THIS MONTH IN

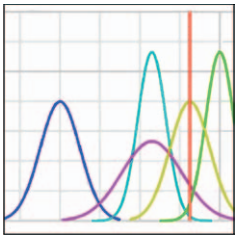
ANESTHESIOLOGY

38 Apnea after Awake Regional and General Anesthesia in Infants: The General Anesthesia Compared to Spinal Anesthesia Study—Comparing Apnea and Neurodevelopmental Outcomes, a Randomized Controlled Trial

In the General Anesthesia compared to Spinal anesthesia study, 722 infants up to 60 weeks postmenstrual age and born at more than 26 weeks gestation scheduled for herniorrhaphy under anesthesia were randomized to regional anesthesia (RA) or general anesthesia at 28 centers between February 2007 and January 2013. The incidences of apnea up to 12 h postoperatively in 361 patients in the RA arm and 358 in the general anesthesia arm were compared in the intention-to-treat analysis. Three percent of patients had at least one episode of apnea. Although RA did not reduce the overall incidence of observed apnea, the incidence of early apnea was lower in the RA arm. The strongest predictor of apnea was prematurity. *See the accompanying Editorial View on* ***page 15***. *(Summary: M.J. Avram. Image: ©Thinkstock.)*

148 Effects of an Innovative Psychotherapy Program for Surgical Patients: Bridging Intervention in Anesthesiology—A Randomized Controlled Trial

Clinically significant comorbid mental disorders may exist in surgical patients. The aim of the stepped care Bridging Intervention in Anesthesiology (BRIA) program is to motivate and support surgical patients with such disorders to participate in psychosocial mental health care options. To test the hypothesis that BRIA sessions produce higher rates of engagement in subsequent mental health care at 6-month follow up, 220 surgical patients with diverse comorbid mental disorders were randomly assigned to BRIA sessions up to 3 months postoperatively or no psychotherapy/computerized brief written advice only. At 6-month follow up, 30% of patients randomized to BRIA participated in psychosocial mental health care while only 11.8% of those randomized to brief written advice did. *(Summary: M.J. Avram. Image: J.P. Rathmell.)*



101 Assessing and Comparing Anesthesiologists' Performance on Mandated Metrics Using a Bayesian Approach

The periodic Ongoing Professional Practice Evaluation (OPPE) required by the Joint Commission mandates assessing clinical performance of anesthesiologists within the same department and identification of performance outliers. The characteristics and results of a Bayesian method for detecting anesthesiologists who might be judged as outliers were compared with those of a frequentist-observed percentage without covariate adjustment using measurement of blood pressure and of oxygen saturation either before or less than 5 min after first drug administration in 63,913 general anesthetics from January 2011 through June 2013 as OPPE metrics. Bayesian hierarchical outlier detection methods that take into account patient and practice characteristics provided more reliable and valid performance assessments for OPPE than methods assessing raw incidence of compliance. *(Summary: M.J. Avram. Image: J.P. Rathmell.)*

18 Decision Aid for Cigarette Smokers Scheduled for Elective Surgery

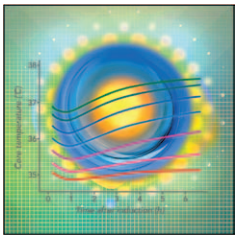
Decision aids are designed to facilitate patient participation in making decisions about their health care by presenting available options, pros and cons of each, and, when pertinent, their likelihood. A decision aid designed to increase involvement of cigarette smokers scheduled for elective surgery in decisions regarding smoking behavior was developed. One hundred twenty-nine patients were randomly assigned to receive either the decision aid or usual care to test the hypothesis that the decision aid administered in a perioperative clinic would improve decisional quality and patient involvement in decision making. Although use of the decision aid substantially improved measures of decisional quality and patient involvement in decision making, it did not change perioperative tobacco use behavior. *See the accompanying Editorial View on* ***page 5***. *(Summary: M.J. Avram. Image: ©Thinkstock.)*

92 A Randomized, Double-blinded Trial of a "Rule of Threes" Algorithm *versus* Continuous Infusion of Oxytocin during Elective Cesarean Delivery

The "rule of threes" algorithm for elective cesarean delivery was designed to limit the dose- and rate-related side effects of oxytocin. It calls for 3-IU oxytocin intravenous loading dose; 3-min uterine tone assessment intervals with 3 IU oxytocin administered if required; 3 total oxytocin doses; 3-IU oxytocin maintenance dose; and 3 pharmacologic options if inadequate uterine tone persists. Sixty women undergoing elective cesarean delivery with spinal anesthesia were randomly assigned to "rule" or standard care continuous infusion oxytocin protocols and the total amounts of oxytocin administered to obtain adequate uterine tone determined. A rule-of-threes uterotonic agent algorithm achieved adequate uterine tone after elective cesarean delivery at lower oxytocin doses than the standard care protocol. *(Summary: M.J. Avram. Image: ©iStock.)*

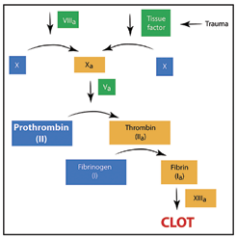
55 Predictors of Failure of Awake Regional Anesthesia for Neonatal Hernia Repair: Data from the General Anesthesia Compared to Spinal Anesthesia Study—Comparing Apnea and Neurodevelopmental Outcomes

In the General Anesthesia compared to Spinal anesthesia study, 363 infants up to 60 weeks postmenstrual age scheduled for herniorrhaphy under anesthesia were randomized to regional anesthesia (RA) at 28 centers between February 2007 and January 2013. Data from 339 cases were analyzed to determine the failure rate of awake RA and identify patient and operator characteristics associated with failure. Awake RA was successful in 83.2% of patients. Bloody tap on the first attempt at lumbar puncture was a risk factor for block failure. Gestational age, current age, weight, drugs used, anesthetic technique, and experience of the anesthetist were not predictive of successful completion of the surgery under RA alone. *(Summary: M.J. Avram. Image: ©Thinkstock.)*



116 Compliance with Surgical Care Improvement Project for Body Temperature Management (SCIP Inf-10) Is Associated with Improved Clinical Outcomes

The Surgical Care Improvement Project for body temperature management (SCIP Inf-10) guideline is one of eight SCIP measures intended to reduce hospital-acquired infections. According to SCIP Inf-10, patients undergoing surgical procedures lasting at least 60 min should be actively warmed or have a body temperature of at least 36°C within 30 min immediately before or 15 min after anesthesia end time. When electronic medical record data from 45,304 patients who underwent noncardiac surgery between January 2010 and June 2014 were analyzed, SCIP Inf-10 compliance was associated with reduced incidences of hospital-acquired infections, ischemic cardiovascular events, and mortality. This suggests compliance with SCIP Inf-10 is a process measure that can be used as a perioperative quality measure. *(Summary: M.J. Avram. Illustration: A. Johnson, Vivo Visuals.)*



214 Antifibrinolytic Therapy for Cardiac Surgery: An Update (Clinical Concepts and Commentary)

Antifibrinolytic agents, including aprotinin and the lysine analogs ε-aminocaproic acid and tranexamic acid, decrease hemostatic activation and reduce bleeding and allogeneic blood product transfusions in cardiac surgery but are associated with potential side effects. The most recent developments in antifibrinolytic therapy are reviewed in the context of cardiac surgery, including developments with aprotinin since its temporary withdrawal from the market and ε-aminocaproic acid and tranexamic acid dosing, efficacy, and safety issues. Also reviewed are the new antifibrinolytics, the potent plasma kallikrein inhibitor ecallantide and the serine protease inhibitor MDCO-2010, Phase II studies of which were terminated early. *(Summary: M.J. Avram. Illustration: J.P. Rathmell.)*