professionals, and clinical trials of treatment in older populations are vital if we are to ensure that all patients receive the very best care, regardless of their age.

**Contributors** PB, RS, MDP and IW lead the team responsible for audit data. RH provided the initial idea for the analysis. PB analysed the data under the supervision of RBH and LJT. PB wrote the paper with substantial input from all authors on content, style and presentation.

**Funding** The National Lung Cancer Audit in the UK is commissioned by the Healthcare Quality Improvement Partnership (HQIP) with funds from the Department of Health and maintained jointly by the Health and Social Care Information Centre (HSCIC) and the Royal College of Physicians.

### Competing interests None.

Provenance and peer review Not commissioned; externally peer reviewed.

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## Journal club

# CPAP may reduce cardiovascular mortality in patients with OSA

This double-blind randomised crossover study of patients with moderate-to-severe obstructive sleep apnoea (OSA) compared 3 months of therapeutic continuous positive airway pressure (CPAP) with 3 months of sham CPAP with a 1 month wash-out period in between. Markers of the metabolic syndrome were measured before and after each CPAP treatment.

The study population comprised 86 CPAP naïve patients aged 30–65 who were recruited from a sleep laboratory in New Delhi, India. Exclusion criteria were previous or current treatment for hypertension, diabetes, dyslipidemia or any evidence of end-organ damage due to these conditions.

There were modest, statistically significant, reductions in systolic and diastolic blood pressure, glycated haemoglobin, triglycerides, low-density lipoprotein, non-high-density lipoprotein and total cholesterol after CPAP therapy as compared with sham therapy. Additionally, there were significant decreases in body mass index and visceral and subcutaneous fat. Carotid intimal thickness and insulin resistance did not differ significantly. Applying the authors' criteria for the metabolic syndrome, there was a net reduction in the number of patients affected.

Predefined subgroup analysis of patients whose mean adherence with CPAP was five or more hours per night (n=51) revealed, compared with the whole population, significantly greater reductions in systolic and diastolic blood pressure, glycated haemoglobin, triglyceride, LDH and total cholesterol.

The study uses surrogate end points for cardiovascular mortality. CPAP reduces cardiovascular mortality in patients with OSA and CPAP is the recommended treatment for patients with moderate-to-severe OSA.

Further research is needed before we can conclude that additional cardiovascular mortality reduction benefit accrues to this subset of patients with moderate OSA who have the metabolic syndrome.

**Sharma SK,** Agrawal S, Damodaran D, *et al.* CPAP for the metabolic syndrome in patients with obstructive sleep apnoea. *N Engl J Med* 2011;**365**:2277—86.

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Published Online First 10 February 2012

Thorax 2012;67:839. doi:10.1136/thoraxjnl-2012-201669