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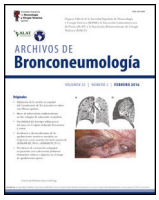

Editorial

Severe Lung Disease Associated with Vaping: A First Warning*

Enfermedad pulmonar grave asociada a vapeo: primer aviso

The use of e-cigarettes and other vaping products has soared in recent years around the world.[1] These devices are now commonly used by adolescents and young adults in the Anglosphere.[2] A study conducted in Spain in 2014 showed that 10.3% of the population had used e-cigarettes at some time.[3] A more recent study indicates that the use of these devices is increasing.[4] Many factors have contributed to this propagation, most significantly campaigns by the tobacco multinationals promoting their use, the support given by certain health institutions,[5,6] and the debate that has been generated among groups of health professionals who are against[7–9] or in favor[5,6] of their use. The outcome is that a large part of the general population of smokers has been taken in by the 'harm reduction strategy' and remain entrenched in the use of alternative forms of tobacco consumption in the futile belief that they are safe.[10]

However the truth is that smoking is brutal and merciless. In July 2019, the Health Departments of Wisconsin (WDHS) and Illinois (IDPH) received reports of some cases of severe lung disease of unclear etiology associated with the use of e-cigarettes or other vaping devices. This prompted both departments to initiate a study of the reported cases that culminated in a report analyzing 53 cases of this new vaping-related lung disease.[11] The article described the epidemiological, pathological, clinical, radiological, and analytical characteristics and the course of the disease and defined criteria for distinguishing between probable and confirmed cases.[10] In summary, subjects had a mean age of about 19 years, 83% were men, and all had used vaping devices (many to inhale tetrahydrocannabinol) 90 days prior to the presentation of symptoms (the most common being cough, expectoration, dyspnea, chest pain, vomiting, nausea, abdominal pain, fever and headache) and presented diffuse pulmonary infiltrates that could not be attributed to other causes. Up to 95% required admission, 58% to the ICU, and 1 patient (2%) died.[11] The most recent data available at the time of writing (November 2019) show that the epidemic has spread to all US states (with the exception of Alaska), and that 2051 cases have been detected with 39 confirmed deaths from the disease, while others are still under investigation.[12] Most of these patients used the devices to inhale tetrahydrocannabinol and had obtained the fluids from unofficial or illegal sources.[12] The disease is currently known as e-cigarette or vaping product use-associated lung injury (EVALI). Vitamin E acetate has been found in the bronchoalveolar lavage fluid of some patients, and is being evaluated as the cause of this process.[11,12]

Smoking is a chronic disease that causes about 6 million deaths annually, according to the most recent WHO data.[13] The Framework Convention on Tobacco Control (FCTC) and the MPOWER strategy have been shown to be the most effective and safe tools for combating this epidemic.[14] Despite the claims of sectors close to the tobacco companies, it is patently untrue that these strategies are failing and unable to control smoking.[15] On the contrary, correctly implemented strategies that are properly monitored for compliance produce undeniable short- and medium-term benefits in any given country. This study analyzed data from 126 countries and found that those that had implemented the measures recommended by the FCTC had a greater reduction in smoking prevalence and lower rates of morbidity and mortality associated with this disease.[16] The MPOWER strategy advocates monitoring the tobacco epidemic, expanding smoke-free spaces, raising tobacco prices, and providing help to smokers wishing to stop smoking, among other interventions.[14]

There are no shortcuts to victory in this epidemic. The only route map is that indicated by the MPOWER strategy and the FCTC. It is essential that all healthcare professionals trust in and ensure strict adherence to the recommendations of these organizations. The efforts of the leading scientific institutions in the field of respiratory health in supporting this strategy[7–9] and in speaking out against the more lukewarm, conformist opinions of other scientific institutions that uphold the use of vaping devices have been laudable.[5,6]

A question that remains unanswered is whether the epidemic already observed in the United States of America is emerging in other countries. The Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) has created the Registry of Vaping-Related Severe Pulmonary Disease (https://separ.es/node/1634). A letter has been sent to all members of our society informing professionals of the characteristics of this disease and urging them to rule out EVALI in any patient with suspected symptoms and always enquire after any history of e-cigarette or other vaping product use (internal communication sent to all SEPAR partners in November 2019). This Registry will act a basis for research on this disease and will help to quickly control the propagation of this habit, should it occur Spain.

To sum up, smoking is one of the world's leading health problems. The FCTC and the MPOWER strategy are the most effective and safe instruments for controlling it. Harm reduction strategies do not work in controlling this epidemic. E-cigarettes and other

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vaping devices have short, medium and long-term health risks. The emergence of this new disease that already affects more than 2000 individuals and has caused the death of 39 must be taken as a first warning.

References

1. Surgeon general's advisory on e-cigarette use among youth. Washington, DC: Department of Health and Human Services, Office of the Surgeon General; 2018. Available from: https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf [accessed 20.10.19].
2. Cullen KA, Ambrose BK, Gentzke AS, Apelberg BJ, Jamal A, King BA. Notes from the field: Use of electronic cigarettes and any tobacco product among middle and high school students—United States, 2011–2018. MMWR Morb Mortal Wkly Rep. 2018;67:1276–7.
3. Lidón-Moyano C, Martínez-Sánchez JM, Fu M, Ballbè M, Martín-Sánchez JC, Fernández E. Prevalence and user profile of electronic cigarettes in Spain (2014). Gac Sanit. 2016;30:432–7.
4. Tarrazo M, Pérez-Ríos M, Santiago-Pérez MI, Malvar A, Suanzes J, Hervada X. Changes in tobacco consumption: boom of roll-your-own cigarettes and emergence of e-cigarettes. Gac Sanit. 2017;31:204–9.
5. McNeil A, Brose LS, Calder R, Hitchman SC, Hajek P, McRobbie H. E-cigarette: an evidence update. A report commissioned by Public Health England [accessed 20.10.19]. Available from: http://tobacco.cleartheair.org.hk/wp-content/uploads/2015/08/PHE-e-cig-review-summary-Aug-2015.pdf
6. Barua RS, Rigotti NA, Benowitz NL, Cummings KM, Jazayeri MA, Morris PB, et al. ACC expert consensus decision pathway on tobacco cessation treatment. A report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents; 2018. Available from: http://www.onlinejacc.org/content/72/25/3332 [accessed 20.10.19].
7. Signes-Costa J, de Granda-Orive JI, Ramos Pinedo A, Camarasa Escrig A, de Higes Martínez E, Rábade Castedo C, et al. Official Statement of the Spanish Society of Pulmonology and Thoracic Surgery (SEPAR) on Electronic Cigarettes and IQOS®. Arch Bronconeumol. 2019;55:581–6, http://dx.doi.org/10.1016/j.arbres.2019.04.023.
8. Bals R, Boyd J, Esposito S, Foronjy R, Hiemstra PS, Jiménez-Ruiz CA, et al. Electronic cigarettes: a task force report from the European Respiratory Society. Eur Respir J. 2019;53, http://dx.doi.org/10.1183/13993003.01151-2018, pii:1801151.
9. Zabert G, Gaga M, Jiménez Ruiz C, Buljubasich D, García G, Vázquez J, et al. Cigarrillo electrónico y demás ENDS: posición de sociedades científicas respiratorias. RAMR. 2019;19:139–45.
10. ERS position paper on tobacco harm reduction statement prepared by the ERS Tobacco Control Committee. Available from: https://ers.app.box.com/v/ERSTCC-Harm-Reduction-Position [accessed 20.10.19].
11. Layden JE, Ghinai I, Pray I, Kimball A, Layer M, Tenforde M, et al. Pulmonary illness related to e-cigarette use in Illinois and Wisconsin—preliminary report. N Engl J Med. 2019, http://dx.doi.org/10.1056/NEJMoa1911614.
12. Outbreak of lung injury associated with e-cigarette use, or vaping. Available from: https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html#key-facts-vit-e [accessed 10.11.19].
13. WHO. Report on the global tobacco epidemic; 2019. Available from: https://www.who.int/tobacco/global_report/en/ [accessed 20.10.19].
14. El Convenio Marco de la OMS para el Control del Tabaco. Disponible en: https://www.who.int/fctc/text_download/es/ [consultado 20 Oct 2019].
15. Declaración de la Secretaría del Convenio Marco de la OMS para el Control del Tabaco sobre la Creación de la Fundación por un Mundo sin Humo. Disponible en: https://www.who.int/fctc/mediacentre/statement/secretariat-statement-launch-foundation-for-a-smoke-free-world/es/ [consultado 20 Oct 2019].
16. Gravely S, Giovino GA, Craig L, Commar A, d'Espaignet ET, Schotte K, et al. Implementation of key demand-reduction measures of the WHO Framework Convention on Tobacco Control and change in smoking prevalence in 126 countries: an association study. Lancet Public Health. 2017;2:e166–74, http://dx.doi.org/10.1016/S2468-2667(17)30045-2 29253448.

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