

Risks of Perioperative Vaping and Surgery

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The use of electronic cigarettes has increased exponentially over the past ten years. The CDC has reported increased use in both adult and pediatric populations.¹ As the use of vaping devices and marijuana has increased in the United States, so has the number of exposed patients presenting for elective and emergent procedures.² This is a relatively new phenomenon and there is a paucity of evidence delineating the perioperative risks associated with vaping and marijuana use.

In 2019 we were faced with an epidemic of E-cigarette associated lung injury or EVALI. As of February 2020, the FDA found that 511 of the 843 vaping devices and products sampled from EVALI patients contained THC.³ Thus, it is particularly important to screen patients for THC use prior to surgery. A recent pilot study attempted to screen patients in the preoperative clinic for E-cigarette exposure and found a prevalence of 3.7% with a median age of 43 years.² A larger study is ongoing. Diaz et al described the risk of bronchoscopy as part of the diagnostic workup for EVALI and demonstrated that patients are more likely to suffer postoperative complications including prolonged intubation.⁴ However, there are no published studies or guidelines related to the perioperative care of patients with vaping exposure.

It is always recommended to stop damaging practices prior to the stress of surgery. If we extrapolate from our tobacco literature, we could recommend a minimum of two weeks of cessation of all vaping or marijuana products prior to surgery to minimize the risk of perioperative complications. The chemicals and combustibles in these products only yield harm to the respiratory cells and could lead to abnormal immune-mediated responses to the stress of surgery. We would also recommend pre-operative pulmonary clearance with the use of pulmonary function testing and counseling to make sure patients are optimized for elective procedures.

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