

Towards eradication of COPD?

¿Hacia la erradicación de la EPOC?

Walter Mattarucco

Despite substantial advances in reducing the impact of many non-communicable diseases (such as heart disease and cancer), the morbidity and mortality of chronic respiratory disease continue to rise. This increase is mainly due to the growing burden of chronic obstructive pulmonary disease (COPD), which has occurred despite the fact that smoking was identified as the leading risk factor for the disease over 50 years ago. Many factors have contributed to what must now be considered a public health emergency: failure to limit the sale and consumption of tobacco products, and lack of control over lifelong exposure to environmental pollutants, in addition to the aging of the global population.¹ In the introduction of this document, The Lancet Commission acknowledges that this is the start of a debate and that not all actions can be implemented basing on evidence or be applied equitably in different parts of the world.

In the year 2020, Argentina recorded 376,219 deaths from all causes, with respiratory diseases ranking third (14.5%), though in a lower proportion compared to the previous year (18%). This decrease was due to the emergence of SARS-CoV-2 (14.1%) as a cause of death, which ranked fourth.² This clearly demonstrates that COPD and its consequences continue to increase steadily.

The EPOC.AR study showed that in our country, the prevalence of this condition reaches 14.5%, with an observed underdiagnosis that reached 77%.³ Similar to other countries, the lack of detection of COPD remains a problem for healthcare systems. There are multiple reasons for this lack of detection: first, smoking patients with symptoms often attribute them to their smoking habit, age,

or deconditioning. Secondly, these symptoms are not routinely investigated during consultations when compared, for example, to blood pressure or glucose control. Thirdly, brief intervention for smoking cessation (which has proven effectiveness) is not provided consistently. Fourthly, the spirometry is not a widely or equitably available test in our healthcare system, and its availability in the private sector is often restricted in terms of frequency.

In recent years, the GOLD initiative has emphasized several issues related to etiology, taking into account other exposures such as the use of biomass and illicit drugs as causes of COPD. However, the requirement of a FEV1/FVC ratio < 0.70 is still necessary to confirm the diagnosis.⁴

In recent years, Alvar Agusti et al have been advocating for the holistic approach to COPD through GETomics.⁵ The acronym GET stands for gene, environment, and time, describing the possible relationship between a person's genetic burden associated with exposure/events throughout their lifetime, and the timing in which it is expressed or acts. These events are associated with various "omics", which are sets of features within a specific sphere (clinical, radiological, genetic, imaging, or structural).

This is a comprehensive approach of biological events occurring in a specific individual, who is subjected to etiological environmental factors. With this integrated strategy, through the individual patient's history, we can establish the presence of life events (such as low birth weight, prematurity, childhood infections, childhood asthma, tuberculosis) that become determinants of what we

call the “pulmonary function trajectory.” This trajectory expresses the **unnatural** evolution of our pulmonary function; it determines the alteration in the FEV1 value at different moments in life (at birth, during adolescence, in adulthood) which may go unnoticed and, if subjected to various types of exposure (smoking, biomass smoke, toxic fumes, inhalation of heated nicotine products) it increases the likelihood of developing COPD.

From a practical perspective, in the clinic, we find patients with all the symptoms of COPD who never smoked, patients with risk factors and structural abnormalities in their imaging but without symptoms, and young adult smokers who were asthmatic and suffered from bronchiolitis at an early age. Some will have functional impairment, while others won't. The latter fall into what GOLD refers to as early COPD.

At present, we lack evidence that supports active searching for at-risk individuals or undiagnosed COPD patients. And healthcare systems neither support nor promote an active search of cases, and this initiative is limited to individual action within a system that does not encourage multidisciplinary work.

In this issue of RAMR, Uribe Echevarría et al present a multidisciplinary and integrated strategy for the “Prevention, Diagnosis, and Management of Pre-COPD.” (6) Based on The Lancet Commission's initiative, it not only covers diagnosis but also prevention and early detection. How does this

group propose to undertake this colossal task? Firstly, clear and precise objectives: to emphasize the existence of situations that facilitate the alteration of the pulmonary function trajectory, to inform the population about the risks, and encourage the search for undiagnosed individuals, provide information about the types of exposure that predispose the development of COPD, conduct imaging and functional studies in symptomatic patients or patients with compatible medical history.

The group proposes active searching from birth to adulthood for life situations combined with alterations in pulmonary function or structure that can lead to the development of COPD.

Clearly, this initiative falls within the realm of precision medicine, in a manner consistent with current trends. It promotes interdisciplinary work and the involvement of multiple specialties, with a clear objective: to eliminate COPD. However, it also faces some obstacles, such as obtaining the commitment of all the disciplines involved, securing economic and logistical resources, and sustaining the initiative over time.

I have no doubt that they will succeed. Lastly, it is worth acknowledging that actions like this should be imitated by all healthcare systems, both public and private. Some of the described situations can be detected through simple questioning, an easily accessible tool, and the first step in this set of actions that lead us to fulfill our role in the elimination COPD.

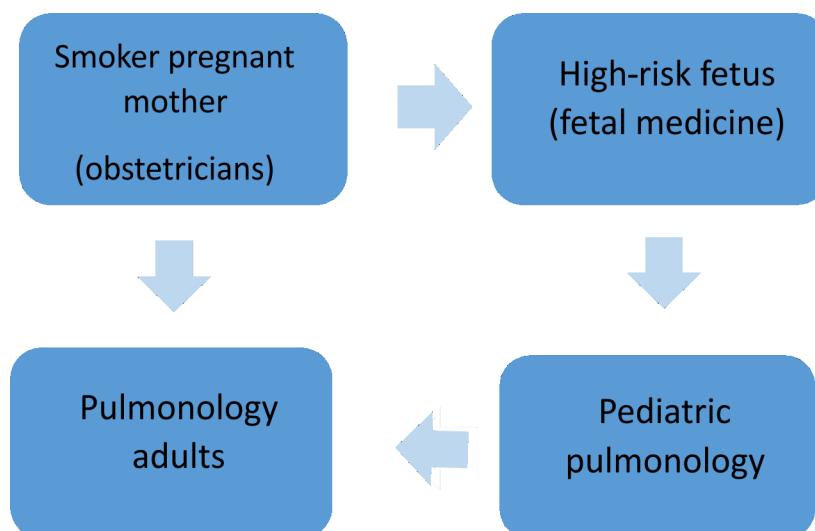


Figure 1. Flow of patients at risk of developing COPD.

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