An epidemic of electronic cigarette-induced acute lung injury (EV ALI) or vaping-associated lung injury (VAPI) has been reported in the United States. According to the U.S. Centers for Disease Control and Prevention (CDC), more than 2000 cases of EV ALI and over 40 deaths have been confirmed in the United States [1]. Reports outside of the United States have been scarce. We present the first clinical case report in Israel.

A 21-year-old male with no prior medical history presented to the emergency department with nausea, vomiting, diarrhea, dry cough, fever, and shortness of breath. The episode began 10 days earlier with symptoms of nausea and vomiting, dry cough, and persistent diarrhea. Subsequently, he developed a fever of 38°C. The history was negative for headaches, photophobia, shivering, night sweats, weight loss, recent travel abroad, exposure to animals, or other individuals with similar symptoms.

Following repeated visits to a community clinic and failed symptomatic treatment, he deteriorated further and was referred to the hospital emergency department.

On arrival to the emergency department, he was short of breath and presented tachypneic with a respiratory rate of 30 breaths per minute, bibasilar crepitations, peripheral oxygen saturation of 90% in room air. Chest X-ray appeared normal [Figure 1A]. Normotension and an oral temperature of 37.2°C were recorded. Bowel sounds were normal, the abdomen was non-tender and without organomegaly. The remainder of the physical examination was non-contributory.

The patient was admitted to the intensive care unit (ICU) for continued management. A chest X-ray showed diffuse bilateral consolidations [Figure 1B]. Empiric treatment with cefuroxime and azithromycin was initiated.

Laboratory data on admission to the ICU included white blood cell (WBC) count 22,000/mm³, C-reactive protein 46 mg/dl and mildly elevated hepatocellular enzymes. human immunodeficiency virus (HIV), pneumocystis pneumonia (PCP), tuberculosis, and a wide range of common infectious agents were all found negative. Arterial blood gas analysis disclosed a PaO2/FIO2 ratio of 165 (PaO2 74 on FIO2 0.45 via 40 L high flow nasal cannula) and PaCO235 mmHg.

A computed tomography (CT) angiography study of the chest and abdomen displayed extensive, patchy, ground-glass opacities in both lung fields with subpleural sparing and mediastinal lymphadenopathy. Pulmonary embolism and other thoraco-abdominal pathologies were ruled out.

Due to significant hypoxic respiratory failure, oxygen via high flow nasal cannula and bi-level non-invasive ventilation (NIV) were applied alternately.

Following a review of the CT scans and their similarity to recent reports of VAPI in the New England Journal of Medicine [5], this diagnosis was considered. A repeat focused history for the use of vaping devices was positive for tetrahydrocannabinol (THC) capsules imported from North America three weeks prior to the appearance of symp-
toms. He had not previously used this type of vaping capsules and was abstinent from vaping devices for 6 months.

Since clinical and laboratory features of infectious diseases were excluded considering a positive recent vaping history, a trial of methylprednisolone 40 mg/day was initiated. Over the subsequent 3 days, improvement of respiratory symptoms and better oxygenation were observed. He was weaned from NIV but still required controlled oxygen therapy via low-flow nasal prongs.

A bronchoscopy with broncho-alveolar lavage (BAL) was performed. Cytology showed 8% eosinophilia. Pathogens, including PCP, were excluded. Traces of THC, cannabinol, and tocopherol (vitamin E acetate) were found in the BAL fluid and in capsule content analyses. These substances are associated with VAPI [3].

Ten days after ICU admission, the patient was transferred to the pulmonology department for further management. Pulmonary function testing showed a moderate restrictive pattern, with a moderate-to-severe decrease in D LCO. These findings are consistent with pneumonitis and interstitial lung disease.

After further improvement, he was discharged on day 14 of hospitalization, on home-oxygen (with a room air oxygen saturation of 90%), 50 mg prednisone daily, inhalation therapy with salbutamol and ipratropium bromide and antibiopcynphaxis with sulfamethoxazole/trimethoprim. Follow-up chest x-ray on day 22 showed radiographic resolution.

As this phenomenon is still relatively rare and an infectious etiology for respiratory symptoms is much more prevalent, a thorough workup must be completed before starting high-dose corticosteroid therapy. Nonetheless, due to the increasing popularity of vaping worldwide and the increase in reported cases of VAPI in the USA, we recommend keeping a high index of suspicion when presented with this clinical scenario.

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