



What's hot that the other lot got

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UPPER AIRWAY STIMULATION FOR OBSTRUCTIVE SLEEP APNOEA

In this multicentre, prospective cohort study (*N Engl J Med* 2014;370:139–49), the clinical safety and efficacy of upper airway stimulation in 126 patients with moderate to severe obstructive sleep apnoea who had difficulty adhering to CPAP were evaluated. Upper airway pacing of the hypoglossal nerve, coordinated with ventilatory effort, led to significant improvement in subjective and objective measures of the severity of obstructive sleep apnoea. Median apnoea-hypopnoea index at 12 months reduced 68%, from 29.3 events/h to 9.0 events/h ($p<0.001$). Oxygen desaturation index decreased 70%, from 25.4 events/h to 7.4 events/h ($p<0.001$). A reduction of sleep apnoea symptoms and improved quality of life were reported by patients. There is a possible role for this treatment in the future, although it is unlikely to replace CPAP as first line therapy.

EFFECT OF REDUCED IODINE DOSAGE ON CTPA IMAGE QUALITY

Optimal pulmonary arterial opacification is required to allow adequate CT pulmonary angiogram (CTPA) interpretation. This UK, single centre, retrospective study (*Clin Radiol* 2014;69:36–40) reviewed the effect of administering reduced volumes of high concentration iodine (thereby reducing the dose) versus standard protocol. The authors reported no significant difference in the mean opacification of the main pulmonary arteries and also no significant difference in the number of suboptimal

opacified scans between the two protocols. Using reduced doses of iodine for CTPA appears to be feasible and may contribute to reducing the risk of contrast induced nephropathy.

EUROPEAN COPD MORTALITY DATA

COPD is a leading cause of mortality worldwide. In this study (*Lancet Respir Med* 2014;2:54–62), COPD mortality between 1994 and 2010 in the 27 countries in the EU was analysed. Overall, a downward trend in mortality was noted. There was a substantial reduction in age standardised mortality rate in men; reduced from 90.7 in 1994 to 61.33 in 2010. For women, the mortality rate was slightly reduced from 26.99 in 1994 to 25.15 in 2010. Mortality rates differed between countries with higher mortality reported in UK, Denmark and Hungary. Below EU average rates of COPD deaths in Greece, Cyprus and Bulgaria were reported despite higher rates of smoking.

COMBINED TREATMENT FOR SMOKING CESSATION

Combined treatment with varenicline and bupropion slow release was reported to increase prolonged abstinence from smoking compared with varenicline alone in this randomised, double-blind, placebo controlled, multicentre trial (*JAMA* 2014;311:155–63). Patients were initiated on 12 weeks of treatment and followed up for a period of 52 weeks. Fifty-three per cent of the combination therapy group achieved prolonged smoking abstinence versus 43.2% in the varenicline monotherapy group at week 12. At 26 weeks, prolonged smoking cessation remained statistically significant in the combination group (36.6% vs 27.6% in the varenicline only group) but this was lost at 52 weeks (30.9% vs 24.5%, respectively). Patients receiving varenicline and bupropion

reported more anxiety (7.2% vs 3.1%) and depressive symptoms (3.6% vs 0.8%).

NOVEL TREATMENT FOR TB?

Multidrug resistant and extensively drug resistant TB (MDR-TB, XDR-TB) is a growing problem worldwide. In this Swedish, phase 1 safety study (*Lancet Respir Med* 2014;2:108–22), 30 patients with confirmed MDR/XDR-TB were given a single dose of autologous mesenchymal stromal cells alongside standard TB anti-biotic treatment. At 18 months, 16 patients treated with mesenchymal stromal cells were considered to be cured from MDR/XDR-TB. Immune system function was not compromised and treatment was well tolerated. Phase 2 trials are now required to evaluate efficacy and safety of this potential new treatment.

IMPROVING MESOTHELIOMA SURVIVAL WITH NEOADJUVANT RADIOTHERAPY

Neoadjuvant radiation therapy prior to surgery has been reported to improve advanced mesothelioma survival in this Canadian study (*J Thorac Oncol* 2014; doi: 10.1097/JTO.000000000000078; published ahead of print). Twenty-five patients diagnosed with T1-3N0M0 mesothelioma were given five daily fractions of radiotherapy (25 Gy dose) plus a 5 Gy boost to at-risk areas, followed by extrapleural pneumonectomy within 1 week of completing radiotherapy. The 3-year survival in this study was stated to be 72%, compared with 32% reported with other conventional treatments. The authors therefore concluded that SMART (Surgery for Mesothelioma After Radiation Therapy) may be a feasible option in selected patients with resectable mesothelioma but further trials are required.

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