Arch Bronconeumol. 2017;53(3):87–88

Sociedad Española de Neumología y Cirugía Torácica SEPAR

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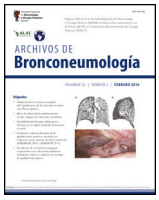

Editorial

Global Initiative for Chronic Obstructive Lung Disease (GOLD)-2017: The ALAT Perspective☆

Global Initiative for Chronic Obstructive Lung Disease (GOLD)-2017: la visión desde alat

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Introduction

The Global Initiative for Chronic Obstructive Pulmonary Disease (GOLD) was formed in 1991, and since then it has regularly published recommendations for the diagnosis, management and treatment of chronic obstructive pulmonary disease (COPD). Evidence pertaining to the disease is reviewed annually, and the efforts of all the contributors are invaluable to the respiratory community.[1] As a consequence of this work, the GOLD initiative has become widely accepted as one of the main COPD references worldwide. There is little doubt that GOLD has had a widespread impact, influencing clinical practice and the institutions responsible for implementing health policies. It is also important to recognize the effect that it has had on public awareness of COPD.

GOLD 2017, the latest update, is a major revision of the previous proposals, and a series of changes have been introduced to reflect new evidence on the etiology of COPD and the role of spirometry in the management of the disease, and the clinical classification of patients into "ABCD" groups has been redefined. The aim is to move toward more personalized medicine, and to depict strategies for treatment escalation and de-escalation.[1]

COPD Etiology

GOLD 2017 reviews and incorporates new evidence on the pathophysiology of COPD, particularly with regard to the interaction of host factors and environmental exposure.[1] Recognition of aspects that were underestimated in the past, such as genetic abnormalities, abnormal lung development, and accelerated age-related loss of lung function in COPD, has helped advance our understanding of the origin of the disease. For example, approximately 50% of patients develop COPD due to a rapid decline in lung function (FEV_1) – the classic hypothesis of Fletcher and Peto – while the other 50% acquire COPD as a result of abnormal lung development.[2]

Changes in Stratification and Classification

In GOLD 2007, COPD stratification was based exclusively on severity of airflow limitation.[3] This classification is of major clinical significance, as airflow limitation has a proven impact on mortality, the number of exacerbations and hospitalizations.[4–6] GOLD 2013, in an attempt make the classification more comprehensive, combined airflow limitation with respiratory symptoms (mMRC scale or CAT questionnaire), and exacerbations and/or hospitalizations due to exacerbations.[7] However, difficulties have arisen in the implementation of the ABCD classification in clinical practice, and it has shown no benefits over spirometric classification in the prediction of mortality or other important COPD outcomes.[8–10] Moreover, the evidence for basing therapeutic decisions on this classification is limited.

The new GOLD 2017 recommends a classification which combines components from GOLD 2007 (severity of limitation; grades 1–4) and from GOLD 2013 (ABCD groups based on symptoms and exacerbations), generating 16 different categories.[1] At first sight, at least, combining the different components has produced a complex and unwieldy proposal that heightens the risk of confusion.

We recognize that inclusion of the spirometry classification should increase the prognostic value of the tool, compared to the GOLD 2013 version. However, the 2017 version proposes a modified ABCD tool for assigning drug treatment according to symptoms and exacerbations only, on the undeniable premise that FEV_1 is an incomplete descriptor of disease activity in individual patients.[1] Nevertheless, airflow limitation and symptoms are not independent variables, and evidence has shown that the greater the airflow limitation, the greater the tendency to present symptoms and exacerbations. Perhaps the biggest drawback of the new ABCD classification (that will probably soon be widely implemented given the prestige of the GOLD group) is that it fails to provide any evidence for its objective (guiding drug treatment), so it may ultimately be of little use. Nor has any evidence been provided on its prognostic value, and it seems unlikely that the new classification system will be an improvement over spirometric classification.

☆ Please cite this article as: Montes de Oca M, Pérez-Padilla R. Global Initiative for Chronic Obstructive Lung Disease (GOLD)-2017: la visión desde alat. Arch Bronconeumol. 2017;53:87–88.

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Therapeutic Recommendations

With its new ABCD tool and its "FEV_1-free approach",[2] GOLD 2017 proposes a COPD drug treatment algorithm that represents an attempt to achieve a more personalized approach, with strategies for escalation and de-escalation of drug treatment. However, an approach that underplays the severity of airflow limitation can lead to errors. On the one hand, some patients with severe limitation and few symptoms (GOLD 3–4 A) could initially be recommended only a short-acting bronchodilator on demand. Another risk is overtreating patients with mild limitation in the C and D groups (e.g., GOLD 1 D) with drugs that are costly for most Latin American countries. Currently, no biomarker is available that can offer a precise diagnosis of exacerbation. Diagnosis is mainly clinical, based on an acute worsening of respiratory symptoms that may be caused by infections, such as pneumonia, or other problems such as gastroesophageal reflux or heart failure. This may cause patients to be wrongly classified in groups C or D, and to the inappropriate prescription of expensive medications. It should also be pointed out here that GOLD 2017 limits the use of inhaled corticosteroids in groups C-D patients, due to the high risk of pneumonia.

The GOLD classification, by defining limitation as post-bronchodilator $FEV_1/FVC<0.7$, runs the risk of overdiagnosing COPD, particularly in the elderly, resulting in the administration of costly bronchodilators to disease-free individuals, a practice which only benefits the pharmaceutical industry. It goes without saying that physicians must be fully informed about risk factors and other clinical aspects, and must be able to request additional tests and monitor the patient. However, the GOLD initiative does not recognize diagnostic uncertainty, nor does it recommend observation or repeat testing in borderline patients, as would be the case for hypertension, for example.[1]

The implementation of a new classification inevitably involves costs that are particularly burdensome for countries with fewer resources. For this reason, it would be preferable to see a proposal for a global classification that was based on documented scientific evidence, either from a prognostic or therapeutic point of view.

References

1. From the Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2017. Available from: http://goldcopd.org.
2. Lange P, Celli B, Agustí A, Boje Jensen G, Divo M, Faner R, et al. Lung-function trajectories leading to chronic obstructive pulmonary disease. N Engl J Med. 2015;373:111–22.
3. Rabe KF, Hurd S, Anzueto A, Barnes PJ, Buist SA, Calverley P, et al. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: GOLD executive summary. Am J Respir Crit Care Med. 2007;176:532–55.
4. Marin JM, Alfageme I, Almagro P, Casanova C, Esteban C, Soler-Cataluña JJ, et al. Multicomponent indices to predict survival in COPD: the COCOMICS study. Eur Respir J. 2013;42:323–32.
5. Johannessen A, Nilsen RM, Storebø M, Gulsvik A, Eagan T, Bakke P. Comparison of 2011 and 2007 Global Initiative for Chronic Obstructive Lung Disease guidelines for predicting mortality and hospitalization. Am J Respir Crit Care Med. 2013;188:51–9.
6. Faganello MM, Tanni SE, Sanchez FF, Pelegrino NR, Lucheta PA, Godoy I. BODE index and GOLD staging as predictors of 1-year exacerbation risk in chronic obstructive pulmonary disease. Am J Med Sci. 2010;339:10–4.
7. Vestbo J, Hurd SS, Agusti AG, Jones PW, Vogelmeier C, Anzueto A, et al. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: GOLD executive summary. Am J Respir Crit Care Med. 2013;187:347–65.
8. Soriano JB, Lamprecht B, Ramírez AS, Martinez-Camblor P, Kaiser B, Alfageme I, et al. Mortality prediction in chronic obstructive pulmonary disease comparing the GOLD 2007 and 2011 staging systems: a pooled analysis of individual patient data. Lancet Respir Med. 2015;3:443–50.
9. Goossens LM, Leimer I, Metzdorf N, Becker K, Rutten-van Mölken MP. Does the 2013 GOLD classification improve the ability to predict lung function decline, exacerbations and mortality: a post-hoc analysis of the 4-year UPLIFT trial. BMC Pulm Med. 2014;14:163.
10. Kim J, Yoon HI, Oh YM, Lim SY, Lee JH, Kim TH, et al. Lung function decline rates according to GOLD group in patients with chronic obstructive pulmonary disease. Int J Chron Obstruct Pulmon Dis. 2015;10:1819–27.