

## Lung alert

### Treatment with $\beta$ -blockers may reduce exacerbations and mortality in patients with COPD

Cardiovascular disease is a significant burden in patients with chronic obstructive pulmonary disease (COPD). Shortness of breath and fatigue may be misinterpreted as symptoms of COPD, leaving cardiovascular disease unrecognised. Beta-blockers improve survival in ischaemic heart disease and heart failure. Many physicians avoid prescribing  $\beta$ -blockers in COPD because of concerns regarding bronchoconstriction and 'competition' with  $\beta$ -agonists, despite meta-analyses showing that they are well tolerated in this group.

In this observational cohort study, data from 2230 patients coded as having chronic bronchitis or emphysema according to GP electronic medical records between 1995 and 2005 were analysed. All-cause mortality and exacerbations of COPD were measured as end points. The authors found that 665 patients (29.8%) were prescribed  $\beta$ -blockers for a variety of conditions. A reduction in all-cause mortality was observed in the  $\beta$ -blocker group with an HR of 0.7. This effect was seen in cardioselective and non-selective  $\beta$ -blocker use. A reduction in exacerbations of COPD was also noted. These findings were also observed in patients with COPD without overt cardiovascular disease.

This study demonstrates that  $\beta$ -blockers may be beneficial in COPD, but a randomised controlled trial would be needed to confirm these findings. The study used a diagnosis of COPD based on clinical coding rather than spirometry which may have resulted in misclassification of some patients. The findings in this large sample with a long follow-up should alert physicians to consider cardiovascular disease when assessing all patients.

► **Rutten F**, Zuithoff NPA, Hak E, *et al.*  $\beta$ -Blockers may reduce mortality and risk of exacerbations in patients with chronic obstructive pulmonary disease. *Arch Intern Med* 2010;**170**:880–7.

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