

INTRODUCTION

Massive haemoptysis can impair ventilation and cause acute airway obstruction, potentially leading to fatal complications. Multiple case reports have documented airway obstruction caused by endobronchial clot following haemoptysis. We report a case of acute unilateral lung collapse secondary to possible endobronchial clot formation following haemoptysis.

CASE DESCRIPTION

A 34 year old male, non-smoker with no comorbidities, presented with a week history of cough associated with haemoptysis. He had no history of tuberculosis exposure or constitutional symptoms.

Initial chest Xray (CXR) revealed clear lung fields. Arterial blood gas (ABG) on room air showed good oxygenation. He received nebulised and intravenous tranexamic acid.

One hour later, haemoptysis worsened with pleuritic chest pain and desaturation (SPO2 80% on room air). Repeated ABG showed type 1 respiratory failure and CXR revealed an acute left lung collapse. He was then intubated for impending respiratory collapse.

Six hours post-intubation, ABG and CXR demonstrated significant improvement with full left lung reexpansion.

Relevant investigation:

FBC- mild thrombocytopenia;
CRP- 10 mg/L ; ESR- 108 mm/Hr ;
Infective screening- negative
Cultures- no growth; Sputum AFB x3- negative

CECT/CTA Thorax:

- Left lower bronchiectasis with multiple lung nodules suggestive of malignancy
- Tortuous left bronchial artery. No pulmonary/active haemorrhage

DISCUSSION

Conditions such as bronchiectasis, tuberculosis and malignancy can lead to endobronchial clot formation and airway obstruction. While haemoptysis often precedes obstruction, approximately 30% of patients present without antecedent bleeding history.

Interventions like bronchoscopy, positive pressure ventilation (PPV) and haemostatic measures can help control/stop bleeding.

In this case, it is possible that early PPV may have provided haemostatic effects to the tortuous bronchial artery and possible dislodging of the endobronchial clot leading to lung reexpansion preventing fatal complications.

Unfortunately, further investigation to identify the possible causes was limited as he had discharged against medical advice after he was extubated on day 6 of admission. Patient was discharged with antibiotics and memo to nearest healthcare centre to reassess general condition.

REFERENCES

2. Lee P, et al. (2007). Airway obstruction and atelectasis after massive hemoptysis. *Ann Thorac Surg*, *83(1)*, 316–8.
3. Panda A, et al. (2020). Massive hemoptysis: Etiology and management strategies. *N Am J Med Sci*, *12(2)*, 47–59.

ON ARRIVAL



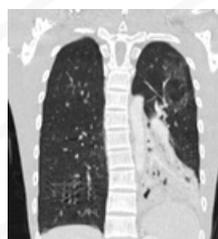
4H AFTER PRESENTATION



6H POST INTUBATION



CTA THORAX



CONCLUSION

Acute airway obstruction and respiratory failure may result from clot formation following haemoptysis. Prompt recognition and early intervention are crucial to prevent complications or fatal outcomes in haemoptysis-related airway obstruction.

KEYWORDS

- Haemoptysis
- Airway collapse
- Ventilation
- Endobronchial clot