

## INTRODUCTION

- Diffuse alveolar hemorrhage (DAH) is a rare but potentially life-threatening condition characterized by the presence of widespread bleeding in the alveolar spaces of the lungs. It can result from various etiologies, including vasculitis, autoimmune diseases, infections, and drug-induced lung injury.
- In recent years, the use of electronic cigarettes (e-cigarettes) and vaping devices has emerged as a growing public health concern due to their association with lung injuries. Despite the CDC's recommendation to avoid tetrahydrocannabinol (THC)-containing e-cigarettes or vaping products, many THC vaping products remain available in the market. Here we present an unusual case of diffuse alveolar hemorrhage in a patient with an extensive history of THC vaping, emphasizing the diagnostic and management challenges encountered in such cases.

## CASE PRESENTATION

- A 45-year-old female with a medical history of bilateral renal cell carcinoma post-nephrectomy, currently on HD, who presented to the hospital with progressively worsening shortness of breath for over a month. She had been vaping marijuana oil for about a year. The patient reported a sinusitis infection about a month ago and observed worsening breathing since then. Initial CT pulmonary angiogram demonstrated posterior consolidation in the right upper lobe, mediastinal lymphadenopathy, and bilateral small pleural effusions.
- Elevated inflammatory markers were observed, but no leukocytosis. The patient was initially administered intravenous broad-spectrum antibiotics for pneumonia. Blood and respiratory cultures were negative. Despite antibiotic treatment, the patient experienced persistent dyspnea and recurrent fever, with procalcitonin increasing from 0.28 to 0.96. A repeat CT chest revealed marked significantly worsened multifocal pneumonitis, predominantly in the right upper lobe. The patient responded well to pulse-dose steroid treatment (methylprednisolone 500mg daily for 5 days), with symptomatic improvement and better chest X-ray findings.

## CONCLUSION

- In conclusion, the potential association between DAH and cannabis vaping highlights the need for increased awareness, further research, and careful consideration when treating patients with non-resolving pneumonia.

## DISCUSSION

- The 30-day prevalence of cannabis vaping among adolescents in the US and Canada rose sevenfold between 2017 and 2020.<sup>6</sup>
- Hemoptysis, the cardinal symptom, is absent in one-third of patients with DAH, while other nonspecific symptoms like fever, chest pain, cough and dyspnea may occur.<sup>1</sup>
- Bronchoscopy is typically required for diagnosing DAH, as it especially helps exclude infection and identify alveolar hemorrhage and bleeding sources. Persistent blood on three sequential lavage aliquots from a single affect area is supporting the diagnosis of DAH in the phase of acute bleeding, whereas the hemosiderin-laden macrophages are suggestive of DAH in subacute or recurrent episodes.<sup>2</sup>

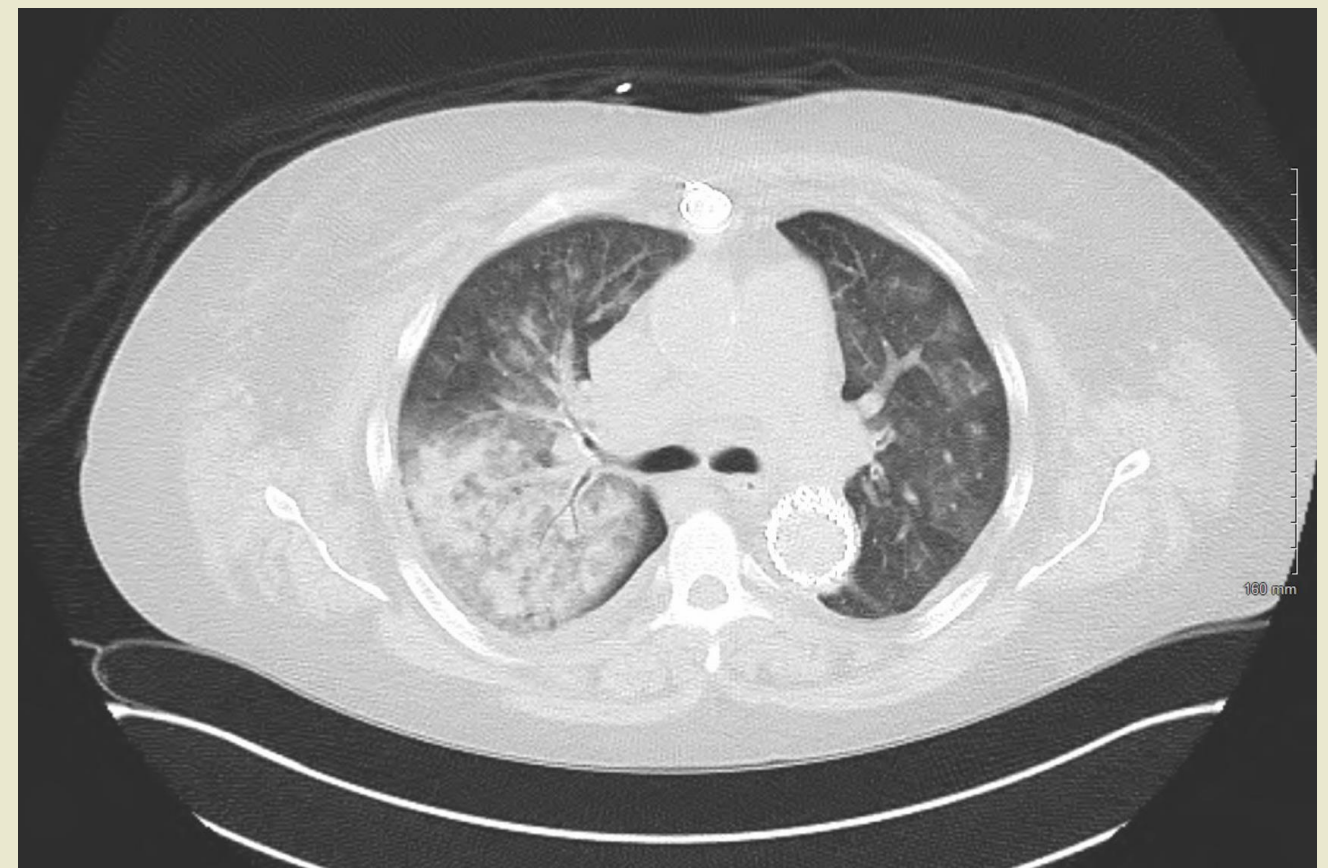


Image 1: Initial CT pulmonary angiogram demonstrated posterior consolidation in the right upper lobe, mediastinal lymphadenopathy, and bilateral small pleural effusions.

## REFERENCES

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