



What's hot that the other lot got

Candy Lee

WEIGHT LOSS IN OBESE PATIENTS WITH ASTHMA

Weight reduction in obese patients with asthma has been found to improve asthma severity, airway hyper-responsiveness, asthma control, lung function and quality of life in this Canadian, prospective, controlled, parallel-group study (*Chest* 2015;147:1582–90. doi: 10.1378/chest.14-3105). Twenty-two patients with a mean body mass index of 45 were involved in this study. Sixteen patients followed a 3-month behavioural weight reduction programme with the remaining six patients acting as controls. After 3 months, a mean weight loss of 16.5 kg was seen in patients involved in the weight reduction programme compared with a mean weight gain of 0.6 kg in the control group. Significant improvement was seen in airway hyper-responsiveness ($p=0.009$), FEV_1 ($p=0.009$), FVC ($p=0.010$), asthma control ($p=0.001$) and asthma quality of life ($p=0.003$) in the intervention group. There was no significant change in these parameters within the control group. The study supports the active treatment of comorbid obesity in individuals with asthma.

HIGH FLOW OXYGEN IN ACUTE HYPOXAEMIC RESPIRATORY FAILURE

In this open label, multicentre, randomised control trial, treatment with high flow oxygen was shown to improve survival rates among intensive care unit patients with acute hypoxaemic, non-hypercarbic respiratory failure compared with other methods of oxygen delivery (*N Engl J Med* 2015;372:2185–96. doi: 10.1056/NEJMoa1503326). Three hundred and ten patients with acute hypoxaemic respiratory failure were randomised to receive either high flow oxygen via nasal cannula, oxygen via face mask or non-invasive ventilation (NIV). Primary outcome of intubation rate at 28 days and secondary outcomes of 90-day mortality and number of ventilator-free days were assessed. Intubation rate at

28 days showed no statistical difference and were 38% for high flow oxygen, 47% for oxygen via face mask and 50% for NIV. Number of ventilator-free days was significantly higher in the high flow oxygen group. Ninety-day mortality also reached statistical significance. Mortality rates among those treated with standard oxygen therapy were double, and those treated with NIV were more than double, of patients treated with high flow oxygen.

LUNG DISEASE IN SMOKERS WITH NORMAL SPIROMETRY

Lung disease and impairment may be underestimated in smokers whose spirometry does not meet COPD criteria according to this cross-sectional observational study (*JAMA Intern Med* Published Online First: 22 June 2015. doi:10.1001/jamainternmed.2015.2735). Eight thousand eight hundred and seventy-two patients, with a 10 or more pack year history of smoking, underwent spirometry, chest CT, 6-min walk test and quality of life questionnaires. Approximately 50% of patients were found to have 'normal' lung function. Chest CT revealed evidence of emphysema or airway disease in 42% of smokers with normal spirometry versus 10% of non-smokers. The prevalence of lung damage seen on CT increased with advancing age. Twenty-three per cent of smokers with normal spirometry reported shortness of breath. This patient group was also found to have worse performance on 6-min walk test and worse quality of life than never smokers. The authors concluded that the effect of chronic smoking on the lungs and on the individual is substantially underestimated when using spirometry alone.

OLDER PATIENTS WITH ASTHMA INCREASED RISK OF TREATMENT FAILURE

Higher proportions of older patients with asthma (aged 30 years or over) experienced reduced response to therapy compared with younger patients, according to this retrospective study that analysed data from 1200 patients with mild to moderate asthma (*Am J Respir Crit Care Med* Published Online First: 11 June 2015. doi:10.1164/rccm.201503-0426OC). Patients aged 30

years or older were more likely to experience treatment failure which was defined as exacerbation requiring oral corticosteroids or hospital visit, worsening of lung function or increased use of asthma medication. Despite older patients having a slightly higher median adherence average than patients under 30 years (92.5% vs 89.9%, $p<0.001$), treatment failure was reported to be 17.3% compared with 10.3% of those under 30 years. Failure rates increased proportionally with increasing age, with a 1 year increase in age being associated with a 2% increased risk and a 27% increased risk of treatment failure reported with a 10 year age increase. Lower lung function, longer asthma duration and use of inhaled corticosteroids were also associated with a higher risk of treatment failure.

LOW DOSE CT SURVEILLANCE OF NON-SOLID LUNG NODULES

This large prospective cohort study (*Radiology* 2015. doi: 10.1148/radiol.2015142554) reported that low dose CT is a safe and effective method in the monitoring of patients with non-solid nodules, in which surveillance with CT detected all nodules in transition to part-solid tumours thereby enabling curative treatment. Results were analysed from 54 496 participants of the International Early Lung Cancer Program who underwent baseline low dose CT and annual repeat screenings. Two thousand three hundred and ninety-two baseline CT screenings (4.2%) identified a non-solid nodule, of which after pathological diagnosis, 73 cases of adenocarcinoma were diagnosed. Annual screening identified a new non-solid nodule in 485 patients (0.7%) of which 11 patients were subsequently diagnosed with adenocarcinoma. All adenocarcinomas diagnosed were stage 1 regardless of initial size or time to diagnosis. After a median follow-up of 78 months, patients with treated lesions had 100% survival rate. Median transition time from non-solid to part-solid was more than 2 years. The authors concluded that non-solid nodules of any size could therefore be safely followed by low dose CT at 12 monthly intervals.

Competing interests None declared.

Provenance and peer review Commissioned; internally peer reviewed.



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To cite Lee C. *Thorax* 2015;70:916.

Thorax 2015;70:916.
doi:10.1136/thoraxjnl-2015-207515

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