Chronic Obstructive Pulmonary Disease

“There is no other alternative but to keep on breathing.”

By Mahmood Ali, MD, FCCP

No one anticipates hearing that they have a chronic disease and will be debilitated for the rest of their life. Chronic obstructive pulmonary disease ("COPD") is a disease that can be treated but has no cure. Many people may experience denial, anger, or even depression, when faced with a diagnosis of chronic lung disease like COPD.

COPD is a major cause of disability, and it is the third leading cause of death in the United States.

COPD is a common disease with reports of more than 12 million adult cases. It is believed that there are currently more than 12 million adults with COPD who have not been diagnosed yet.

COPD is an underdiagnosed condition in general practice. This is strongly related to a significant lack of diagnostic testing in high risk groups, such as smokers. Also many patients with coughing or wheezing mistake COPD symptoms for bronchitis, or asthma. Additionally, breathlessness is often ignored by many along with the justification that breathing problems are related to being “out of shape,” or “old age”, instead of COPD.

The recent National Heart, Lung, and Blood Institute’s (NHLBI) survey found that 27 percent of current smokers said they had suffered from either a chronic cough, wheezing, or have been short of breath and unable to perform normal activities in the past year. Furthermore, the survey also found that 40 percent of smokers who said they had COPD symptoms have not discussed them with a doctor or other health care provider.

Cigarette smoking is the leading cause of COPD. Most people who have COPD currently smoke or used to smoke. Long-term exposure to other lung irritants, such as air pollution, chemical fumes, or dust, also may contribute to COPD.

COPD is a progressive inflammatory process involving the airways, lung parenchyma, and vasculature. It causes damage and remodeling of the airways, lung tissue, and supporting tissue. These developments can result in emphysema, chronic bronchitis, or both.

Studies have found that smoking, improper use of inhalers, poor adherence to a drug therapy, and lack of a pulmonary rehabilitation program are all associated with more frequent episodes of COPD exacerbation. This will accelerate the drop in functional capacity (FEV1).

In addition, exacerbations are a major cause of morbidity and mortality in patients with COPD as well as having a large impact on health care costs. However, severity and prognosis are not only determined by lung function impairment (FEV1) and exacerbation, but exercise capacity, health-related quality of life, and ability to perform activities of daily living are often impaired.

With advanced stages of COPD, the disease may significantly impair a patient’s capacity to exercise, level of energy, ability to work, and to carry on with their regular daily routine.

This will reduce independence and create severe disability and the sensation of feeling hopeless and helpless.

Other health problems related to COPD may include: osteoporosis, anxiety, reduction in social activities, depression, heart failure (cor pulmonale), and sleep problems. Therefore, living with COPD may be challenging, and can have a negative impact on both the duration and quality of life.
LIFE EXPECTANCY:

Many COPD patients do not want to face the prospect of death; in fact many of my patients with COPD simply do not want to talk about life expectancy.

There are numerous studies that confirm FEV1 is a strong predictor of survival in a COPD patient, but the clinical evidence is limited regarding how long people live after diagnosed with COPD. The BODE Index is designed to assess clinical risk in people with COPD. The BODE index reflects prognosis and survival in COPD. A higher BODE score correlates with an increased risk of death.

### THE BODE INDEX (SIMPLIFIED)

<table>
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<th>VARIABLE</th>
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<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td>FEV1 %</td>
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<td>50 - 64</td>
<td>&lt;50</td>
<td>≤ 35</td>
</tr>
<tr>
<td>6MW Test</td>
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<td>250 - 349</td>
<td>&lt;250</td>
<td>&lt;150</td>
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<td>2</td>
<td>3-4</td>
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<tr>
<td>BMI</td>
<td>&gt;21</td>
<td>&lt;21</td>
<td>&lt;21</td>
<td>&lt;21</td>
</tr>
</tbody>
</table>

NEW DRUGS TO TREAT COPD:

In July 2011, the Food and Drug Administration ("FDA") approved Arcapta (Indacaterol), a long-acting beta-agonist, at a dose of 75 μg once daily as a bronchodilator for patients with COPD.

Last April the FDA approved roflumilast, which is an inhibitor of phosphodiesterase type 4 (PDE-4). Roflumilast is recommended for people with severe COPD associated with chronic bronchitis that has had flares. Roflumilast has been shown to reduce the risk of COPD flares in this group.

It is advised for all high risk groups (smokers or ex-smokers) who are complaining of a chronic cough with or without mucus, shortness of breath, wheezing, fatigue, or a reduced ability to exercise, to undergo a pulmonary function test and referral for pulmonary evaluation.

If COPD is diagnosed early enough and a patient quits smoking, then the prognosis is relatively favorable. However, if a patient continues to smoke after being diagnosed then the lung function can decline at a much faster rate. This may eventually lead to poor health related quality of life and/or poor prognosis.

Our efforts focus on better understanding the treatment of COPD, to improve the quality of life for patients, and to reduce the number and severity of exacerbations which are currently responsible for two-thirds of the COPD related costs.

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