



## TREPOPNEA DUE TO BLOOD CLOT IN LEFT MAIN BRONCHUS: AN UNCOMMON PRESENTATION

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**ABSTRACT** Trepopnea due to causes other than heart failure is rare. Here we report an unusual case involving a 28-year-old man with trepopnea caused by blood clot in left main bronchus following multiple episodes of hemoptysis. The patient had a history of pulmonary tuberculosis and was on Anti Tuberculous Drugs, and he was hospitalized for acute dyspnoea and significant hypoxemia was observed in the left lateral decubitus position. Patient was kept on Non Invasive Ventilation and suspected to be having Pulmonary Embolism. And meanwhile workup for Pulmonary Embolism was done and was normal. Then Bronchoscopic examination confirmed presence of large blood clot in left main bronchus. Then patient was given continuous chest physiotherapy following presence of blood clot in the bronchus. Our findings suggest that trepopnea due to causes other than heart failure can be resolved by identification and management of the underlying cause.

### KEYWORDS :

#### CASE PRESENTATION

We present an interesting case of trepopnea due to a large blood clot occluding left main bronchus. A 28-years-old man presented to emergency department with complaints of multiple episodes of hemoptysis followed by breathlessness. Hemoptysis of around 500 ml had occurred a few days before he presented to hospital. Breathlessness started after bout of hemoptysis and was of grade-IV of modified Medical Research Council Scale. Dyspnea was more pronounced in the left lateral decubitus position. Patient was on Anti Tuberculous Drugs for pulmonary tuberculosis and past history of cardiac disease was not given by the patient. He was not on medications like antiplatelets or anticoagulants.

#### On Examination :

Patient was having tachypnea and hypoxia without oxygen supplementation (SpO<sub>2</sub> = 62% and 85% in left and right decubitus positions, respectively). Breath sounds were reduced in intensity on left lung fields. Rest of systemic examination was normal. His routine blood counts and coagulogram were normal. His echocardiography was normal. Patient's Chest Xray was done and it showed left lung collapse [Figure 1]. Computed tomography pulmonary angiogram was done which was normal and bronchiectatic changes along with collapse were found in left lower lobe and cavity changes in bilateral upper lobes [Figure 2].

#### Management :

Non Invasive Ventilation, Hemostatics along with intravenous fluids was started. Hypoxia improved with NIV but differential oxygen saturation in the lateral decubitus positions (lesser in left lateral position) persisted. Bronchoscopy was performed with the patient in semi-supine position. It revealed a large blood clot lying in the left main bronchus almost completely occluding it [Figure3]. The bronchoscope could not be negotiated further down this bronchus. Removal of the clot was not attempted as it could precipitate recurrence of bleeding. Patient kept on conservative management like Mucolytics, Expectorants and Chest physiotherapy. The patient got stabilized and could be weaned off NIV by next 4-5 days. The chest X-ray done after it was normal [Figure 4&5].

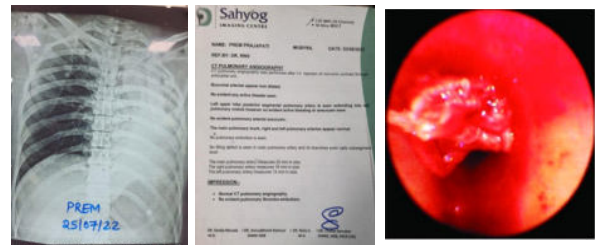
#### Discussion :

Trepopnea is a term used to define breathlessness in either lateral decubitus position. Trepopnea in left lateral position is seen in patients with congestive heart failure, wherein the mechanism depicted is increased sympathetic input and increased pulmonary venous pressure in the decubitus position.[1] However in patients with pulmonary conditions, dyspnea occurs with the affected lung in the dependent decubitus position. Various other conditions like lung cancer, cardiac tumors, diaphragmatic paralysis, right to left interatrial shunts, etc.[2-

5] have been reported to cause trepopnea. The present case is interesting because the similar presentation of trepopnea due to a blood clot obstructing a main bronchus has not been reported.

#### Conclusion :

The case exhibited left bronchial tree obstruction by a blood clot. The patient had bleeding from a bronchiectatic left lower lobe, and the blood got clotted before it could be coughed out and caused obstruction of all the segments of left lung. The resulting ventilation perfusion mismatch caused trepopnea; the patient became breathless and hypoxemic in the left lateral decubitus position. Initially, we thought that dyspnea with hemoptysis was probably due to pulmonary embolism, but a normal pulmonary angiogram ruled it out. The cause of unexplained trepopnea was then found out on bronchoscopy. The blood clot was then managed conservatively by Chest physiotherapy, Mucolytics, Expectorants.



**Figure 1 :- Showing left lung collapse on admission.**

**Figure 2 :- Showing completely normal CT Pulmonary Angiography**

**Figure 3 :- a large blood clot lying in the left main bronchus almost completely occluding it**



**Figure 4 & 5 :- At the end of conservative management patient's chest Xray improved and appeared to be normal (last xray dated 26/9/22)**

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