



What's hot that the other lot got

Lucy E Maddocks

PROCALCITONIN GUIDED ANTIBIOTIC THERAPY FOR LRTIS

Serum procalcitonin is associated with infection severity and is more specific for bacterial rather than viral infections. Huang *et al.* (*NEJM* 2018;379:236) investigated whether procalcitonin-guided use of antibiotics in lower respiratory tract infections (LRTI) reduces the number of total antibiotic days over a 30 day period. This randomised control multi-centred clinical trial focused on patients admitted to emergency departments from 14 US hospitals with suspected LRTI and divided them into two groups: the usual care group (n=834) and the procalcitonin group (n=830). Prior to study initiation the trial sites had educational updates on best practice for LRTI management. Clinicians in the procalcitonin group were provided with initial and/or serial procalcitonin results alongside a procalcitonin-guided antibiotic guideline. There was no significant difference between the two groups in mean number of antibiotic days (4.2 days for the procalcitonin group vs 4.3 days for the usual care group; difference -0.05 days, 95% CI -0.6 to 0.5 days, P=0.87). Patients with lower levels of procalcitonin had fewer infective symptoms and therefore the impact of measuring procalcitonin on treatment decisions was negligible. The study results suggest that wide spread use of procalcitonin is unlikely to reduce antibiotic use in suspected LRTIs over supported best practice.

COUGH PREVALENCE AND ASSOCIATIONS

Cough is a common cause for medical contact in primary care. Lähti, Pekkanen and Koskela (*BMJ Open* 2018;8:e022950) used an observational study design to define the risk factors for acute (<2 weeks), subacute (2–8 weeks) and chronic (>8 weeks) cough in a cross-sectional study. This study involved an 80-item questionnaire being sent to public service employees in two towns in central Finland. 3697 participants responded (26.4% of population surveyed) of which 199 (5.4%) had acute cough, 126 (3.4%) had subacute cough and 267 (7.2%)

had chronic cough. Multivariate analysis showed that age, family history of chronic cough, moisture damage exposure, somatic symptom score, asthma, chronic rhinosinusitis, gastro-oesophageal reflux were associated with increased risk of chronic cough. The study concluded that family history is associated with all cough subtypes; allergy related disorders were associated with subacute as well as chronic cough; and exposure to moisture is a possible treatable risk factor for all cough subtypes. The study argues that acute and subacute cough should not be seen as manifestations of acute respiratory tract infections but may be due to modifiable risk factors.

EFFECT OF WATCHING THE BREATHLESS BREATHE

Breathlessness is a common symptom with both a physiological and psychological basis. Herzog *et al.* (*Eur Respir J* 2018;51:1702682) investigated the impact of observing dyspnoea in others using a series of carefully designed studies. Study 1 involved showing 44 dyspnoea-related pictures (eg, drowning, suffocating) and five neutral control pictures to 86 (61 female) participants. Breathlessness intensity was reported on the mBorg scale (0–10; higher scores=higher intensity) and their affective state using a 9-point self-assessment manikin. The same participants then watched five video sets each containing neutral, negative and dyspnoea related content. Ratings were made similarly to study 1. Study 3 combined the 40 highest dyspnoea rated pictures from study 1 with 40 neutral, 40 positive (eg, smiling person) and 40 negative pictures (eg, crying person) into a picture series and examined the responses in 50 (41 female) participants. Participants rated their own self perceived dyspnoea and affective state and also assessed levels of empathy and anxiety and brain responses using EEG. A subgroup of 24 participants had respiratory mechanics measured during the Study 3. All three studies demonstrated that dyspnoea related stimuli caused mild-moderate dyspnoea and increased negative affect compared with control stimuli. There was no significant effect on measured respiratory mechanics but there were increased late positive

potentials detected on EEG for dyspnoea related pictures. The paper demonstrates the concept of vicarious dyspnoea and the authors argue that these findings have significant clinical impact in terms of the affect that dyspnoea can have on carers, family and friends and can be used when considering cognitive behavioural therapy in patients.

SCREENING FOR ANXIETY IN COPD

Anxiety in COPD is associated with increased morbidity and mortality but is often under diagnosed. Barker *et al.* (*Ann Am Thorac Soc* 2018;15:926) investigated the use of the Generalised Anxiety Disorder (GAD-7) questionnaire, the Hospital Anxiety and Depression Scale (HADS-A) and the Anxiety Inventory for Respiratory Disease (AIR) in screening for anxiety in COPD in a prospective cohort study across 16 centres. The study compared scores of these three questionnaires against the Mini International Neuropsychiatric Interview (MINI) as the gold standard in 219 COPD patients. 11% of participants had a DSM V diagnosis of anxiety according to the MINI. The three questionnaires identified higher rates of elevated anxiety levels among the patient group; AIR: 38%, GAD-7: 30% and HADS-A: 20%. The internal consistency and intra-class correlations (ICC) for repeatability between in-person and telephone interview were similar for all three questionnaires; Cronbach's alpha: 0.86–0.90 and ICC: 0.60–0.70. GAD-7 had the highest area under the curve (AUC) in the receiver-operator characteristics curves compared with HADS-A and AIR: AUC (95% CI) 0.78 (0.69 to 0.87), 0.74 (0.64 to 0.84); P=0.430 and 0.66 (0.56 to 0.76); P=0.014, respectively. Meanwhile, HADS-A had the highest specificity (85%); GAD-7: 77%, P<0.001 and AIR: 65%, P<0.001; while all three tools had similar sensitivities. Despite the high level of anxiety symptoms in COPD patients clinically diagnosed anxiety disorder was only present at a similar level to the general US population.

Competing interests None declared.

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