

The study by Li and colleagues evaluated the safety and effectiveness of a rapid flow expulsion maneuver to clear subglottic secretions. They conducted both an *in vitro* and an *in vivo* study, and found that the rapid flow expulsion maneuver was safe and effective to clear subglottic secretions. The first maneuver was the most effective to expel the majority of secretions. Supine position and high peak flow improved the clearance efficiency. Lamb and Kriner suggest that a rapid flow expulsion maneuver could potentially add to the clinician's arsenal of options to remove subglottic secretions not removed by other modalities. To be determined will be the effectiveness and impact on important clinical outcomes when using this maneuver to clear subglottic secretions.

Kallet et al assessed the severity of hypoxemia and other factors that influence the response to aerosolized prostacyclin in subjects with ARDS. Mean  $P_{aO_2}/F_{IO_2}$  increased by 33 mm Hg (42%) on initiation of aerosolized prostacyclin, with a responder rate of 62%. A favorable response was most strongly associated with baseline  $P_{aO_2}/F_{IO_2}$  and respiratory system compliance. As pointed out by Attaway and colleagues, the absence of mortality data brings into question the relevance of the improvement in  $P_{aO_2}/F_{IO_2}$ . The heterogeneity of ARDS and its complex management strategies complicate evaluation of salvage therapies. The critical endpoint is mortality, but in the interim, evaluation of important surrogate endpoints such as significant reductions in  $F_{IO_2}$ , decrease in the use or intensity of other salvage therapies, or need for ECMO might add important information.

In a retrospective cohort study of subjects admitted to a tertiary children's hospital pediatric ICU (PICU), Coletti et al evaluated the utilization of high flow nasal cannula (HFNC). HFNC was utilized in 27% of all PICU admissions for a wide range of indications. The primary indications for the utilization of HFNC were status asthmaticus, status asthmaticus with pneumonia, and bronchiolitis. The authors suggest the protocols should be developed for the initiation, escalation, and weaning of HFNC to optimize utilization. In their editorial, Baudin and Pouyau recognize that, with greater comfort, simplicity, and probably effectiveness, HFNC has succeeded in finding the favor of pediatric intensivists and respiratory therapists. However, it now requires a more convincing level of evidence from randomized control trials in the PICU.

Crezé and colleagues evaluated a quality improvement initiative to reduce unplanned extubations in a neonatal ICU. The development of standard guidelines to prevent unplanned extubations, and a quality review process to track unplanned extubations, resulted in important information for education and practice change. These changes significantly improved the unplanned extubation rate through improved teamwork, accountability, and communication.

The study by Vitaliti et al compared the efficacy and safety of 2 noninvasive respiratory support methods, helmet CPAP and HFNC, in children with respiratory distress admitted to the PICU. They found that both CPAP and HFNC were efficient in improving the clinical condition of subjects with mild to moderate respiratory distress. Clinical response to CPAP was more efficient and rapid than HFNC.

The goal of the study by Rehman and colleagues was to pilot test a simple, telephone-based health coaching intervention that was shown to decrease readmission among subjects with COPD. They found that a telephone-delivered motiva-

tional interviewing-based coaching program for COPD subjects was feasible, well accepted by subjects and providers, simple, and novel intervention to improve the well being of subjects with COPD. This pilot study provides insight into a possible alternative to an onsite pulmonary rehabilitation program for patients with limited access to that program.

The Glittre-ADL test is proposed to evaluate the functional capacity of patients with COPD. The objective of the study by Souza et al was to compare the metabolic, ventilatory and cardiac requirements, and time taken to carry out the Glittre-ADL test by subjects with mild, moderate, and severe COPD. They found that, as the degree of airflow obstruction progresses, subjects with COPD present significantly lower ventilatory reserve to perform the Glittre-ADL test. Metabolic and cardiac reserves may differentiate the more severe subjects. Perhaps these variables are better outcomes to differentiate functional performance than Glittre-ADL test.

The study by Montes de Oca et al evaluated the exposure to biomass and smoking on COPD risk in a primary care setting from Latin America. Subjects with COPD had a higher exposure to biomass and smoking compared to subjects without COPD. Smoking and biomass were both risk factors for COPD, but they did not appear to have an additive effect.

Tambascio and colleagues evaluated the effects of the flutter valve on sputum inflammation, microbiology and transport of respiratory secretions in subjects with bronchiectasis. The use of flutter valve 30 min per day for at least 4 weeks was enough to change physical properties and improve mucus transport by coughing. It also contributed to the reduction of the number of inflammatory cells in the respiratory secretions of subjects with bronchiectasis.

The aim of the study by Lee and colleagues was to identify laboratory parameters that are correlated with the bronchiectasis severity index (BSI) and FACED score. Several laboratory variables were identified as possible prognostic factors for non-cystic fibrosis bronchiectasis. Among them, the serum albumin level exhibited the strongest correlation and was identified as an independent variable associated with the BSI and FACED scores.

Using *in vitro* experiments, Smallwood et al assessed a possible mechanism by which the activity of exogenous pulmonary surfactant is adversely affected by direct oxygen exposure. The characteristics of pulmonary surfactant were adversely affected by short-term exposure to oxygen. Specifically, surface tension studies revealed that short-term exposure of surfactant film to high concentrations of oxygen expedited the frangibility of pulmonary surfactant, as shown with the surface area change. This suggests that reductions in pulmonary compliance and associated adverse effects could begin to take effect in a very short period of time. If these findings can be demonstrated *in vivo*, a role for reduced  $F_{IO_2}$  during exogenous surfactant delivery may have a clinical benefit.

The aim of the study by Ozsu and colleagues was to investigate the possible value of the serum levels of uric acid in predicting 30-day pulmonary thromboembolism-related mortality. They found that serum uric acid level was an independent predictor of short-term mortality in pulmonary thromboembolism. This suggests that serum uric acid levels may be a potential biomarker for predicting outcome in patients with acute pulmonary thromboembolism.