WHAT IS IT?
● Chronic obstructive pulmonary disease (COPD) is a chronic, slowly progressive disease characterised by airflow obstruction.
● It is secondary to chronic bronchitis, emphysema and some cases of chronic asthma.
● Cigarette smoking is the major risk factor (Kanner, 1996), although it is likely that environmental or genetic factors may also be contributory.
● There were 32,155 deaths from COPD in 1999 (British Thoracic Society, 2002).

SIGNS AND SYMPTOMS
● History of smoking 10–20 cigarettes a day for 20 or more years prior to onset of symptoms.
● Usually presents in fifth decade.
● Productive cough or acute chest infection.
● Wheezing.
● Later, breathlessness on moderate exertion.
● In severe disease, breathlessness on mild exertion, pursed-lip breathing, use of accessory respiratory muscles, central cyanosis.

INVESTIGATIONS
● Spirometry: forced expiratory volume in one second (FEV1). Obstructive impairment is shown by FEV1 <80 per cent of predicted value and FEV1/FVC (forced expiratory vital capacity) ratio <70 per cent.
● Chest X-ray may show hyperinflation, flat hemidiaphragm, reduced peripheral vascular markings and bullae.
● Full blood count to exclude chronic hypoxia.
● Serum alpha 1-antitrypsin deficiency should be excluded in the following cases:
  ● Chronic bronchitis and emphysema in a non-smoker;
  ● Premature onset of COPD;
  ● Family history of alpha 1-antitrypsin deficiency or COPD onset by age of 50.

MANAGEMENT ISSUES
● Stopping smoking reduces the rate of decline (BTS, 1997; Kanner, 1996).
● Patients need thorough instruction in the use of their medications, as compliance is poor in people with COPD. Many underuse maintenance medication while others overuse at times of exacerbation.
● Anxiety is common in patients with COPD experiencing breathlessness during exercise.
● Patients need to adapt their lifestyles to take account of their condition – they should try to keep generally fit, maintain a healthy weight and eat a balanced diet to slow the disease progress.
● Pulmonary rehabilitation programmes have been shown to improve exercise tolerance, relieve dyspnoea and fatigue and enhance patients' sense of control over their condition (Lacasse et al, 2002).

TREATMENT OPTIONS
● Inhaled bronchodilators – the patient's inhaler technique should be reviewed regularly.
● Short courses of corticosteroids may reduce breathlessness.
● Antibiotics may be required to treat acute exacerbations of COPD.
● Oxygen therapy may be used to treat hypoxaemia after assessment:
  ● Long-term oxygen therapy at home is unsuitable for patients unwilling to stop smoking as it presents a fire hazard;
  ● Ambulatory oxygen therapy can be useful to make shopping, exercise and travel easier.
● Annual flu immunisation is recommended, as is a one-off pneumococcal vaccination.

WEB SITES
British Lung Foundation: www.britishlungfoundation.org
British Thoracic Society: www.brit-thoracic.org.uk

REFERENCES