

The Editor's Choice for August is a reassessment of the respiratory therapy consult service two decades after implementation. Chatburn and colleagues evaluated therapy provided, and whether therapy was indicated, at the main campus and 2 off-site hospitals. The overall rate of agreement was lower with the current consult service compared to historical data. This decline was primarily the result of inappropriate orders for bronchopulmonary hygiene. The authors conclude that success of a consult service requires ongoing vigilance. Kollef and Watts opine that this work supports standardized respiratory care to attain greater adherence to evidence-based practice. They also suggest that a respiratory therapy consult service may not only improve patient care, but enhance the professional image of respiratory therapists.

Baldomero et al evaluated driving pressure (ΔP) ranges observed in mechanically ventilated subjects in a community hospital. They retrospectively analyzed ventilator parameters during the first day in the ICU and found that median ΔP was higher for passive breathing compared to patient-triggered breathing. Suggested safety thresholds for ΔP were frequently violated (60% of the time) when focusing only on V_T and P_{plat} . They emphasize that at ventilator initiation, strict attention should be paid to triggering efforts when interpreting ΔP . Sahetya and Fan contribute an accompanying editorial agreeing that questions regarding the validity of ΔP as a surrogate for cyclic lung stress and the contribution of patient effort to measurement of ΔP are important tenets in preventing ventilator-induced lung injury. They remind us that, to date, the mathematical and physiologic coupled measure of ΔP has been identified as a marker of outcome, but that trials using ΔP as a target are necessary.

Koide et al evaluated factors impacting implementation of a lung protective strategy in deeply sedated subjects who were still triggering the ventilator. Subjects were stratified based on a V_T above or below 8 mL/kg of predicted body weight. PEEP was lower in the low V_T group while opioids were more common in the high V_T group. They reported that metabolic alkalosis was slightly more common in the low V_T group and postulate that buffering might be an effective strategy in lung protection. Deem provides an insightful editorial highlighting the strengths and weaknesses of the trial. He astutely observes that more study is needed to determine if spontaneous inspiratory efforts are detrimental or beneficial in acute lung injury, and whether these efforts can be modulated to the benefit of patients.

Andreu et al compared safety and the incidence of complications during extubation of 236 subjects with suctioning of the endotracheal tube (ETT) during removal versus a positive pressure method with the subject connected to the ventilator. There were no differences in overall complications, including the incidence of pneumonia or need for reintubation. However, major complications were fewer in the positive pressure extubation group. The authors conclude that the positive pressure approach was safe and offers some advantages over ETT suctioning during extubation.

Duprez and coworkers evaluated the addition of a double trunk mask during HFNC therapy in subjects with hypoxemic respiratory failure. In subjects already receiving HFNC therapy, the addition of the double trunk mask resulted in a significant increase in P_{aO_2} without a change in P_{aCO_2} . Alpha-1 antitrypsin deficiency is a frequently under-recognized cause of chronic lung disease. Tejwani

and colleagues report on the association between delayed diagnosis and clinical status at time of diagnosis in a small group of subjects ($N = 40$). They demonstrated that a delayed diagnosis of alpha-1 antitrypsin deficiency was associated with worse COPD-related symptoms and functional status. Their data reaffirm that alpha-1 antitrypsin deficiency testing should be accomplished in all adults with fixed airflow obstruction.

Rétory et al evaluated gait and walk distance using an accelerometer during the 6-min walk test. They evaluated subjects with normal and high BMI. The addition of the accelerometer allowed the system to detect steps and U-turns, and to calculate 6-min walk distance. The accelerometer was sensitive enough to characterize BMI-dependent differences in gait pattern.

Nastars et al evaluated the impact of race and ethnicity on 30-d readmission rates in COPD subjects. Using Medicare data they evaluated readmissions in COPD subjects discharged over a 21-month period. Nearly 90% of subjects were white, with black and Hispanic subjects contributing the remainder of the cohort. The overall readmission rate was 17%. The authors conclude that racial and ethnic disparities in readmission rates may be explained by the more severe clinical profiles of minority populations.

Martins et al evaluated daily life activities in school children with asthma. In a 19-month cross-sectional study they applied TGlittre tests to pediatric subjects. They report that reference equations for the TGlittre-P were developed for females and males, with age being the most influential predictive variable in the test.

Macdonald and others studied the methods in which cystic fibrosis (CF) patients manage their disease. Semi-structured interviews with adult CF subjects, family members, and healthcare providers demonstrated that participants' main concern was to be seen as 'normal'. Study participants did not relate to the term non-adherent. Healthcare provider perspectives on adherence varied from subjects with CF. Individualizing treatment regimens through dialogue between patients and caregivers could prove successful.

The New Horizons Symposium presented in Las Vegas focused on issues surrounding ventilator-associated events (VAEs). Klompas provides a review of the intent and definitions of VAE surveillance. The architect of the VAE paradigm, Klompas' paper details what VAE surveillance can accomplish and how VAE is not VAP. Wong and others describe the role of aerosolized antibiotics in the prevention and treatment of infectious ventilator-associated complications. Piraino reviews the role of specialty ETTs in preventing VAEs. While VAEs are associated with an increased duration of mechanical ventilation, increased ICU and hospital length of stay, and increased risk of mortality, most studies of specialty ETTs fail to show a difference in these outcomes. Dexter and Scott review airway management techniques and their impact on VAEs. This includes management of ETT cuff pressures and suctioning techniques. Finally, Kallet provides a review of the use of ventilator bundles and the incidence of VAEs. The popular combination of a group of therapies intended to reduce VAP has not often used VAEs as an outcome.

Carlin contributes a Year in Review of sleep, reviewing the important papers published in the last calendar year. This includes research publications and statements/guidelines from major medical groups.