Subacute bronchial toxicity induced by an electronic cigarette: take home message

The case-based discussion of an adult smoker with respiratory symptoms and worsened pulmonary function shortly after switching to an electronic cigarette (e-cig) can be interpreted differently.

Ironically, some people experience transient (days/weeks) worsening of respiratory symptoms (cough, wheezing, chest tightness) after quitting. Cough and breathlessness have been reported when switching to e-cigs, but progressive improvement in respiratory symptoms is usually observed with regular use of these products.

Significant risk reduction and harm reversal are expected in smokers who switch from tobacco to e-cigs. Signs and symptoms compatible with contact dermatitis around the mouth or in the oral mucosa may occur in predisposed e-cig users exposed to propylene glycol (PG) in the vapour, but the e-liquid used by this patient contained glycerol, not PG. Hypersensitivity response to glycerol has never been reported to our knowledge. Consequently, performing skin prick testing with a product that does not contain PG and is not approved for this indication is of questionable utility and safety. Additionally, the authors' reference to ethylene glycol and mineral oil is irrelevant since these ingredients are not normally present in e-liquids and are not in the GRAS generally regarded as safe list. Alternatively, some unknown contaminants/by-products in the e-cig vapour might have been responsible for this patient's symptoms.

The observation that the patient has moderate COPD recovering from a right upper lobe resection together with the lack of lung function results at earlier time points after lung surgery complicates the interpretation of the pulmonary function test findings in relation to e-cig use.

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