

Bronchial Artery Embolization in Massive Hemoptysis

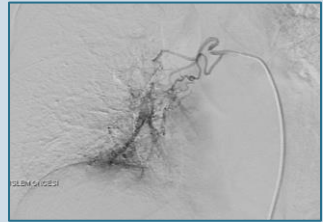
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Introduction: Hemoptysis is a rare but often life-threatening condition in pediatric patients. Massive hemoptysis can easily lead to asphyxia, respiratory failure, shock, and even death. If left untreated, massive hemoptysis is associated with a mortality rate higher than 50%. The most common causes of severe hemoptysis are lower respiratory tract infection, vascular malformation, and bronchial foreign body(1). We present an unusual case of massive hemoptysis caused by malformation of the bronchial artery.

Case Presentation: An 14-year-old girl was admitted to the hospital with mild hemoptysis. She did not report any discomfort, such as fever or chest pain. Neither patient had any lung or systemic disease such as Cystic Fibrosis or history of previous lung infection. Her complete blood count and coagulation function were normal. Endoscopy is performed by the gastroenterology department. Respiratory arrest develops. Then she intubated and admitted to intensive care. She extubated the next day, had no hemoptysis in her 8-day follow-up and she discharged. She applied to the emergency room 1 month later with complaints of hemoptysis again. The patient lost 400 ml of blood in 24 hours, 3 times a day. Endoscopy and bronchoscopy were performed on the patient who was consulted to our department. No pathology was seen in endoscopy. Bronchoscopy showed a dot in the right lower medial lobe and petechiae in both main bronchi. No active bleeding area was seen. Angiography was performed and due to right bronchial artery bleeding embolization was performed. The patient was discharged after no hemoptysis was observed during the 4-day ward follow-up. The patient's 9-month follow-up showed no pathology.



A. Pre-operation



B. Post-operation

Conclusion: Massive hemoptysis is an acute disease with high mortality and is difficult to diagnose and treat. Vascular malformations of the pulmonary and bronchial arteries are one of the most important causes of hemoptysis. The experience with bronchial arterial embolization in childhood is very limited; only a few case reports with short-term follow-up have been reported(2). Patients should immediately receive hemostatic treatment and undergo bronchial arteriography, bronchial artery embolization and bronchoscopy according to their condition. Rapid identification of the etiology and symptomatic treatment are critical to saving the lives of children.