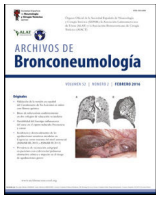
Archivos de Bronconeumología 57 (2021) 737–738

Sociedad Española de Neumología y Cirugía Torácica SEPAR

ARCHIVOS DE Bronconeumología

www.archbronconeumol.org



Editorial

The Most Important Learnings from the new Official American Thoracic Society (ATS) Clinical Practice Guidelines: Initiating Pharmacologic Treatment in Tobacco Dependent Adults

Los aprendizajes más importantes de la nueva guía de práctica clínica de la American Thoracic Society: Inicio del tratamiento farmacológico en adultos dependientes del tabaco

Tobacco dependence is one of the most important non-infectious causes of premature death and disability. Although commonly viewed as a bad habit, it is now known to be a severe treatable chronic illness. Nicotine withdrawal can lead to a variety of neuropsychiatric symptoms which can be severe, including anger, irritability, depression, difficulty feeling pleasure, and difficulty concentrating in addition to the cravings of compulsion to use nicotine. Pharmacotherapy of tobacco dependence focuses on treating these withdrawal symptoms so that the patient can feel normal when not using tobacco products.

The American Thoracic Society (ATS) Clinical Practice Guideline for Initiating Pharmacologic Treatment in Tobacco-Dependent Adults documents that varenicline is more effective than nicotine patch or bupropion for pharmacotherapy of tobacco dependence. Varenicline does not increase psychiatric adverse effects and is more effective than nicotine patch for patients with psychiatric comorbidities. The combination of varenicline and nicotine patch is more effective than varenicline alone. Extended duration pharmacotherapy (>12 weeks) is more effective than standard duration (6–12 weeks). Varenicline can be initiated for a patient who is ready to intiate pharmacotherapy but is not yet ready to stop smoking.[1]

Although strong recommendations were made favoring varenicline compared to other FDA (US Food and Drug Administration) approved tobacco dependence treatment medications, if a patient does not wish to use varenicline, it is reasonable for the provider to prescribe or recommend another FDA approved tobacco dependence treatment medication such as nicotine patch and/or bupropion.[2]

The ATS guideline was developed using GRADE (Grading of Recommendations Assessment, Development and Evaluation) methodology. The methodology was developed to reduce risk for bias and develop "guidelines you can trust".[3] Evidence is condensed to estimates of effect size derived from pooled data from the randomized clinical trials and assessment of quality of the evidence. Evidence from outside of randomized clinical trials is excluded. Strong recommendations can only be made when supported by high quality evidence from randomized clinical trials. When high quality evidence exists and there are not other conflicting findings, that approach can work well. When there is important conflicting data from laboratory and observational research, that approach can be problematic.

The limitation of GRADE methodology was evident in evaluating electronic cigarettes versus varenicline. The evidence synthesis included data from two open label trials comparing electronic cigarettes to nicotine patch and eleven randomized controlled clinical trials comparing varenicline to nicotine patch. As the evidence was of very low quality, a conditional recommendation against e-cigarettes and in favor of varenicline was made. Extensive evidence from observational and laboratory studies raising concern of lack of efficacy and significant harms from electronic cigarettes was excluded from the evidence synthesis. Six committee members (myself included) dissented from the conditional recommendation asserting that, based on evidence excluded from the evidence synthesis, a strong recommendation against electronic cigarettes should have been made.

Acute harms from electronic cigarettes include injuries from product explosions, nicotine poisoning, and severe lung diseases. Electronic cigarette use is associated with increased risk for cardiovascular disease, chronic obstructive lung disease, and cancer. There is a decreased rate of smoking cessation and an increased rate of relapse to smoking among electronic cigarette users.[4] An open label clinical trial of electronic cigarettes vs. nicotine patch found that 80% of the subjects who stopped smoking with the electronic cigarette were not able to stop electronic cigarette use. Many of the smokers who used electronic cigarettes remained dual users of combustible tobacco and electronic cigarettes.[5] Dual use of electronic cigarettes and combustible tobacco may be more harmful than combustible tobacco alone.[6,7]

The World Health Organization advises, "Unlike the tried and tested nicotine and non-nicotine pharmacotherapies that are known to help people quit tobacco use, WHO does not endorse e-cigarettes as cessation aids".[8] The Ibero-Latino-American respiratory scientific societies states, "Health professionals should never recommend the use of this type of device (electronic nicotine delivery systems)".[9] Electronic cigarettes have substantial harms and

prolong tobacco and nicotine dependence. Electronic cigarettes should not be recommended by health care providers.

Founding

This work has not received any type of funding.

References

1. Leone FT, Zhang Y, Evers-Casey S, Evins AE, Eakin MN, Fathi J, et al. Initiating pharmacologic treatment in tobacco-dependent adults an Official American Thoracic Society Clinical Practice Guideline. Am J Respir Crit Care Med. 2020;202(July):e5–31.
2. Fiore MC, Jaén CR, Baker TB, Bailey WC, Benowitz NL, Curry SZ, et al. Treating tobacco use and dependence: 2008 update. Clinical practice guideline. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service; May 2008. Available from: https://www.ncbi.nlm.nih.gov/books/NBK209539/ [accessed 12.04.21].
3. IOM (Institute of Medicine). Clinical practice guidelines we can trust. Washington, DC: The National Academies Press; 2011 https://www.ncbi.nlm.nih.gov/books/NBK209539/
4. Farber HJ, Conrado Pacheco GM, Galiatsatos P, Folan P, Lamphere T, Pakhale S. Harms of electronic cigarettes: what the health care provider needs to know. Ann Am Thorac Soc. 2021;18:567–72.
5. Hajek P, Phillips-Waller A, Przulj D, Pesola F, Myers Smith K, Bisal N, et al. A randomized trial of E-cigarettes versus nicotine-replacement therapy. N Engl J Med. 2019;380:629–37.
6. Wang JB, Olgin JE, Nah G, Vittinghoff E, Cataldo JK, Pletcher MJ, et al. Cigarette and e-cigarette dual use and risk of cardiopulmonary symptoms in the Health eHeart Study. PLoS One. 2018;13:e0198681.
7. Parekh T, Pemmasani S, Desai R. Risk of stroke with E-cigarette and combustible cigarette use in young adults. Am J Prev Med. 2020;58:446–52.
8. World Health Organization. WHO report on the global tobacco epidemic: offer help to quit tobacco use. Geneva, Switzerland: World Health Organization; 2019. Available from: https://apps.who.int/iris/bitstream/handle/10665/326043/9789241516204-eng.pdf?ua=1 [accessed 03.08.19].
9. Declaration of the Ibero-Latino-American Respiratory Scientific Societies on Electronic Nicotine Delivery Systems; May 2019. https://alatorax.org/es/descargar/adjunto/372-ntdcsf-deln-doc-posicion-may2019-eng.pdf [accessed 02.04.21].

Harold J. Farber [1]
Pulmonary Section, Baylor College of Medicine and Texas Children's Hospital, Houston, TX, USA
E-mail address: hjfarber@texaschildrens.org

[1] Dr. Farber served as co-chair for the American Thoracic Society Initiating Pharmacologic Treatment in Tobacco Dependent Adults Guideline Committee. There was no financial support for preparation of this editorial.