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Editorial

Chronic Obstructive Pulmonary Disease

"LEARN MORE, BREATHE BETTER"

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Chronic obstructive pulmonary disease (COPD) is this nation's second leading cause of disability and fourth leading cause of death.¹ Many people who are at risk for developing the disease are unaware that the disease even exists, and many people who actually have the disease are undiagnosed. The National Heart Lung and Blood Institute has recently taken a lead in an attempt to demystify this disease for patients and healthcare providers by designing the "Learn More, Breathe Better" campaign. This campaign will help increase awareness and understanding of COPD and its attendant risk factors. Through the detection of the disease at the early stage, earlier interventions for the treatment of COPD can be afforded, which will likely ultimately improve patient outcomes.

Chronic obstructive pulmonary disease is the only major cause of death (eg, cardiovascular disease, cerebrovascular accidents, cancer) in which the mortality rate is increasing rather than decreasing. In the past, COPD has been viewed primarily as a disease occurring in men, yet beginning in 2002, more women died from the disease than did men.² There are currently over 11 million people who are diagnosed with COPD, yet there may be well in excess of that number who have actually not been diagnosed. COPD represents a serious public health problem with many social and economic ramifications.

Recent guidelines (Global Initiative for Chronic Obstructive Lung Disease¹) describe COPD as a "disease state that is characterized by airflow limitation that is not fully reversible. This airflow limitation is associated with an abnormal inflammatory response of the lungs to noxious particles or gases (most frequently cigarette smoke)

and is usually progressive."¹ Several mechanisms including chronic inflammation, protease-antiprotease imbalance, and oxidative stress play a role in this airflow limitation. Many systemic effects (eg, muscle weakness, malnutrition, weight loss) are now known to be consequences of the pathophysiologic processes associated with COPD.^{3,4}

In years past, nihilism existed regarding the disease process, treatment options, and overall prognosis. In part, this may have been because of the attention given to smokers in blaming them for their own health problems. Most now recognize the seriousness of this life-threatening disease, no matter how socially unacceptable its cause may be. In addition, the insidious presentation of disease symptoms (often occurring only after a significant amount of lung function has been lost) obscures the diagnosis until very late in the disease state making treatments less beneficial.

Most people at risk for developing COPD have never even heard of it, and in many cases, do not even realize that the condition has a name. Several factors may place a person at risk for COPD including smoking, environmental exposures (eg, chemicals or dusts in the workplace), and genetic abnormalities (eg, α -1-antitrypsin deficiency, susceptibility to cigarette smoke). Symptoms associated with COPD (eg, cough, shortness of breath, sputum production, wheezing, reduced exercise capability) are often overlooked by patients and healthcare providers.

Patients who are at risk for the development of COPD and who have cough, sputum production, or shortness of breath should be tested for the disease. A very simple and inexpensive test (spirometry) should be used as the

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initial test. Spirometry, as recommended by the National Lung Health Education Program,⁵ can be easily and effectively performed in a variety of settings under the direction of appropriately trained healthcare providers. Simple criteria for the diagnosis of COPD exist and can be used in this determination.

Detecting the disease at an earlier stage will help direct appropriate therapy. At the top of the management algorithm should be abstinence from cigarette smoke. Techniques to maintain abstinence must be discussed with every patient.⁶ Pharmacologic therapy with either inhaled beta agonists, anticholinergics, and/or corticosteroids has been the mainstay of treatment for most patients with COPD.^{7,8} Nonpharmacologic therapy, however, must also be considered in this management algorithm. Comprehensive pulmonary rehabilitation has been shown to significantly improve exercise capacity and quality of life, reduce dyspnea and healthcare utilization, and should now be considered as a first line therapy for all patients with COPD.^{9,10} Oxygen therapy should be administered for those patients with COPD who have hypoxemia.^{11,12} Various surgical and endobronchial therapies have also been shown to be effective in reducing symptoms and should be considered for selected patients.^{13,14} Each of these various types of therapy can be used to significantly improve the quality of life of patients who have COPD.

LEARN MORE, BREATHE BETTER

Early diagnosis is essential to the effective treatment of the disease and subsequent prevention of disability and death. The National Heart Lung and Blood Institute (NHLBI) has recently taken a lead in an attempt to demystify this disease for both patients and healthcare providers. The "Learn More, Breathe Better" campaign is designed to increase awareness and understanding of COPD and its risk factors.¹⁵ The campaign is targeted toward men and women older than 40 who have risk factors for the development of COPD in an attempt to detect the disease at an earlier stage, to develop effective management strategies, and to ultimately slow the disease process and improve the quality of life of the patient. The NHLBI is joined by more than 20 partners in implementing this campaign. The American Association of Cardiovascular and Pulmonary Rehabilitation, the American Academy of Family Physicians, the American Lung Association, the American Thoracic Society, the American College of Chest Physicians, and the US COPD Coalition are a few of the organizations that will promote the campaign to their constituencies. Kaiser Permanente has stepped forward to help spread the word about COPD and plans to distribute campaign information to its members, physicians, and staff. Through a partnership with the COPD Foundation, the

campaign will tour health fairs, senior expos, and other community venues throughout the country this year, offering information and spirometry testing to those at risk.

The campaign, which will roll out throughout this year, includes targeted print and radio public service announcements (PSAs). The PSAs are supplemented by fact sheets for patients and those at risk, a fact card for healthcare professionals, a Web site, an educational video, and materials to help community-level organizations to further educate the public about the signs and symptoms of COPD.

Certainly the time has arrived in which COPD is recognized as much more of a public health and economic problem than ever before. Awareness and understanding of the disease will help both patients and healthcare providers recognize the risk factors and symptoms associated with the disease. This will cause many to seek the appropriate diagnosis and treatment and should result in detecting COPD at an earlier stage in the patient's disease process. In turn, a decrease in the morbidity and mortality associated with COPD will occur. Very simple, low-cost, and effective diagnostic modalities and treatment options are currently available. We must be more proactive (and not reactive) in our efforts to diagnose and treat COPD. The "Learn More, Breathe Better" campaign will help provide patients and healthcare providers the education necessary to effect improved outcomes and should help all of us "breathe more easily"!

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