JOURNAL CLUB SUMMARIES

What's hot that the other lot got

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HOUSE DUST MITE IMMUNOTHERAPY TO IMPROVE ASTHMA CONTROL

Two trials recently have discussed this question. The first randomised double blind controlled trial looked 600 subjects who took a standardised quality house dust mite sublingual immunotherapy tablet (6 SQ-HDM) (doi:10.1016/j.jaci.2014.03.019). The inhaled corticosteroid (ICS) dose was standardised and adjusted to the lowest dose required to provide asthma control before commencing the trial medication. The primary end point was an individual reduction in ICS dose at 1 year. There was a mean difference between 6 SQ-HDM and placebo in the reduction in daily ICS dose of 81 µg (p=0.004). The second trial looked at the tolerability of house dust mite sublingual immunotherapy in asthma (doi:10.1111/all.12188). This was a randomised trial involving 454 adults with the primary outcome being stable asthma for the last 16 weeks of a 20 week trial. This occurred in 85.4% in treatment arm v 81.5% in the control arm. The post hoc analysis revealed a subgroup of 175 with moderate asthma who achieved better control (80.5% treatment v 66.1% control) and a greater mean reduction in ICS use.

WHICH INHALER FOR COPD?

A trial (*JAMA* 2014;312:1114–21) looked at all patients in Canada from 2003 to 2011 who were 66 years or older and met a case definition of COPD. There were 8712 new users of long-acting bronchodilator (LABA) and inhaled corticosteroids therapy and 3160 new users of LABAs alone. They were followed up for a median of 2.7 years and 2.5 years, respectively. The outcome assessed was death or hospitalisation for COPD. The outcomes occurred in 5594 in the LABA ICS group (3174 (36.4%) deaths, 2420 COPD hospitalisations (27.8%)) and 2129 in the LABA alone group (1179 deaths (37.3%); 950 hospitalisations (30.1%)). New use of LABA and ICS was associated with a modestly reduced risk of death or COPD hospitalisation compared with new use of LABAs alone (HR, 0.92; 95% CI 0.88 to 0.96).

TREATING MULTI DRUG RESISTANT TUBERCULOSIS (MDR-TB)

Bedaquiline is a diarylquinoline that inhibits mycobacterial ATP synthase, and has been shown to cause accelerated sputum-culture conversion in patients with MDR-TB, when added to a preferred background regimen for 8 weeks (*N Engl J Med* 2014;371:723–32). This trial looked at its effects when taken at a dose of 400 mg once daily for 2 weeks followed by 200 mg three times a week for a further 22 weeks (24 weeks in total) compared with a placebo in a randomised trial involving 160 patients. The primary efficacy end point was the time to sputum-culture conversion in liquid broth. Bedaquiline reduced the median time to culture conversion, compared with placebo, from 125 days to 83 days (p<0.001) and increased the rate of culture conversion at 24 weeks (79% vs 58%, p=0.008) and at 120 weeks (62% vs 44%, p=0.04). Cure rates at 120 weeks were 58% in the bedaquiline group and 32% in the placebo group (p=0.003).

PARTIAL PLEURECTOMY OR TALC FOR MALIGNANT MESOTHELIOMA?

The MesoVATS trial in the UK randomly allocated patients who had their radiology verified by two independent radiologists, to video assisted thorascopic surgery partial pleurectomy (VATS-PP) or talc pleurodesis (doi:10.1016/S0140-6736(14)60418-9). The partial pleurectomy and talc pleurodesis could be carried out as part of the VATS diagnostic procedure. After the procedure treatment was at the behest of the referring clinician. The primary outcome was survival at 1 year, 175 patients were randomised. Survival at 1 year was 52% in the VATS-PP group and 57% in the talc pleurodesis group. Surgical complications were significantly more common after VATS-PP than talc pleurodesis (31% V 14%; p=0.019) as were respiratory complications (24% v 15%; p=0.22). The median hospital stay was longer in the VATS-PP group compared to the talc group (7 days v 3 days; p>0.0001).

MACROLIDES AND RISK OF CARDIAC DEATH

This trial from the Netherlands looked at the risk of cardiac death from clarithromycin compared with penicillin V in a cohort study in Danish adults who had received a 7-day course of antibiotics (n=4 355 309) (BMJ 2014; 349:g4930). Two hundred and eighty-five cardiac deaths were seen. The use of clarithromycin showed a significantly increased rate of cardiac death (incidence rate 5.3 per 1000 person years) in comparison to penicillin V (incidence rate 2.5 per 1000 person years). The risk of cardiac death was greater in women (adjusted rate ratio 2.83 in women and 1.09 in men). Compared with penicillin V the adjusted absolute risk difference was 37 cardiac deaths per 1 million courses of clarithromycin.

NEBULISED AZTREONAM IN NON-CYSTIC BRONCHIECTASIS

The paper (doi:10.1016/S2213-2600(14)70165-1) considered two trials AIR-BX1 and AIR-BX2 who used aztreonam for inhalation (AZLI) in a double blind randomised placebo controlled trial in adults with bronchiectasis and Gram-negative organisms. Both trials used AZLI for 4 weeks on (three times a day via an e-flow nebuliser) and 4 weeks off. The primary end point was the change from baseline Quality of Life-Bronchiectasis Respiratory Symptoms scores at 4 weeks. The difference between AZLI and placebo for adjusted mean change from baseline Quality of Life-Bronchiectasis Respiratory Symptoms scores was not significant at 4 weeks in AIR-BX1 (0.8 (95% CI −3.1 to 4.7), p=0.68), but was significant in AIR-BX2 (4.6 (1.1 to 8.2), p=0.011), this was not deemed to be clinically significant. The group who received AZLI had more discontinuations due to dyspnoea, cough and increased sputum.

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