JOURNAL CLUB SUMMARIES

What's hot the other lot got

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COUGH PLATES VERSUS COUGH SWABS FOR BACTERIAL DETECTION IN CYSTIC FIBROSIS

Obtaining sputum samples from paediatric cystic fibrosis patients for targeted microbiological therapy is difficult. The cough swab is often used, which involves a cotton-wool swab held in the back of the pharynx and the patient asked to cough. An increasingly used alternative technique is the cough plate, which involves patients coughing directly onto a culture plate. A recent study (*Arch Dis Child* 2013;98:768–71) has compared the two techniques. Both techniques to collect specimens were conducted in a randomised order at assessments. In total, 95 non-expectorating patients (mean age 9 years) took part, with 324 sets of cough plates and cough swabs produced. Pathogens were isolated in 18% of cough swabs compared with 8% of cough plates. Agreement between the two specimen types occurred in only 6% of cases. A similar spectrum of pathogens was produced from both techniques. Although most (84%) patients preferred the non-invasive nature of the cough plates, they appear less effective for isolating bacterial pathogens from non-expectorating patients.

SADDLE EMBOLISM IS ASSOCIATED WITH AN INCREASED MAJOR ADVERSE EVENT RATE

Severity features of acute pulmonary emboli include shock, acute right ventricular (RV) dysfunction and raised cardiac-specific enzymes. Thromboembolus straddling the pulmonary artery bifurcation (saddle embolism) occurs in approximately 5% of PEs. Kwak et al (*Br J Radiol* 2013;86. doi:10.1259/bjr.20130273) have assessed the significance of this feature in those diagnosed with non-high-risk PE at diagnosis. Records of 297 patients presenting with acute PE were included in the analysis; 10% had a saddle embolus. There was a trend for increased 30-day mortality in the patients with a saddle embolus compared with those without, but this was not statistically significant. Patients with saddle emboli did have a significantly higher rate of major adverse events (shock, mechanical ventilation, in-hospital mortality, thrombolysis and thrombectomy, within 30 days).

β BLOCKERS REDUCE MORTALITY AFTER MI IN COPD PATIENTS

Prescriptions of β blockers in patients with COPD have historically been low as a consequence of concerns over inducing bronchospasm. This study (*BMJ* 2013;347:f6650. doi:10.1136/bmj.f6650) explored the use of β blockers in COPD patients treated for a first myocardial infarction (MI). Data were collected from the UK national registry of myocardial infarction (Myocardial Ischaemia National Audit Project) linked to the General Practice Research Database. Two thousand two hundred nine patients were identified, but 1146 were excluded which included 679 patients with records stating β blockers were contraindicated. GOLD staging was similar in those prescribed and not prescribed a β blocker, but patients prescribed β blockers were younger and had less frequent COPD exacerbations. Patients started on or already on β blockers for MI had reduced mortality compared with those not prescribed β blockers. There was no evidence of poor drug tolerability after prescription. This suggests withholding β blockers after an MI is inappropriate, but selection bias may have occurred through excluding all patients deemed contraindicated to β blockers.

IMPROVING SURVIVAL IN SYSTEMIC SCLEROSIS-ASSOCIATED PULMONARY ARTERIAL HYPERTENSION

Systemic sclerosis-associated pulmonary arterial hypertension (SSc-PAH) is a major cause of morbidity and mortality in patients with SSc, with 3-year survival often quoted at 50%. To assess the impact of recent advances in management, Launay et al (*Ann Rheum Dis* 2013;72:1940–6) assessed characteristics of patients recently diagnosed and managed for SSc-PAH through the French Pulmonary Arterial Hypertension Network. Between 2006 and 2009, a total of 145 patients were diagnosed. At diagnosis, a majority of patients were in NYHA functional class III–IV (79%). Median follow-up after PAH diagnosis was 2.3 years. Median survival rates were 90%, 78% and 56% at 1, 2 and 3 years from PAH diagnosis, respectively. Poor prognostic factors include aged >70 years, male gender and poor right ventricular function. This suggests some improvement in mortality but further significant improvement is required.

CHRONIC HYPERSENSITIVITY PNEUMONITIS MAY BE LABELLED AS IDIOPATHIC PULMONARY FIBROSIS

Differentiation between chronic hypersensitivity pneumonitis (CHP) and idiopathic pulmonary fibrosis (IPF) can be difficult despite assessments of potential environmental triggers being performed. Morell et al (*Lancet Resp Med* 2013;1:685–94) report the results of a prospective case–cohort study where extended investigations for CHP were undertaken in 46 patients diagnosed with IPF. Investigations included specific IgG determination, bronchoalveolar lavage, bronchial challenge testing with suspected antigens and a review of lung biopsy histopathological features, as well as the collection of microbiological culture specimens obtained from suspected sources in the patient's environment. Following these assessments, 20 of the 46 (43%) patients were subsequently diagnosed with CHP. The authors report that most of these cases were attributed to exposure to occult avian antigens from commonly used feather bedding and reflect that further research and studies at other centres is warranted.

GLOBAL MORTALITY ESTIMATES FOR THE 2009 INFLUENZA PANDEMIC

The influenza pandemic of 2009 triggered a major public health logistical challenge. The modest number of laboratory-confirmed H1N1pdm09 deaths, however, has caused debate to whether the public health response to H1N1pdm09 was excessive. As of 31 August 2010, the WHO received reports of 18 449 laboratory-confirmed deaths from H1N1pdm09 infection, but it is thought this is a significant underestimate. The WHO funded Global Pandemic Mortality (GLaMOR) project aimed to make a conservative estimate of the global H1N1pdm09 mortality using updated statistical modelling (*PLoS Med* 2013;10: e1001558). Overall, the model estimated that between 123 000 and 203 000 pandemic respiratory deaths occurred. This is similar mortality to seasonal influenza, but the majority of deaths (62–85%) were attributed to persons under 65 years of age compared with an expected 19%.

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