PATIENT: 20-month old female patient with a history of tetrology of Fallot, pulmonary atresia and secundum atrial septal defect presented for diagnostic cardiac catheterization and angioplasty of bilateral pulmonary arteries.

CASE: Inhalation induction followed by a peripheral intravenous line and placement of a 3.5 cm cuffed endotracheal tube without any complications. Cardiology service then proceeded with catheterization and angioplasty as planned, also with no complications noted. However, at the end of the case prior to extubation, some coughing was noted with saturations dropping to the 70s. Blood in the endotracheal tube was noted. The FiO2 was increased to 100% followed by the endotracheal tube being suctioned with approximately 5 mL of frank blood removed. Saturations increased to the mid 90's following suctioning. Bronchoscopy showed some blood in the lingula and upper branch of the left lung, with no obvious site of hemorrhage. The decision was made at that time to transport the patient to the pediatric intensive care unit (PICU) and to remain intubated, sedated, and paralyzed overnight for observation.

DISCUSSION

Major aorto-pulmonary collaterals are found in about 35–40% of patients with TOF with pulmonary atresia [1]. The development of major aortopulmonary collateral arteries in the setting of pulmonary atresia is a well known and well described phenomenon, with these patients having highly variable pulmonary vascular anatomy [2]. These patients are prone to stenosis of native pulmonary vessels and MAPCA and often require numerous procedures in the cardiac catheterization suite for management of the patient’s resultant pulmonary hypertension [3]. However, these procedures are not without complication, with a rare but documented risk of extravasation into the lung parenchyma with resulting hemoptysis/hemorrhage [3,4]. This risk is a potential area of perioperative morbidity, and should be considered in this patient population as a source of concern.

References