Chronic obstructive pulmonary disorder

This charity profile looks at the work of the British Lung Foundation in attempting to raise awareness of chronic obstructive pulmonary disease—a condition that women are more susceptible to developing as their lung function worsens with less duration of smoking or intensity of smoking than that of men.

British Lung Foundation
website www.lunguk.org

Chronic Obstructive Pulmonary Disorder (COPD) is an umbrella term for a group of lung diseases that include chronic bronchitis, emphysema and small airways disease. Lung damage over a long period of time impairs the flow of air in and out of the lungs and causes breathlessness.

COPD is the 5th biggest killer in the UK.[1] Every hour COPD is estimated to kill over 250 people worldwide.[2] In the UK, the rate of COPD has been increasing nearly three times faster amongst women than men.[3] In 2005 it killed more women than breast cancer: 11,302 died of COPD and 10,969 died of breast cancer.[4]

What causes COPD?

COPD is characterised by airflow obstruction. The airflow obstruction is usually progressive, not fully reversible and does not change markedly over several months. The disease is predominantly caused by smoking. Other factors, particularly occupational exposures, may also contribute to the development of COPD.

There is no single diagnostic test for COPD. Making a diagnosis relies on clinical judgement based on a combination of history, physical examination and confirmation of the presence of airflow obstruction using spirometry.[5]

Treatment

There is no cure for COPD but a lot can be done to relieve its symptoms:[6]

- Stopping smoking—stopping smoking will help improve coughing and phlegm
- Diet
- Bronchodilators—treat breathlessness and exercise limitation initially with short-acting bronchodilators ($beta_2$-agonists or anticholinergics) as needed. If this does not control symptoms, prescribe a long-acting bronchodilator. Also prescribe a long-acting bronchodilator if the patient has two or more exacerbations a year
- Nebulisers—consider a nebuliser for patients with distressing or disabling breathlessness despite maximal therapy with inhalers
- Steroids—maintenance use of oral corticosteroid therapy in COPD is not recommended. However, a few patients with advanced COPD may need maintenance oral corticosteroids if oral corticosteroids cannot be withdrawn after an exacerbation. In those cases, keep the dose as low as possible, monitor patients for osteoporosis and prescribe prophylaxis
- Vaccination—patients with COPD should be offered pneumococcal vaccination and an annual influenza vaccination. Within their licensed indications, zanamivir and oseltamivir are recommended for at-risk patients who present with influenza-like illness within 48 hours of onset of symptoms. Patients with COPD should have a fast-acting bronchodilator available when taking zanamivir because of the risk of bronchospasm.[6]

Guidelines

In 2004, NICE produced a guideline[6] that made recommendations for the diagnosis and treatment of COPD. The next update of this guideline is due April 2010. The guidance currently recommends that long-acting inhaled bronchodilators ($beta_2$-agonists or anticholinergics) should be used to control symptoms and improve exercise capacity in patients who continue to experience problems despite the use of short-acting drugs. Inhaled corticosteroids should be added to long-acting bronchodilators to decrease exacerbation frequency in patients with an FEV_1 less than or

equal to 50% predicted who have had two or more exacerbations requiring treatment with antibiotics or oral corticosteroids in a 12-month period.

Pulmonary rehabilitation should be made available to all appropriate patients with COPD and non-invasive ventilation (NIV) should be used as the treatment of choice for persistent hypercapnic ventilatory failure exacerbations not responding to medical therapy. It should be delivered by staff trained in its application, experienced in its use and aware of its limitations.

Invisible Lives report

The starting point for this project was epidemiological evidence suggesting that there are an estimated 3·7 million people in the UK with COPD. With only 900,000 people currently diagnosed and receiving treatment and care, the remaining estimated 2·8 million people are unaware they have a disease which, if left untreated, could severely restrict their lives and eventually kill them.

COPD is a widespread but largely invisible disease. Most people in the UK have not heard of the disease or its symptoms; it has been neglected by health care services, with misdiagnosis a common theme; and those affected become isolated by the physical and emotional side effects of the disease as its severity increases. Because of this, and because of the stigma attached to having a smoking-related lung disease, people with COPD feel invisible and seldom have the energy or the confidence to challenge those in authority or to campaign for improvements in care.

As the NHS begins to tackle how it organises COPD services through a new National Service Framework due later this year, the establishment of clinical standards in Scotland and similar strategies tackling respiratory disease in the other UK nations, one of its biggest challenges is to identify and reach the estimated 2·8 million people with undiagnosed COPD. The British Lung Foundation (BLF) approached Dr Foster Intelligence to help identify where the "missing millions" at risk of future hospital admission with COPD are living and how best to target them, including the best communication channels to reach and engage this audience. To identify those at risk, Dr Foster Intelligence used various data sources including hospital admissions data and COPD GP surgery registrations data from the Department of Health, Experian's Mosaic™ lifestyle segmentation and TGI (Target Group Index) Analysis. Mosaic™ lifestyle segmentation is a population classification tool which breaks the population of Great Britain into 61 "lifestyle types" based on more than 400 data variables. By overlaying this information on the postcodes of people admitted to hospital with COPD, it was possible to predict which Mosaic™ lifestyle types are most at risk of future hospital admission with COPD. Using this data it was possible to identify which areas of the UK (defined by 192 Primary Care Organisation (PCO) boundaries) contain populations which have the highest proportion of predicted COPD hospital admissions. It was then possible to identify which areas of the UK face the greatest overall challenge from COPD taking into account the proportion of predicted COPD hospital admissions and the population size compared to the rest of the UK.

In Scotland, these COPD hotspots include Greater Glasgow and Lanarkshire. In England they include ex-industrial and inner city areas in the North East, North West and Yorkshire and Humberside; pockets of deprivation in otherwise affluent areas such as Barking & Dagenham in London; and areas with disproportionately high populations of older people including the South Coast of England and East Anglia. In Wales they include Blaenau Gwent and ex-mining towns along the Welsh valleys. In Northern Ireland, they include Belfast and Londonderry. Many of these areas have high and enduring levels of deprivation and associated unemployment.

Further information on the work of the British Lung Foundation can be found at www.lunguk.org

References

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