

MASSIVE HEMOPTYSIS

- Definition
 - Varies from 100 mL/24 hours to 1,000 mL/24 hours. The most accepted definition is >500 mL in 24 hours or >100 mL/hour in rapidity
- Etiology
 - Bronchiectasis
 - cystic fibrosis
 - Lung cancer
 - Mycetomas
 - Lung abscesses
 - TB
 - Coagulopathy
- Management
 - The initial goal is stabilization by establishing an airway with intubation with a larger tube (≥ 8.5 mm) to allow for suctioning clots and the passing of instruments
 - Bronchoscopy is the initial diagnostic procedure of choice
 - It is often successful in localizing (or at least lateralizing) the bleeding if it is performed when the bleeding is ongoing
 - Guide positioning of the patient with the bleeding lung in the dependent position to protect the nonbleeding lung once the bleeding side is identified
 - Allows placement of a bronchial blocker or other endobronchial intervention including use of iced-saline lavage, lower dose epinephrine, phenylephrine, laser therapy, argon plasma coagulation, and cryotherapy
 - Helpful in clearing the airway of blood to maintain adequate ventilation (this is especially true in the nonbleeding lung)
 - May help in selectively intubating the nonbleeding side
 - Tranexamic acid 300 mg by nebulization q8h daily as adjuvant therapy
 - Bronchial artery embolization (BAE) is now a well-established definitive treatment
 - Usually first depends on localization of the bleeding to guide the IR where to embolize to decrease additional contrast exposure and minimize the chance of the rare complication of spinal artery embolization
 - Sometimes direct BAE is recommended in the setting of:
 - Radiographic focal or unilateral lung disease, such as unilateral mycetoma
 - In the majority of cases of hemoptysis in cystic fibrosis patients
 - BAE is successful in 60% to 90% of cases. Rebleeding can occur
 - If rebleeding consider repeat BAE and/or refer to cardiovascular surgery