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### Published In/Presented At

Soller, D., Kears, A., Buzard, K., & Adeel, W. (2020, October). *An Unusual Case of EVALI With Recurrent Hemoptysis*. Poster Presented at: CHEST (American College of Chest Physicians) Annual Meeting, Virtual.

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# An Unusual Case of EVALI With Recurrent Hemoptysis

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## Introduction

### HEMOPTYSIS

- A common, non-specific symptom of various lung pathologies such as infection, bronchiectasis, pulmonary embolism, connective tissue disorders, and neoplasms
- Uncommonly reported in cases related to E-cigarette or Vaping Associated Lung Injury (EVALI)

## Case Report

A 23-year-old male with a history of polysubstance abuse and daily vaping presented with sudden onset shortness of breath and hemoptysis which woke him up from sleep. He was found to be in hypoxic respiratory failure and placed on high flow oxygen via nasal cannula. Labs revealed a leukocytosis, elevated creatinine, mild troponin elevation, and a lactic acidosis. Computed tomography (CT) chest angiogram revealed bilateral ground glass opacities without evidence of pulmonary embolism. Urine toxicology screen was positive for cannabinoids and opioids. His symptoms resolved and lab abnormalities corrected with fluid resuscitation and without antibiotics. He was diagnosed with EVALI with bilateral pneumonitis and was discharged within 48 hours after admission. At discharge, he was counseled to cease any form of vaping.

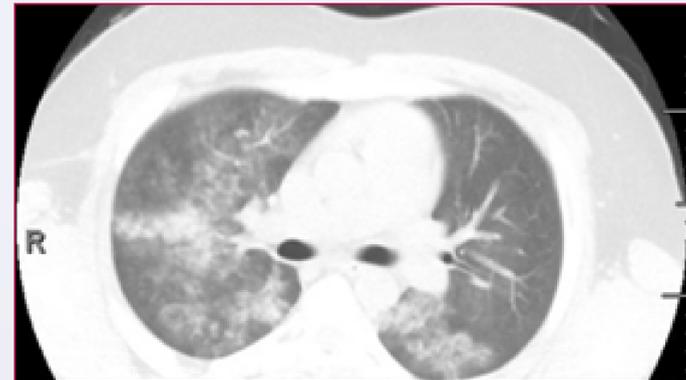


Figure 1. Bilateral Ground-glass opacities noted on initial presentation.

He returned to the emergency department multiple times in a two-month span and was readmitted twice due to recurrent hemoptysis in the setting of continued vaping. He was noted to have elevated creatine kinase and lactate levels. Repeat CT chest with contrast five weeks after initial imaging showed worsening bilateral diffuse ground-glass opacities and interstitial infiltrates. Autoimmune and neurologic workup was negative. Bronchoscopy with bronchial alveolar lavage and cultures was unremarkable. After multidisciplinary discussions, he was initiated on high dose steroids. At his four-week follow up, his respiratory symptoms had resolved with cessation of vaping. A repeat CT chest revealed complete resolution. He finished a gradual steroid taper with no recurrence of his hemoptysis.



Figure 2. Worsening ground-glass opacities on repeat CT-scan in the setting of continued e-cig usage.

## Discussion

### EVALI

- Has become a national emergency with a growing number of cases in patients who use vaping products in the last year
- Predominantly seen in patients under the age of thirty-five
- Strongly associated with the use of tetrahydrocannabinol containing products and is less commonly seen with nicotine containing products, as demonstrated in our patient
- Common symptoms include dyspnea, chest congestion and cough, with hemoptysis only reported in 11% of the cases
- Symptoms such as hemoptysis can improve when a patient ceases vaping.

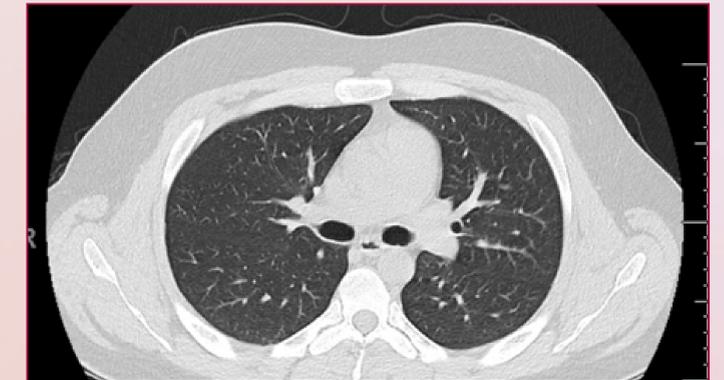


Figure 3. Complete resolution of ground-glass opacities after halting e-cig usage.

## Conclusion

- Importance of having a high index of suspicion for EVALI in patients who present with respiratory symptoms or hemoptysis in the setting of current or previous e-cigarette or vaping use
- Prevention and cessation of vaping is paramount to reduce overall incidence of EVALI.

### REFERENCES

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