter 4 mm has been described in a 9 month-old infant (1). In this case report, the infant was 2 months-old, and the blocker was blindly placed in the left bronchus without difficulty within a short time. The position of the endobronchial blocker was verified and adjusted under fluoroscopy.

Ref:

1. Bastien J.L. et al., Can J Anesth, 2006