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Special Article

Musings from an Unlikely Clinician–Scientist: 2018 American Society of Anesthesiologists Excellence in Research Award
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In this article, the author shares several personal stories, with the goal of encouraging young investigators, and then describes pivotal studies that have identified the unique pharmacologic properties and physiologic roles of extrasynaptic γ -aminobutyric acid type A receptors.

Perioperative Medicine

CLINICAL SCIENCE

◆ ◆ **Assessment of Common Criteria for Awake Extubation in Infants and Young Children**
T. W. Templeton, E. J. Goenaga-Díaz, M. G. Downard, C. J. McLouth, T. E. Smith, L. B. Templeton, S. H. Pecorella, D. E. Hammon, J. J. O'Brien, D. H. McLaughlin, A. E. Lawrence, P. R. Tennant, D. G. Ririe.....801

For an awake-extubation in a child that has had volatile anesthesia, facial grimace, purposeful movement, conjugate gaze, eye opening, and tidal volume greater than 5 ml/kg are all associated with successful extubation. The chances of successful extubation steadily increase as more of these features are present.

◇ Refers to This Month in ANESTHESIOLOGY
 ◆ Refers to Editorial Views
 This article has an Audio Podcast

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 Readers' Toolbox




ON THE COVER: The use of epidural analgesia to manage labor pain is lower in Hispanic than Caucasian women in the United States. In this issue of ANESTHESIOLOGY, Togioka *et al.* evaluated the use of a linguistically concordant educational program that describes the epidural procedure and explains alternatives and found that it increased epidural analgesia use in women of Hispanic ethnicity. Cover illustration: S. Jarret, C.M.I. Cover photograph: J. P. Rathmell.

- Togioka *et al.*: Education Program Regarding Labor Epidurals Increases Utilization by Hispanic Medicaid Beneficiaries: A Randomized Controlled Trial, p. 840

◆ ◆ **Positive End-expiratory Pressure and Postoperative Atelectasis:**

 **A Randomized Controlled Trial**

 *E. Östberg, A. Thorisson, M. Enlund, H. Zetterström, G. Hedenstierna, L. Edmark*809


Thirty patients undergoing nonabdominal surgery under general anesthesia were randomized to maintained (7 or 9 cm H₂O) or zero positive end-expiratory pressure before being given 100% oxygen for emergence preoxygenation. Postoperative atelectasis (assessed by computed tomography) was small with no effect on oxygenation, whether or not positive end-expiratory pressure was used during emergence.

 ◆ **Management of Difficult Tracheal Intubation: A Closed Claims Analysis**


A. M. Joffe, M. F. Aziz, K. L. Posner, L. V. Duggan, S. L. Mincer, K. B. Domino818


This article compared recent malpractice claims related to difficult tracheal intubation to historic claims using the Anesthesia Closed Claims Project database. Outcomes remained poor in recent malpractice claims related to difficult tracheal intubation. The number of claims during the induction phase of anesthesia in this report is comparable with the previous report of 1993 to 1999, but outcomes are poorer. Inadequate airway planning and judgment errors were contributors to patient harm. Almost three fourths exhibited judgment failures, which were more common in elective and urgent intubation procedures than emergency tracheal intubations. Delay in surgical airway initiation during “can’t intubate, can’t oxygenate” emergencies remains an issue in airway management.

 ◆ **Hypoxemia, Bradycardia, and Multiple Laryngoscopy Attempts during Anesthetic Induction in Infants: A Single-center, Retrospective Study**

 *J. A. Gálvez, S. Acquah, L. Ahumada, L. Cai, M. Polanski, L. Wu, A. F. Simpaio, J. M. Tan, J. Wasey, J. E. Fiadjoe*830


In a quaternary pediatric academic center, 16% of healthy infants undergoing routine tracheal intubations had multiple laryngoscopies. There was also a 35% incidence of hypoxemia, defined as an oxygen saturation measurement less than 90%, during induction of anesthesia. There was evidence for an association between multiple laryngoscopies and hypoxemia. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

 ◆ **Education Program Regarding Labor Epidurals Increases Utilization by Hispanic Medicaid Beneficiaries: A Randomized Controlled Trial**

 *B. M. Togioka, K. M. Seligman, M. K. Wertz, N. D. Yanez, L. M. Noles, M. M. Treggiari*840

A language-concordant, educational program regarding labor epidurals during the first stage of labor, in addition to the routine prenatal education, is feasible and does not cause any negative effect. Such an intervention increases epidural use among Hispanic but not non-Hispanic women. It also reduces misconceptions regarding epidural analgesia in both Hispanic and non-Hispanic women. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

BASIC SCIENCE

 **Propofol Anesthesia Alters Spatial and Topologic Organization of Rat Brain Metabolism**

Y. Chen, W. Bao, X. Liang, J. Zhang850

The brains of rodents undergoing propofol anesthesia demonstrate reduced metabolic network connectivity and efficiency. These effects might inform the mechanism of the functional disconnections and network inefficiency observed during general anesthesia in humans. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

Critical Care Medicine

BASIC SCIENCE

 ◆ **Recombinant Thrombomodulin on Neutrophil Extracellular Traps in Murine Intestinal Ischemia–Reperfusion**

N. Hayase, K. Doi, T. Hiruma, R. Matsuura, Y. Hamasaki, E. Noiri, M. Nangaku, N. Morimura866

In male mice, recombinant thrombomodulin administration after intestinal ischemia–reperfusion increased survival rate. Histones and neutrophil extracellular traps were found in the livers and intestines after ischemia–reperfusion, and recombinant thrombomodulin reduced these accumulations only in the liver. Recombinant thrombomodulin may attenuate liver injury by suppressing hepatic histone and neutrophil extracellular trap accumulation. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

Pain Medicine

CLINICAL SCIENCE


 ◆ **Outcomes of Sympathetic Blocks in the Management of Complex Regional Pain Syndrome: A Retrospective Cohort Study**

J. Cheng, V. Salmasi, J. You, M. Grille, D. Yang, E. J. Mascha, O. T. Cheng, F. Zhao, R. W. Rosenquist883

In patients with complex regional pain syndrome, skin temperature change is not associated with sympathetic block pain reduction. The short- and long-term effects of sympathetic blocks are not associated with spinal cord stimulation outcomes. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

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N. M. Goldenberg, M. Rabinovitch, B. E. Steinberg898

Patients with pulmonary arterial hypertension have exceptionally high perioperative risk. This review summarizes the clinical presentation and therapies for pulmonary arterial hypertension, and it highlights evidence for inflammation as a driver of disease pathogenesis and a therapeutic target.

REVIEW ARTICLE

 **Learners and Luddites in the Twenty-first Century: Bringing Evidence-based Education to Anesthesiology**
S. M. Martinelli, R. S. Isaak, R. M. Schell, J. D. Mitchell, M. D. McEvoy, F. Chen908

This article reviews several new concepts in medical education and empirical evidence of their utilization for anesthesiology learners. Methodologies and theories for evidence-based educational practices are described.

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