CHEST

GOLD 2017
A New Report

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The first Global Initiative for Chronic Obstructive Lung Disease (GOLD) report was published in 2001 and has since undergone several updates,[1] with a major revision in 2011 that introduced the ABCD assessment tool to guide initial therapy. This scheme added symptoms (eg, dyspnea) and history of exacerbations to severity measured by using FEV_1 to decide on initial therapy; however, many practicing clinicians found it confusing because both spirometry and exacerbation history were considered together. Furthermore, the A-D classification does not seem to perform any better than spirometric grades in predicting serious clinical outcomes such as mortality.[2] The new GOLD 2017 Report has now clarified this situation by separating the spirometric severity from the A-D categories, which are determined according to symptoms and exacerbation history. This change was made because FEV_1 measurements have little impact on choice of therapy and are important mainly in initial diagnosis and assessing long-term progression but not for choice of, and response to, therapy.

Every chapter in the GOLD 2017 Report has been revised, with new figures and tables provided, and the references extensively updated. The definition of COPD is still problematic and is essentially a description, but it has been simplified to: "COPD is a common, preventable and treatable disease that is characterized by persistent respiratory symptoms and airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particles or gases." This definition now specifically includes persistent symptoms. In current cigarette smokers, symptoms measured by the COPD Assessment Test (CAT), exacerbations and increased airway thickening on computerized tomograph, may occur without airflow limitation as measured by FEV_1/FVC ratio.[3] These individuals do not meet the normal criteria for COPD because they do not have spirometric airway obstruction; however, it is very likely that they may have obstruction of small airways and represent an earlier stage of the disease, and they may need treatment.[4] Indeed, a recent longitudinal study found that smokers with mucus hypersecretion (chronic bronchitis) are at risk of developing airway obstruction (COPD).[5] This finding highlights the need to study early disease, the inadequacy of spirometry in defining the diagnosis, and the need for better tests of small airway obstruction and air trapping.

The discussion on risk factors has been extensively updated. It is now recognized that poor lung growth is a risk factor for COPD and that any factor that affects lung growth during gestation and childhood, such as tobacco smoke exposure, poor diet, and infections, may be important determinants of future lung function.[6] Following the trajectory of FEV_1 in several large cohorts indicates that about one-half of those who develop reduced FEV_1 have decreased lung growth without accelerated decline, and this finding has important implications for therapies targeted at reducing disease progression.[7] Greater emphasis is given to environmental risk factors other than cigarette smoking, such as exposure to biomass smoke, air pollution, and occupational exposures, which may be particularly relevant in low- and middle-income countries.[8] In these countries, a diagnosis of COPD is very common in patients who have had TB, and COPD may increase the risk of acquiring TB, but there has been little research on TB-related obstructive pulmonary disease.[9]

In the chapter on therapy, the recommendations for various pharmacologic and nonpharmacologic therapies for managing stable disease have been revised and

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reassessed, based on new clinical trial data. Although influenza vaccination was previously recommended for all patients with COPD, pneumococcal vaccination (13-valent pneumococcal conjugate vaccine or 23-valent pneumococcal polysaccharide vaccine) is now also recommended for all patients aged > 65 years and younger patients who have significant comorbidities.[10] The importance of using inhaler devices correctly and how to deal with poor adherence is now emphasized.[11] The value of long-acting bronchodilators is highlighted with the recommendation to start with either a long-acting muscarinic antagonist or a long-acting β_2-agonist and then use a combination if symptoms or exacerbations persist. However, there is growing uncertainty in the value of high-dose inhaled corticosteroids (ICS), in view of the increasing evidence regarding their side effects. Post hoc analyses have suggested that blood eosinophil counts may predict the efficacy of ICS in preventing exacerbations in patients with COPD, but this test is not yet recommended in routine clinical practice; prospective studies are still needed. In patients with lower blood eosinophil counts (< 2%) there is evidence for a poor response to ICS and an increased risk of pneumonia.[12] Further evidence regarding the value of pulmonary rehabilitation is presented, but there is still uncertainty about the benefit of integrated care programs, which may need to be more individualized.[13] Several bronchoscopic lung volume reduction techniques are reviewed and, although they may improve lung function and symptoms in selected patients, the long-term efficacy, complications, and patient selection require further study.[14]

There has been little change to the section on exacerbations, but the definition has been simplified to "worsening of respiratory symptoms that result in additional therapy." Exacerbations are stratified into mild (treated with short-acting bronchodilators), moderate (antibiotics and/or oral steroids), or severe (emergency department visit or hospitalization). Indications for discharge from the hospital after acute exacerbations and follow-up are now discussed in detail.

The section on comorbidities has been expanded in view of their impact on the course of COPD and its management. The importance of looking for and treating comorbidities is emphasized, but COPD should be treated in the same way, regardless of the comorbidity. COPD is increasingly seen as part of the multimorbidity that occurs with aging and may share common pathogenetic pathways.[15] It is important to keep treatment as simple as possible if several diseases are being treated.[16]

The GOLD 2017 Report is a valuable source of information to guide therapy and will be used throughout the world to inform management guidelines. The document highlights the need for more research and additional clinical studies, as well as the need to find therapies that reduce disease progression and mortality.

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