Editor’s Choice: Pediatric Anesthesia Article Highlights

By: Rita Agarwal MD, FAAP
The Children’s Hospital/UCHSC, Denver, CO

Pediatric Anesthesia is still the only journal available that is dedicated to pediatric anesthesia and intensive care. As such it provides a unique forum for international scholars to share information, research and ideas. Last year Dr. Ted Sumner, the Editor of the journal highlighted articles that he found particularly interesting. This year I chose to do so (primarily because I had an extraordinarily hard time getting volunteers for this issue). It is really quite difficult to winnow down so many intriguing editorials, reviews, case reports, original research and special communications to choose just a few “highlights”. Not being a cardiac anesthesiologist, I have a tendency to skip over articles that primarily would interest the cardiac anesthesiologist (my apologies to all the wonderful pediatric cardiac anesthesiologists). Regional anesthesia and acute pain management are a particular interest of mine, so of course articles on those topics catch my eye.

In February 2006, there is an excellent review article by Terry Yemen and Crain Mcclain called Muscular Dystrophy, Anesthesia and the safety of inhalational anesthetics revisited: again. (16:105-108). The authors present a brief history of inhalational anesthetics and their potential for contributing to rhabdomyolysis in children with Duchenne’s Muscular Dystrophy (DMD). There have been a number of case reports over the years (including one in this issue of the journal) on children with either known or undiagnosed DMD who have developed problems with rhabdomyolysis and hyperkalemia +/- cardiac arrest in the post anesthesia care unit. These events occurred after an uneventful anesthetic with one of the volatile agents. In all cases the use of succinylcholine was avoided. The authors review the pathophysiology of muscular dystrophy. They discuss what is known and what is conjectured on possible mechanisms for the reaction between volatile agents and dystrophic muscle tissue, as well as making recommendations regarding safe anesthetic practice.

Melissa Wheeler presents the results of her study on ProSeal™ laryngeal mask airway in 120 pediatric surgical patients: a prospective evaluation of characteristics and performance. (16:297-301). The Proseal™ Laryngeal Mask Airway (LMA) has been available for quite some time in adult sizes. In some practices it has almost completely replaced standard LMA. It has only recently become available in sizes peer of patient anxiety. Data was included on 1224 patients. The authors found that the presence and degree of anxiety at induction. They used the modified Yale preoperative anxiety scale, and parental anxiety was also assessed. Data was included on 1224 patients. The authors found that the incidence of high anxiety was 50.2%. Younger age, longer procedures, behavioral problems, multiple previous hospital experiences, anxious parents and hospital admission were associated with a higher degree of patient anxiety.

Ragheb J, Malviya S, Burke C, Reynolds P. An assessment of interrater reliability of the ASA physical status classification in pediatric surgical patients. (16: 928-931) The ASA physical status classification was first developed in adults at a time when many of the diseases and conditions we deal with now, not only were not recognized but were often untreatable. The ASA classification has remained essentially unchanged and unquestioned for decades. There have been recent studies documenting considerable inconsistencies among ASA-PS assignment in adult patients. The authors of this paper examined inter-rater reliability among pediatric anesthesia providers. They mailed a questionnaire containing 10 case scenarios and asking for ASA-PS classification to 100 practicing pediatric anesthesiologist. There was a 54% response rate. Unlike the adult data, they did find acceptable inter-rater variability, especially among high risk versus low risk patient populations. Since ASA classification is the cornerstone of so much that we do, I applaud the authors for confirming its validity in pediatrics.