What's hot that the other lot got

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NEW DEFINITIONS FOR WEANING FOR MECHANICALLY VENTILATED PATIENTS: THE WIND STUDY

Weaning from mechanical ventilation is an ill-defined process. The 2007 International Consensus Conference (ICC) weaning definition is difficult to apply as it uses spontaneous breathing trials (SBT) which are not universally used and excludes tracheostomised patients and those who fail to wean or die. In this prospective, multinational observational study, Béduneau *et al* propose a weaning classification for utilisation in daily practice for all mechanically ventilated patients (*Am J Respir Crit Care Med* 2017;195:772–83). 2709 intubated patients from 36 European intensive care units (ICUs) were observed until ICU discharge or day 60. The authors propose a classification based on weaning duration from first separation attempt (extubation or SBT in intubated patients or ≥ 24 hours spontaneous ventilation in tracheostomised patients). Group 'no weaning' (24%) had no separation attempt; group 1 (57%) weaned in <1 day (mortality 5%); group 2 (10%) weaned in >1 and <7 days (mortality 15%); group 3 (9%) had a weaning duration of ≥ 7 days (mortality 30%). Group 3 was divided into 3a (completed wean after ≥ 7 days, 62%) and 3b (prolonged unsuccessful wean, 38%). The ICC classification could not be applied to 49% of patients whereas the WIND classification categorised 99%. Younger age, lower admission Sequential Organ Failure Assessment score, shorter duration of mechanical ventilation and admission for elective surgery were associated with shorter weaning. Mortality increased with each additional day without successful wean from the first separation attempt.

EFFECT OF AZITHROMYCIN ON AIRFLOW DECLINE FOLLOWING ALLOGENEIC HAEMATOPOIETIC STEM CELL TRANSPLANT

Bronchiolitis obliterans syndrome, characterised by new airflow obstruction, is an important cause of morbidity and mortality following allogeneic haematopoietic stem cell transplant (HSCT). Azithromycin has demonstrated efficacy in reducing airflow obstruction and rates of chronic graft

dysfunction following lung transplantation. This randomised, double-blind, placebo-controlled, phase III trial performed across 19 sites assessed whether prophylactic azithromycin improves airflow decline-free survival (FEV₁ decline $>5\%$ per year or all-cause mortality) 2 years after allogeneic HSCT (Bergeron A, *et al. JAMA* 2017;318:557–66). At pretransplant conditioning, patients were randomised to receive 250 mg azithromycin or placebo three times weekly. The trial was terminated early due to significantly higher risk of haematological relapse in the azithromycin group (32.9% compared with 20.8% placebo, HR 1.7; 95% CI 1.2 to 2.4, $p=0.002$). Adjustment for factors associated with relapse did not alter the estimated HR (1.6; 95% CI 1.1 to 2.3). Over 2 years, azithromycin was associated with lower airflow decline-free survival (32.8% azithromycin group vs 41.3% placebo group, unadjusted HR 1.3; 95% CI 1.02 to 1.70, $p=0.03$) and survival (56.6% azithromycin group vs 70.1% placebo group, unadjusted HR 1.5; 95% CI 1.1 to 2.0, $p=0.02$). 22 patients developed BOS (6.4% azithromycin group vs 3.0% placebo group, adjusted HR 2.7; 95% CI 1.1 to 6.8). The authors conclude that azithromycin is unlikely to reduce risk of BOS after allogeneic HSCT, is associated with worse airflow decline-free survival and may be associated with haematological relapse, although the findings are limited by early trial termination.

LONGER SLEEP IS ASSOCIATED WITH LOWER BMI AND FAVOURABLE METABOLIC PROFILES IN UK ADULTS: FINDINGS FROM THE NATIONAL DIET AND NUTRITION SURVEY

In this cross-sectional study of 1615 UK adults, Potter *et al* (*PloS One* 2017;12(7):e0182195) analysed data from the National Diet and Nutrition Survey to identify whether sleep duration affects diet, weight and metabolic profile. When adjusted for age, sex, ethnicity, smoking and socioeconomic status, participants had 0.46 kg/m² lower body mass index (BMI) (95% CI -0.69 to -0.24 kg/m², $p<0.001$), 0.9 cm lower waist circumference (95% CI -1.5 to -0.3 cm, $p=0.004$) and 0.03 mmol/L higher HDL cholesterol (95% CI 0.00 to 0.05 mmol/L, $p=0.03$) for each additional hour of sleep. Sleep duration was not

associated with altered energy, carbohydrate, fat or protein dietary intake. The study benefits from the large cohort and comprehensive assessment but lacks objective measures of sleep duration and dietary intake. The authors conclude that, among UK adults, shorter sleepers are more likely to be obese with less favourable metabolic profiles.

INDIVIDUALISED RISK IN PATIENTS UNDERGOING LUNG VOLUME REDUCTION SURGERY: THE GLENFIELD BFG SCORE

Lung volume reduction surgery (LVRS) has been shown to improve lung function, health status and survival in COPD patients however the perceived risk may lead to the intervention being underused. In a single-centre observational cohort study, Greening *et al* (*Eur Respir J* 2017;49:1601766) retrospectively analysed data from 237 patients undergoing video-assisted thoracoscopic surgery (VATS) LVRS to develop a postoperative mortality risk stratification tool. Preoperative factors independently associated with postoperative death by 90 days were BMI <18.5 kg/m² (OR 2.83, 95% CI 0.96 to 8.32, $p=0.059$), FEV₁ <0.71 L (OR 5.47, 95% CI 1.47 to 20.35, $p=0.011$) and Gas transfer (T_{LCO}) $<20\%$ (OR 5.56, 95% CI 1.17 to 26.34, $p=0.031$). These weighted factors created the 'Glenfield BFG score' (range 0–5) with low-, moderate- and high-risk groups. When applied to the cohort, there were significant intergroup differences in 1-year survival. The score was validated in a second cohort of 71 patients and remained a significant predictor of time to death (HR 18.8, 95% CI 3.0 to 118.1, $p=0.002$). Total 1-year mortality was 1% in the low-risk group, 15.7% in the moderate-risk group and 37.9% in the high-risk group. The authors conclude that their simple, individualised multidimensional scoring tool accurately risk stratifies postoperative mortality for VATS LVRS using routinely collected preoperative measurements, which can aid shared decision making.

Competing interests None declared.

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