



What's hot that the other lot got

Simon Rolin

INTRAPLEURAL MINOCYCLINE FOR SPONTANEOUS PTX?

Current initial treatment for primary spontaneous pneumothorax (PTx) has a substantial rate of recurrence. In this study (*Lancet* 2013;381:1277–82), investigators randomly assigned patients with a first episode of PTx to receive minocycline pleurodesis or simple aspiration and drainage. At 1 year, 29.2% patients in the minocycline group had a recurrence of PTx, compared with 49.1% of the control group, suggesting minocycline pleurodesis should be standard therapy for PTx.

RV FUNCTION AS A PREDICTOR OF NEGATIVE OUTCOME IN LUNG TRANSPLANT

Right ventricular (RV) dysfunction has a poor prognosis in patients with chronic cardiopulmonary disease. Here, the influence of RV function at rest and during exercise on mortality in patients awaiting lung transplantation was explored (*BMJ Open* 2013;3:e002108). The inability to increase RV ejection fraction during exercise is a sign of latent dysfunction, and the authors found RV ejection fraction during exercise was an independent predictor of death. This assessment could be useful in aiding prioritisation of patients listed for lung transplantation.

PERSON-TO PERSON TRANSMISSION OF MYCOBACTERIUM ABSCESSUS IN A UK CF CENTRE

M abscessus accounts for a large and increasing proportion of cystic fibrosis (CF)-related non-tuberculous mycobacterial disease. It is associated with a more rapid rate of decline in lung function, and requires prolonged multidrug treatment. The authors conducted whole genome sequencing and antimicrobial susceptibility testing and found that 11 patients shared one genetically identical (or near-identical) strain of *M abscessus* subspecies *massiliense*, differing by less than 10 base

pairs. This is less diversity than is normally found within isolates taken from a single individual, strongly indicating between-patient transmission (*Lancet* 2013; doi:10.1016/S0140-6736(13)60632-7).

MACOLIDES AND BRONCHIECTASIS

Long-term maintenance azithromycin is beneficial in CF. This randomised trial (*JAMA* 2013;309:1251–9) studied efficacy of azithromycin in adults with non-CF bronchiectasis. The median number of pulmonary exacerbations in the azithromycin group was significantly lower than in the placebo group. Significant improvements were also seen in lung function, symptoms and quality of life. A macrolide resistance rate of 88% was noted in the azithromycin-treated patients compared with 26% in the treatment group.

In the BLESS trial (*JAMA* 2013;309:1260–7.), patients with bronchiectasis were randomly assigned to receive erythromycin or placebo. Compared with placebo, the number of pulmonary exacerbations was significantly lower for patients receiving erythromycin. This decrease was associated with an increased rate in macrolide resistance among oropharyngeal streptococci.

CLARITHROMYCIN AND CARDIOVASCULAR EVENTS

Clarithromycin is the most frequently used macrolide in the UK. In this study (*BMJ* 2013;346:f1235), data from two large prospective cohort studies of patients admitted to hospital with an acute exacerbation of COPD (AECOPD), or community acquired pneumonia (CAP), were analysed to test the hypothesis that clarithromycin is associated with excess cardiovascular events and mortality. A significant association was found between clarithromycin use in AECOPD and increased risk of cardiovascular events, with an increase in cardiovascular mortality, but not all-cause mortality. Patients admitted with CAP treated with clarithromycin only had an increased risk of cardiovascular events.

AMITRIPTYLINE IMPROVES LUNG FUNCTION IN CF

Studies in mice and humans with CF have shown an accumulation of ceramide in bronchial, tracheal and intestinal cells. Amitriptyline, a functional acid sphingomyelinase inhibitor, normalises ceramide concentrations in CF mice with an associated improvement in mucociliary clearance, chronic inflammation and rate of infection with *Pseudomonas aeruginosa*. In this study, CF patients (*Cell Physiol Biochem* 2013;31:505–12) were treated with amitriptyline or placebo. FEV₁ increased in the amitriptyline group, with a decrease in ceramide levels in nasal epithelial cells. Treatment was well tolerated with no major side effects.

ACTIVE INFLAMMATION IN END STAGE IPF

Patients with confirmed IPF on surgical lung biopsy in early disease, subsequently received lung transplantation after progression to end-stage disease (*J Inflamm Res* 2013;6:63–70). Median time from surgical lung biopsy to lung transplantation was 24 months. Fibrosis and honeycomb change were greater in the lungs removed during transplantation compared with surgical lung biopsy. There were more lymphocyte aggregates in the explant samples compared with biopsy, suggesting that active cellular inflammation continues in IPF in severe end-stage disease.

VITAMIN D LEVELS LINKED TO PULMONARY FUNCTION

A large cross-sectional study demonstrated a significant positive correlation between serum vitamin D levels and pulmonary function, with a greater effect seen in patients with a history of tuberculosis (TB). Patients with the highest serum levels of 25-hydroxyvitamin D (25-OHD) had significantly higher FEV₁ and FVC compared with patients who had the lowest levels of 25-OHD. The absolute difference in FEV₁ between the top and bottom quartiles in 25-OHD level in the patients with a history of pulmonary TB was four times greater than that seen in the overall population (*JCEM* 2013;98:1703–10).

Competing interests None.

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