

## **EVALI During the COVID-19 Pandemic: A Needle in the Ground Glass**

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# EVALI During the COVID-19 Pandemic: A Needle in the Ground Glass

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## Introduction

COVID-19 pneumonitis has become a predominant respiratory diagnosis in the ED. Consequently, other disease processes can be overlooked- especially in younger patients- including E-cigarette or Vaping Product Use-Associated Lung Injury (EVALI). A case of a patient with EVALI mistaken for COVID-19 is presented



Figure 1

## Case Description

A 16-year-old boy with PMH of asthma presented to the ED with dyspnea and cough of abrupt onset 24 hours prior to ED visit. He had been using his home albuterol without improvement. There were no known sick contacts, but patient was employed at a chain restaurant. Notable VS included: HR 116, RR 32, RA pulse ox 90% (99% on HFNC 40L 50%), T 100.2°F. CXR demonstrated bilateral pulmonary infiltrates concerning for multifocal pneumonia and possible evolving ARDS. Chest CT scan (Figure 1) revealed: "Diffuse bilateral ground glass opacities. Considerations include viral and atypical pneumonia, including COVID 19 pneumonitis". Notable blood work included: WBC 19.4 thou/cm (3.8-10.4 thou/cm), Troponin I 0.27 ng/mL (<0.03 ng/ml). Both urine drug screen of abuse and serum LC/MS detected THC. Patient was admitted to PICU with presumptive diagnosis of COVID-19 infection. On HD 1 patient was transitioned to BiPAP for worsening tachypnea. Blood culture, urine legionella, and respiratory viral panel (including COVID-19) returned negative. Respiratory viral panel was repeated and again returned negative. Upon further inquiry, patient reported vaping the day his symptoms began and smoking cannabis regularly. Treatment remained supportive with supplemental oxygen and intermittent albuterol/ipratropium nebulization. Patient was weaned from oxygen by HD 5 and discharged in stable condition on HD 6.

## Discussion

EVALI is defined as recent vaping use with development of pulmonary infiltrates on chest imaging in the absence of another identifiable cause. Although EVALI is associated with vape liquid containing THC and vitamin E acetate, no single agent has been definitively implicated. Typically, EVALI is associated with counterfeit or user filled cartridges. However, this patient reported a single use vape pen purchased from a convenience store (Figure 2). EVALI treatment is primarily supportive with supplemental oxygen, bronchodilators, steroids, and vaping cessation.



Figure 2

## Conclusion

Despite COVID-19, it is imperative to obtain a detailed social history and to maintain a broad differential in patients with acute respiratory complaints.