EDITORIAL

Local Variations in the Management of Chronic Obstructive Pulmonary Disease

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Although several antismoking campaigns have been conducted in recent years, chronic obstructive pulmonary disease (COPD) remains an important public health problem and prevalence and mortality rates continue to rise. According to the findings of the IBERPOC study of 2000, the prevalence of COPD in Spain is 9.1% in individuals aged between 40 and 70 years, with a breakdown by sex of 14.3% in men and 3.9% in women, although also with substantial geographic variations present.[1] Outside Spain, the Burden of Lung Disease project, which was launched in 2002 with the aim of determining the true situation of COPD in different countries throughout the world, found prevalences—defined as stage I disease or higher according to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) classification—ranging from 11.4% to 26.1% depending on the geographic area, with men generally affected more often than women.[2] If a stricter criterion is used, from the public health perspective, the prevalence of patients with stage II disease or higher according to the GOLD classification in that study was 10.1% overall—11.8% for men and 8.5% for women—also with notable geographic variations. Although these rates exceed figures from previous studies,[3,4] they are in line with those found in other more recent studies with a similar design such as the Latin American Project for Investigation of Pulmonary Obstruction (abbreviated in Spanish to PLATINO).[5] According to that study, which was conducted in 5 Latin American cities, the prevalence of stage I or higher COPD ranged from 7.8% in Mexico City to 19.7% in Montevideo and was higher in men, elderly persons, and those with a lower level of education, lower body mass index, and greater exposure to cigarette smoke. The prevalence of patients with stage II disease or higher was 2.6% to 7.1%. As can be seen from these data, the prevalence of COPD varies greatly according to geographic area, a variation that is probably linked to the frequency of risk factors and the age distribution of each of the populations. Such variations may be partly responsible for local differences in the use of different therapeutic measures.

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In terms of mortality, COPD is currently the fourth leading cause of death worldwide, and predictions suggest that it will occupy third place before 2020.[6,7] If these predictions are borne out, this disease will become the most rapidly growing cause of death in developed countries.

Although these figures are striking, one of the main problems in caring for patients with COPD remains the underdiagnosis of the disease; indeed, more than 75% of sufferers may not be appropriately diagnosed,[1,8,9] and it has been shown that the disease remains undiagnosed in many patients for a large proportion of its natural course and that sufferers only seek medical care when they have lost around half their respiratory function.[10] Possible reasons for failing to diagnose the disease include insufficient use of spirometry in primary health care[11,12] and the long period of mild disease with few symptoms that smokers confuse with natural dyspnea associated with aging or smokers' cough. In any case, the main consequence of failure to diagnose COPD is clearly undertreatment: that is, measures such as vigorous antismoking counseling and an appropriate treatment and follow-up are not adopted.[13] In contrast, an early diagnosis would allow intervention in earlier phases of the disease, leading to clear improvements in disease impact at a personal, family, and societal level.[14]

Another important problem in the diagnosis of COPD is that of false positives. In a study of the effectiveness of a COPD screening program, Miravitlles et al[15] found that 10% of patients selected from primary health care as possible sufferers actually had asthma and 34.8% did not have any obstructive disease.[15] Subsequently, the IDENTEPOC study showed that 10.2% of those assessed had been diagnosed with COPD using lung function criteria despite not having an obstructive pattern at the time of assessment.[11] More recently, the PLATINO project showed that making a previous diagnosis of COPD in the absence of airflow limitation is still a common problem.[9] Thus, more than half the 237 patients with previous diagnosis of COPD in that study did not meet the criteria for obstruction. This may lead to inappropriate treatment regimens, with the subsequent increase in drug spending, the appearance of side effects, and a decrease in the expected treatment benefits.[16] Once again, diagnostic error, which may be large or small depending on the study, leads to treatment failure.

Although in the past physicians have been passive in the face of COPD, we currently have specific treatments that make it a treatable disease.[8] First, effective antismoking

drugs are now available to us. In addition, the introduction of long-acting bronchodilators—both β_2-adrenergic agonists (salmeterol, formoterol) and anticholinergic agents (tiotropium)—represents substantial progress in pharmacological treatments. Inhaled glucocorticosteroid treatment is able to reduce the number of exacerbations, slightly increase the forced expiratory volume in 1 second (FEV_1), and improve the quality of life in patients with moderate and severe COPD. As for the nonmedical measures, evidence suggests that annual administration of the influenza vaccine decreases mortality and the number of hospitalizations during epidemics, and so should be recommended for all patients with COPD. In addition, the roles of oxygen therapy and rehabilitation are also clearly defined in such patients.[17]

Although several clinical guidelines aimed at standardizing the management of COPD have been published in the last 10 years,[18] a number of studies have found relatively poor adherence to these guidelines in daily practice, in terms of both diagnosis and treatment of the disease.[1,11,19,20] For example, in the IBERPOC study, only 21.8% of the cases of COPD detected had been diagnosed previously and only 19.3% of the patients had received respiratory medication.[1] In addition, fewer than half the patients with an FEV_1 of less than 50% of predicted were receiving any sort of treatment for their respiratory disease. More recently, the IDENTEPOC study also revealed the lack of rigorous diagnosis of COPD and the limited adherence to therapeutic guidelines.[11,20]

In a recent issue of *Achivos de Bronconeumología*, new findings from the PLATINO project were published.[21] Specifically, data were provided on the use of preventative measures and the prescription of drugs for stable COPD in the 5 Latin American cities that participated in the study. Once again, the authors highlighted the lack of adherence to guidelines of proven effectiveness for management of this disease. Furthermore, a parallel analysis of the situation in different countries, using a similar methodology, confirmed the uneven use of the guidelines in different areas of Latin America. The differences in the prevalence of COPD and access to diagnostic tests in general and spirometry in particular may contribute to local variations in the treatment prescribed. However, the study was conducted exclusively in urban areas and did not assess rural regions where even more patients are likely to be undiagnosed and therefore undertreated. From the point of view of prevention, noteworthy findings from the PLATINO study included insufficient medical counseling—only half the smokers or ex-smokers had been advised to quit—and the limited use of pharmacological smoking cessation therapies, even though it has been shown that quitting is a cost-effective intervention and the principle way of preventing COPD progression. Medical advice to be vaccinated against influenza—recommended by all guidelines—is also limited, but there were large variations among the participating centers. Furthermore, only one fourth of the patients with COPD were receiving some sort of respiratory medication, the use of which increases with greater disease severity, in line with the results of some previous studies.[1,22] The prescription of such medication was associated with prior medical diagnosis, spirometry testing at some point in the patients' lives, and disease severity. The relationship between dyspnea or quality of life and the patients' treatment was not studied, even though other studies have found that these factors are determinants of COPD treatment.[23] A limitation of the study is that the preventative measures and drug therapy were recorded retrospectively. In addition, the fact that most of the patients identified had mild COPD might have had an influence on the limited use of the therapeutic measures analyzed. However, the results are consistent with those of other population studies and show that management is far from optimal.

In conclusion, the data discussed in this editorial suggest that the current management of patients with COPD is inappropriate. To improve the daily care of these patients, diagnostic and treatment guidelines for COPD should be drawn up and disseminated. It is also necessary to insist on greater use of spirometry because the PLATINO study has shown that such testing should not be considered merely as an isolated diagnostic tool but also as providing key information when deciding treatment for this disease.

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