JOURNAL CLUB SUMMARIES

What's hot that the other lot got

Candy Lee

AID TO SELECT SMOKING CESSATION TREATMENT?

Measuring a biomarker of nicotine clearance may improve smoking quit rate success by optimising cessation treatment selection according to this multicentred, double-blinded, randomised control trial (*Lancet Respir Med* 2015;doi:10.1016/S2213-2600(14)70294-2). Nicotine metabolite ratio was measured in 1246 patients who were randomly assigned to one of three treatments (nicotine patch plus placebo pill, varenicline plus placebo patch or placebo patch and pill). Patients were assessed at the end of 11-week treatment and had follow-up at 6 and 12 months. Normal metabolisers of nicotine were found to have significantly higher quit rates with varenicline than with nicotine patch at the end of treatment (38.5% vs 22.5%) and at 6 months (22% vs 13.6%), but this difference was no longer significant at 12-month follow-up. There was no significant difference in the efficacy of both treatments for slow metabolisers but more severe side effects were reported when taking varenicline, suggesting that nicotine patches may be a better treatment choice for this patient group. Further research is required to confirm results and viability of use in clinical practice.

PNEUMONIA AND LONG-TERM CARDIOVASCULAR RISK

Hospitalisation for pneumonia increases both short-term and long-term cardiovascular risk, according to this matched-cohort study (*JAMA* 2015;313:264.doi:10.1001/jama.2014.18229). Researchers performed secondary data analysis from the Cardiovascular Health Study (mean patient age 73 years) and from the Atherosclerosis Risk in Communities Study (mean patient age 56 years) identifying 1271 patients hospitalised with pneumonia. Each patient was matched with two controls and all patients were followed up for 10 years and observed for occurrences of cardiovascular disease. The highest risk for cardiovascular disease was seen in the first year and the risk was still increased in subsequent years, even after adjusting for multiple confounders. Patients in the older cohort were found to have a fourfold increased risk in the first 30 days, compared with controls. The risk remained raised over the 10 years with a 1.86-fold increased risk at 10 years being reported. In the younger cohort, the risk was higher in the first 2 years after which the risk was not statistically significant (2.38-fold increased risk in the first 90 days and a 1.88-fold increased risk at 2 years). The study suggests that pneumonia may be an important independent risk factor for cardiovascular disease, especially in older patients.

ASTHMA AND OBSTRUCTIVE SLEEP APNOEA RISK

Obstructive sleep apnoea (OSA) is more prevalent in patients with asthma, but it is unclear whether asthma itself is a causal risk for OSA. In this population-based, prospective, epidemiological study (*JAMA* 2015;313:156–4. doi:10.1001/jama.2014.17822), researchers examined the relationship between asthma and new onset OSA. Recruited participants received overnight polysomnography studies and health-based questionnaires at 4 yearly intervals over a 20-year period. At the first 4-year follow-up, 27% of patients with asthma had newly developed OSA compared with 16% of patients without asthma ($p=0.02$). Over the full study period, the authors reported an almost 40% greater risk of sleep apnoea for asthmatics. The duration of asthma diagnosis was also found to have a dose-dependent relationship on the association of asthma and OSA with the highest risk occurring among patients who had asthma of ≥10 years of duration. Although the study was able to show an association between asthma and OSA, it was unable to prove a cause-and-effect relationship.

PREDNISOLONE USE IN COMMUNITY-ACQUIRED PNEUMONIA

In this multicentred, double-blinded, randomised, placebo-controlled trial (*Lancet*. doi:http://dx.doi.org/10.1016/S0140-6736(14)62447-8), 785 patients hospitalised for community-acquired pneumonia were randomised to receive (in addition to antibiotic treatment) a 7-day course of prednisolone (50 mg) or placebo. The primary endpoint for this study was time to clinical stability, defined as time until stable vital signs for at least 24 h. Median time to clinical stability was shorter in the prednisolone group than in the placebo group (3.0 vs 4.4 days). The length of hospital stay was reduced to 6 days from 7 days and the use of intravenous antibiotic was also reduced by 1 day in the prednisolone cohort. Complications from pneumonia were similar between the two groups; however, patients receiving prednisolone had a higher occurrence of hyperglycaemia needing insulin treatment. The authors concluded that the findings are relevant from a patient perspective and an important determinant of hospital costs and efficiency. The role of glucocorticoids in acute bacterial pneumonia is still not yet clear.

RETHINKING ASTHMA RISK FACTORS

In an assessment of an American health survey involving 23 605 asthmatic children, researchers reported that demographic factors such as race, ethnicity, and household income were greater significant risk factors for asthma than living surroundings (*J Allergy Clin Immunol*.doi:http://dx.doi.org/10.1016/j.jaci.2014.11.022). No significant difference was found in the prevalence of asthma between children living in cities (12.9%) and those living in suburban and rural areas (10.6%) once adjusted for variables such as race, ethnicity and geographical region. Independent risk factors for asthma were identified as Puerto Rican ethnicity and African–American race (corresponding with previous research), with rates reported as 20% and 17%, respectively compared with Caucasian (10%) or Asian children (8%). Poverty was also associated with a higher than average risk of asthma with the lower the household's annual income, the higher the risk of asthma diagnosis. Urban living had generally been regarded as a risk factor for asthma due to higher rates of asthma and greater morbidity being reported, this study suggests that the association between urban living and asthma had been previously overestimated.

Competing interests None.

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