

## Deep Vein Thrombosis with Diffuse Alveolar Hemorrhage: An Uncommon Presentation of Acute Leukemia

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### Abstract

### Case Report

Deep Vein Thrombosis with Diffuse Alveolar Hemorrhage is an uncommon Presentation of acute Leukemia. Early diagnosis of acute respiratory failure etiology in patients with Acute Leukemia and Pulmonary Infiltrates is essential. We report a case in a 51- years old male who presented with shortness of breath & cough with blood admixed sputum with a history of right leg pain acutely. CTPA showed signs suggestive of DAH with no evidence of thromboembolism which let us evaluate him further leading to a diagnosis of DAH.

**Keywords:** Deep vein Thrombosis, Diffuse alveolar Hemorrhage, Acute Leukemia.

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## BACKGROUND

Diffuse alveolar hemorrhage (DAH) is a life-threatening condition characterized by acute hypoxic respiratory failure, hemoptysis, and anemia. Deep venous thromboembolism (DVT) and DAH are uncommon presentations of acute leukemia.

## CASE STUDY

57 years male, daily wage worker, smoker, previously healthy presented with shortness of breath & cough with blood admixed sputum since 3 days in emergency with history of right leg pain since 3 weeks, evaluated outside as DVT & started on warfarin. CTPA was done which showed signs suggestive of diffuse alveolar hemorrhage with no evidence of pulmonary thromboembolism. Laboratory data significant for leukemia: TLC 68,000, 88%blast cells, high nucleocytoplasmic ratio. Patient had poor ECOG score 4 and worsening dyspnea for which he was intubated & managed as per hospital protocol. In spite of our best efforts, he passed away 48 hours post admission.

## DISCUSSION

DAH is a clinical syndrome defined by a disturbance of the alveolar-capillary basement membrane that causes bleeding into the pulmonary alveoli. In leukemia, secondary infection is the most

common cause of presentation and mortality. But, DAH is one among the many uncommon, noninfectious complications, and carries a grave prognosis if present. Clinical presentation may include fever, dyspnea, cough, hemoptysis and radiographic infiltrates, all suggestive of pneumonia. However, work-up and cultures are usually negative in this condition owing to lack of an infectious process. In our patient, he deteriorated despite being on adequate antimicrobial coverage which led to have a high degree of suspicion when there are unexplained alveolar infiltrates which led us to evaluate him further leading to a diagnosis of DAH.

## CONCLUSION

Early recognition of acute respiratory failure etiology in patients with leukemia and pulmonary infiltrates is essential. Less common but DAH should always be on the differential as early identification and treatment can likely improve outcomes.

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