



ON THE COVER:

The impact of an anesthesiologist-led preoperative evaluation clinic (PEC) on clinical outcomes is unclear. In this issue of ANESTHESIOLOGY, Blitz and her colleagues compared the incidence of in-hospital postoperative mortality in patients who had been evaluated in their institution's PEC before elective surgery to those patients who had elective surgery without being seen in the PEC. An in-person assessment at the PEC was associated with a reduction in in-hospital mortality. Cover image: ©Thinkstock.

- Blitz *et al.*: Preoperative Evaluation Clinic Visit Is Associated with Decreased Risk of In-hospital Postoperative Mortality, p. 280

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■ PERIOPERATIVE MEDICINE

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◆◆ A Population-based Study Evaluating the Association between Surgery in Early Life and Child Development at Primary School Entry

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J. D. O'Leary, M. Janus, E. Duku, D. N. Wijeyesundera, T. To, P. Li, J. T. Maynes, and M. W. Crawford

Children who undergo surgery before primary school age are at increased risk of early developmental vulnerability, but the magnitude of the risk is small. Contrary to previous reports, age less than 2 yr at first exposure or multiple exposures to surgery did not increase the risk of adverse child development. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

◆ Refers to This Month in Anesthesiology

◆ Refers to Editorial Views



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This is a Healthcare Redesign article



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Best Abstract article originally presented at ANESTHESIOLOGY 2015

-   **Preoperative Evaluation Clinic Visit Is Associated with Decreased Risk of In-hospital Postoperative Mortality** 280
J. D. Blitz, S. M. Kendale, S. K. Jain, G. E. Cuff, J. T. Kim, and A. D. Rosenberg
An in-person assessment in an anesthesiologist-led preoperative evaluation clinic was associated with a reduction in in-hospital mortality.
-  **Emergency Cricothyrotomy Performed by Surgical Airway-naïve Medical Personnel: A Randomized Crossover Study in Cadavers Comparing Three Commonly Used Techniques** 295
F. Heymans, G. Feigl, S. Graber, D. S. Courvoisier, K. M. Weber, and P. Dulguerov
This prospective, randomized, crossover trial compared the success rate and complication of three different cricothyrotomy techniques performed by 20 surgical airway-naïve medical personnel in 60 cadavers. The success rates were 95, 55 and, 50% for surgical cricothyrotomy, QuickTrach, and Merkel, respectively. The majority of failures were due to cannula misplacement during nonsurgical cricothyrotomy.
- Rapid Infusion of Hydroxyethyl Starch 70/0.5 but not Acetate Ringer's Solution Decreases the Plasma Concentration of Propofol during Target-controlled Infusion** 304
S. Itakura, K. Masui, and T. Kazama
Rapid infusion of 8 ml/kg 6% hydroxyethyl starch 70/0.5 over 20 min increased hepatic blood flow by approximately 25% and decreased the targeted plasma propofol concentration by up to 37%. Rapid infusion of 8 ml/kg acetated Ringer's solution over 20 min did not affect either hepatic blood flow or the targeted plasma propofol concentration.
-  **Which Anesthesia Regimen Is Best to Reduce Morbidity and Mortality in Lung Surgery? A Multicenter Randomized Controlled Trial** 313
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Four hundred sixty patients (five centers) undergoing one-lung ventilation during thoracic surgery were randomized to receive either propofol or desflurane. There was no difference in major complications between the two groups.
- Preoperative Falls and Their Association with Functional Dependence and Quality of Life** 322
V. L. Kronzer, R. D. Tang, A. P. Schelble, A. Ben Abdallah, T. S. Wildes, S. L. McKinnon, F. Sadiq, N. Lin, D. L. Helsten, A. Sharma, S. L. Stark, and M. S. Avidan
Observational study of more than 15,000 adults undergoing elective surgery found that 26% fell in the 6 months preceding surgery, and more than half of these falls caused injuries. Even after adjustment for known confounding factors, preoperative falls were associated with a two-fold increase in both preoperative functional dependence and poor physical quality of life.
- BASIC SCIENCE**
-    **A Novel Strategy to Reverse General Anesthesia by Scavenging with the Acyclic Cucurbit[n]uril-type Molecular Container Calabadiion 2** 333
D. Diaz-Gil, F. Haerter, S. Falcinelli, S. Ganapati, G. K. Hettiarachchi, J. C. P. Simons, B. Zhang, S. D. Grabitz, I. M. Duarte, J. F. Cotten, K. Eikermann-Haerter, H. Deng, N. L. Chamberlin, L. Isaacs, V. Briken, and M. Eikermann
The acyclic cucurbit[n]uril molecular container calabadiion 2 dose-dependently decreased effects of ketamine and etomidate on electroencephalographic predictors of depth of anesthesia by encapsulation at nontoxic concentrations in rats. At doses sufficient to reverse neuromuscular blockade, calabadiion 2 had minimal effects on anesthetic depth or duration. The effects of propofol and isoflurane were not reversed by calabadiion 2. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

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◇ **Transcranial Doppler to Predict Neurologic Outcome after Mild to Moderate Traumatic Brain Injury**

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P. Bouzat, L. Almeras, P. Manhes, L. Sanders, A. Levrat, J.-S. David, R. Cinotti, R. Chabanne, A. Gloaguen, X. Bobbia, S. Thoret, L. Oujamaa, J.-L. Bosson, and J.-F. Payen, for the TBI-TCD Study Investigators

Transcranial Doppler parameters had excellent negative predictive value in that patients who did not undergo secondary neurologic deterioration were readily identifiable. Patients with abnormal transcranial Doppler patterns had greater disability 4 weeks injury. In combination with clinical examination and computed tomography scan, transcranial Doppler monitoring can inform clinicians about neurologic outcome in patients with mild to moderate traumatic brain injury.

BASIC SCIENCE

Effects of Dexmedetomidine on Intestinal Microcirculation and Intestinal Epithelial Barrier in Endotoxemic Rats

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Y.-C. Yeh, C.-Y. Wu, Y.-J. Cheng, C.-M. Liu, J.-K. Hsiao, W.-S. Chan, Z.-G. Wu, L. Chia-Hui Yu, and W.-Z. Sun

Using a multifaceted experimental approach in endotoxemic rats, the authors found dexmedetomidine to protect against intestinal epithelial barrier disruption by attenuating intestinal microcirculatory dysfunction and reducing mucosal cell death and tight junctional damage.

■ PAIN MEDICINE

CLINICAL SCIENCE

◇ **Changes in Brain Resting-state Functional Connectivity Associated with Peripheral Nerve Block: A Pilot Study**

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M. S. Melton, J. N. Browndyke, T. B. Harshbarger, D. J. Madden, K. C. Nielsen, and S. M. Klein

Using supraclavicular peripheral nerve block (PNB) as a model of temporary functional deafferentation (TFD) in 10 human subjects, functional connectivity magnetic resonance imaging showed disruption of interhemispheric resting-state functional connectivity (RSFC) in the manual motor region but preservation of intrahemispheric RSFC during PNB, with increased RSFC between the affected motor area and bilateral visual cortices upon PNB resolution. TFD produced by PNB produces similar effects on RSFC as other models, which provides a useful model for TFD-induced changes in neuroplasticity.

BASIC SCIENCE

🌐 **Intrathecal Catheterization and Drug Delivery in Guinea Pigs: A Small-animal Model for Morphine-evoked Granuloma Formation**

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K. A. Eddinger, E. S. Rondon, V. I. Shubayev, M. R. Grafe, M. Scadeng, K. R. Hildebrand, L. M. Page, S. A. Malkmus, J. J. Steinauer, and T. L. Yaksh

In guinea pigs, intrathecal morphine infusion produced granuloma formation with similar characteristics as observed in humans, suggesting the utility of the study of mechanisms of these adverse events in these animals. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

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L. M. Stollings, L.-J. Jia, P. Tang, H. Dou, B. Lu, and Y. Xu

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