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Journal of Lung, Pulmonary & Respiratory Research

Case Report

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Conundrum of catch, colic, cavity and clot: puzzled path of pulmonary thromboembolism

Abstract

Background: Pulmonary thromboembolism (PTE) has varied and nonspecific clinical presentations, often leading to diagnostic delays.[1,2] It may mimic pneumonia, myocardial ischemia, or even abdominal pathologies such as renal colic. High clinical suspicion and appropriate imaging are crucial for early diagnosis and management.[3]

Case presentation: We report the case of a 40-year-old male presenting with acute left-sided chest pain initially suspected to be muscle sprain and then renal colic after a noncontributory chest skiagram. Computed tomography of the kidneys, ureters, and bladder (CT KUB) revealed small bilateral renal calculi, which did not explain his symptoms. High-resolution CT thorax suggested basal consolidation, leading to antibiotic therapy; however, chest pain and hemoptysis persisted. Bronchoscopy demonstrated blood-stained secretions, but cultures and GeneXpert were negative. Despite an initial normal D-dimer, computed tomography pulmonary angiography (CTPA) confirmed thrombi in bilateral lower lobe pulmonary arteries with pleural-based consolidation and cavitation.[3,4] Repeat D-dimer was elevated.[5] Venous Doppler was negative for DVT. The patient improved with anticoagulation (LMWH followed by Apixaban).[4]

Conclusion: This case highlights the diagnostic challenges of PTE presenting with misleading features. A high index of suspicion, even in the presence of atypical presentations and initially normal D-dimer, is essential for timely diagnosis.[5] CTPA remains the gold standard,[3] and prompt anticoagulation can lead to excellent outcomes.[4]

Keywords: pulmonary thromboembolism, chest pain, hemoptysis, diagnostic dilemma, CTPA

Volume 13 Issue 1 - 2026

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Received: December 08, 2026 | **Published:** February 10, 2026

Introduction

Pulmonary thromboembolism (PTE) is a life-threatening condition with diverse presentations.[1,2] It frequently mimics more common conditions such as chest infection, myocardial ischemia, or abdominal pain, leading to diagnostic dilemmas. We describe a case of PTE that was initially mistaken for renal colic and pneumonia, highlighting the importance of clinical suspicion.

Case report

A 40-year-old male presented to his physician with acute left lower chest pain. Chest radiograph (Figure 1) was normal. He was prescribed pain killers suspecting muscle catch. However, when he did not get any relief, he was referred to urologist to rule out renal colic. NCCT KUB showed bilateral small renal calculi, unrelated to his symptoms. He again presented to physician and now HRCT thorax was advised. CT thorax (Figure 2) demonstrated left basal consolidation, and antibiotics were initiated. Despite treatment, chest pain persisted and now was associated with hemoptysis. Pulmonology consult was sought. Chest examination revealed decreased breathsoung inteinsity in left base. Bronchoscopy was performed. Blood mixed secretions were noted in the left lower lobe; BAL cultures and GeneXpert were negative.

History was revisted. The patient had a past history of coronary artery disease with PTCA 8 years ago and was on dual antiplatelet therapy (Ecosprin and Clopidogrel). His chest pain was sudden in onset, occurred at night, and was followed by blood-streaked cough. He also reported smoke inhalation during a house fire, which worsened his hemoptysis. Initial plasma D-dimer was 0.05µg/mL. Cardiology consult was sought and echocardiogram was normal. Due to persistent suspicion, computerized tomographic pulmonary angiogram (CTPA) (Figure 3) was performed and it demonstrated thrombi in bilateral lower lobe branches of pulmonary arteries with pleural-based consolidation and cavitation in left lower lobe.[3] Repeat D-dimer was elevated (1.29µg/mL).[5] Venous Doppler was negative for DVT.

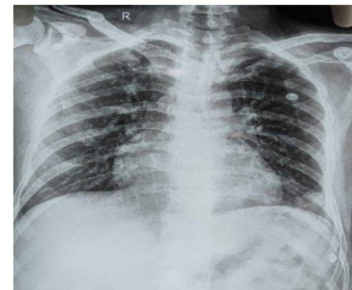

Figure 1 Chest Xray.

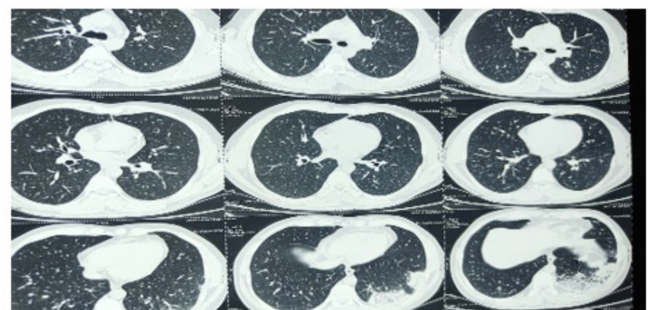

Figure 2 CT thoax: LLL consolidation.

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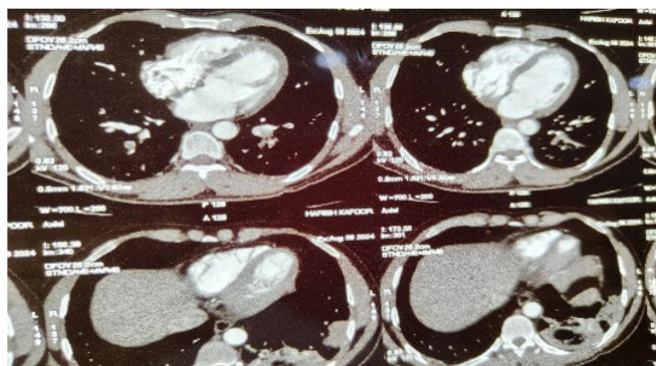

Figure 3 CTPA: Thrombi in lower lobe branches of PA. Cavitary consolidation LLL.

The patient was started on LMWH, with significant improvement in both chest pain and hemoptysis. He was discharged on oral anticoagulation with Apixaban 5mg twice daily and continued to do well on follow-up.[4]

Discussion

This case demonstrates the protean manifestations of pulmonary thromboembolism. The patient's presentation initially mimicked renal and infectious causes, delaying diagnosis. An initially normal D-dimer added to the confusion; however, repeat testing and CTPA were diagnostic.[3,5] This underscores the limitations of D-dimer as a standalone test and reinforces the value of imaging in high-suspicion cases. Timely initiation of anticoagulation is life-saving, as seen in our patient.[4]

Conclusion

Pulmonary thromboembolism should be considered in the differential diagnosis of patients with unexplained chest pain and hemoptysis, particularly when initial investigations are inconclusive. This case highlights the importance of maintaining a high index of suspicion, repeating diagnostic tests when warranted, and using CTPA to establish the diagnosis.[3] Early treatment with anticoagulation ensures favorable outcomes.[4]

Acknowledgment

None.

Disclosures

None.

Funding

No external funding was received.

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Citation: Upadhyay S. Conundrum of catch, colic, cavity and clot: puzzled path of pulmonary thromboembolism. *J Lung Pulm Respir Res*. 2026;13(1):4–5. DOI: 10.15406/jlprr.2026.13.00336