

EVALI, diagnosis of exclusion in the age of COVID

Category: Medicine & Medical Specialties; Poster Presentation

Disclosure: The authors did not report any financial relationships or conflicts of interest

[Supplemental Video](#)

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EVALI, previously known as VAPI (vaping associated pulmonary illness) is an e-cigarette or vaping use-associated lung injury. This phenomenon was first identified in 2019 and due to a significantly increased number of patients being diagnosed with severe lung illnesses related to e-cigarette and vaping products usage, the terminology has been changed to EVALI. Vitamin E acetate is linked to EVALI. Vitamin E acetate is harmless when ingested as a vitamin supplement or applied to the skin. However, when inhaled, it may interfere with normal lung functioning. Vitamin E acetate is used as an additive in THC-containing e-cigarettes and vaping products. As of February 18, 2020, a total of 2,807 hospitalized EVALI cases or deaths have been reported to CDC from all 50 states, the District of Columbia, and two U.S. territories (Puerto Rico and U.S. Virgin Islands). As of February 18, 2020, 68 deaths have been confirmed in 29 states and the District of Columbia. We report an unusual presentation of diffuse ground glass opacities throughout both lungs in a 56-year-old female with a past medical history of COPD, fibromyalgia, asthma, chronic pain syndrome, and tobacco abuse, who has recently switched to electronic cigarettes. In the initial presentation, the patient complained of an acute decline from baseline shortness of breath and reported associated chest pain, palpitations, weakness, and abdominal pain. Per EMS, the patient's oxygen saturation was 40% on room air and she was immediately placed on BiPAP. Blood gas analysis in the Emergency Department demonstrated pH of 7.348, pO₂ of 22, pCO₂ of 24, and HCO₃ of 23. Due to the main complaint of shortness of breath and hypoxia, chest X ray, chest CTA, Covid test, and D-dimers were ordered. Based on the complaint of chest pain cardiac workup has been performed. Based on the clinical findings and test results, we excluded suspected diagnoses of PE, COPD exacerbation, pneumonia, and cardiac involvement. At that point the patient's diagnose was based on exclusion and we believed that the patient's lung injury has been associated with a vaping use. This case report illustrates that EVALI is still an anomalous disease. It also stresses the importance of patients' education regarding harmful effect of these widely accessible and advertised products.

Learning Objectives

Stress the importance of patients' education regarding the harmful effects of these widely accessible and advertised products.

Discuss the difficulty of excluding COVID 19 as a differential diagnosis in today's day and age.