

# Partial Bronchial Tear: An unusual cause of haemoptysis

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**ABSTRACT:**

Hemoptysis is defined as expectoration of blood originating from the lungs or tracheo-bronchial tree. It is attributed to various causes like tuberculosis, bronchiectasis, lung cancer, mycetoma, foreign bodies etc.

We report the case of an adult male patient who presented with episodes of hemoptysis (150 mL) in whom flexible fiberoptic bronchoscopy revealed an unusual finding.

**Key words:** Hemoptysis, lung, tracheo-bronchial tree, bronchoscopy, unusual.

**INTRODUCTION**

Hemoptysis is defined as the expectoration of blood from the respiratory tract, a spectrum that varies from blood streaking of sputum to coughing up large amounts of pure blood. Massive hemoptysis is variably defined as the expectoration of more than 100 to 600 mL over a 24-hour period.<sup>1,2</sup>

Massive hemoptysis has been described due to various causes like tuberculosis (TB), bronchiectasis, lung cancer, aspergilloma, foreign bodies etc.<sup>3</sup>

We are reporting a case of an adult male patient who presented with single episode of haemoptysis (150 mL) in whom flexible fiberoptic bronchoscopy revealed an unusual cause.

**CASE REPORT**

A 40-year-old male reported to emergency department with the complaint of cough since last one month and sudden onset of hemoptysis (150 ml). He denied any history of fever, weight loss, joint pain or night sweat, aspiration and chest trauma. He also denied past history of TB, use of anti-coagulants and any bronchoscopic procedure.

There were no previous episodes of hemoptysis. There was no significant personal and family history of TB or any other lung and cardiovascular disease.

The patient was non-smoker and non-alcoholic. At the time of presentation patient

was clinically stable but anxious. Vitals were within normal limits. There was no evidence of cyanosis, lymphadenopathy and clubbing. Cardiovascular, gastrointestinal and otorhinolaryngological examinations were normal.

Respiratory system examination was also within normal limits. Routine haematology, biochemistry and urine analysis were within normal limits. Her coagulation profile was normal. Serological testing for human immunodeficiency virus (HIV) was non-reactive. Electrocardiogram was within normal limits. Sputum did not reveal acid-fast bacilli. Chest radiograph, postero-anterior (PA) view was within normal limits (figure-1). High resolution computed tomography (HRCT) chest was also normal (figure-2). On flexible fiberoptic bronchoscopy a tear which was bleeding was noted on posterior division of right upper lobe bronchus (figure-3). The patient was discharged on symptomatic treatment, but was lost to follow up.

**DISCUSSION**

Hemoptysis is a common clinical occurrence and a serious symptom of pulmonary pathology. Besides common causes like infection, lung neoplasms, bronchiectasis, foreign bodies, a wide variety of other causes are seen and idiopathic in up to 30% cases.<sup>3</sup>

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We are also reporting an unusual case of tear in posterior division of right upper bronchus presenting with hemoptysis in an adult male. In our case clinico-radiological presentation was of acute onset. The mechanism by which tear occur in our case is not well understood. But we considered irritation and inflammation of bronchial mucosa induced by post viral bronchitis causing coughing which may lead to the tear.

On intensive search of literature we could not find any such case reported, so probably this is first case to best of our knowledge.

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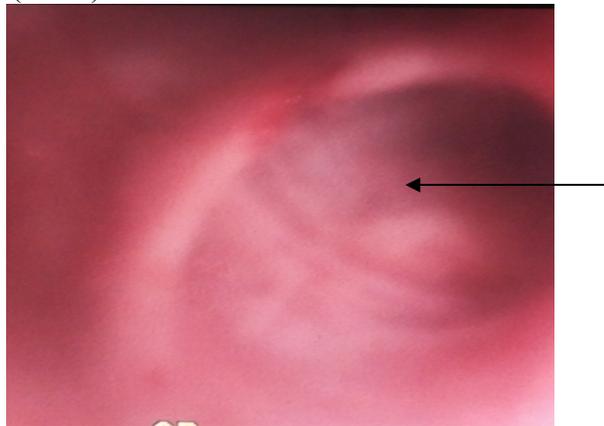
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**Fig. 1: Chest X-ray**



**Fig. 3: Bronchoscopy showing tearing of posterior division of right upper lobe bronchus (arrow)**



**Fig. 2: CEST Chest**

