# ANESTHESIOLOGY





#### ON THE COVER:

The American College of Surgeons and the American Geriatrics Society have suggested that preoperative cognitive screening should be performed in older surgical patients. In this issue of Anesthesiology, Culley et al. cognitively screened 211 patients aged 65 yr old or older without a diagnosis of dementia who were scheduled for an elective hip or knee replacement. Many older elective orthopedic surgical patients were found to have probable cognitive impairment preoperatively. This impairment was associated with development of delirium postoperatively, a longer hospital stay, and lower likelihood of going home upon hospital discharge.

• Culley et al.: Poor Performance on a Preoperative Cognitive Screening Test Predicts Postoperative Complications in Older Orthopedic Surgical Patients, p. 765

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Refers to This Month in Anesthesiology

The earliest identified English definition of anaisthesia is in a medical dictionary published in 1684.

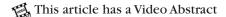


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**■** PERIOPERATIVE MEDICINE

CLI	NICAL SCIENCE	
	Implementing a Health System–wide Patient Blood Management Program with a Clinical Community Approach S. M. Frank, R. N. Thakkar, S. J. Podlasek, K. H. Ken Lee, T. L. Wintermeyer, W. W. Yang, J. Liu, L. C. Rotello, T. A. Fleury, P. A. Wachter, L. E. Ishii, R. Demski, P. J. Pronovost, and P. M. Ness	<b>75</b> 4
	Methods are described for implementing a patient blood management program across a multiinstitutional healthcare system as a quality improvement and patient safety effort. Promoting best practices for patient blood management across a health system can reduce unnecessary transfusions, overall blood utilization, and costs, with a 400% return on financial investment. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT	
CME <	Poor Performance on a Preoperative Cognitive Screening Test Predicts Postoperative	
	Complications in Older Orthopedic Surgical Patients  D. J. Culley, D. Flaherty, M. C. Fahey, J. L. Rudolph, H. Javedan, CC. Huang, J. Wright,  A. M. Bader, B. T. Hyman, D. Blacker, and G. Crosby	765
	In a prospective clinical investigation of patients 65 yr or older without dementia having elective hip or knee replacement, screened preoperatively with the Mini-Cog, 24% were found to have probable cognitive impairment. Patients with probable preoperative cognitive impairment, compared to those patients without, were more likely to be discharged to a place other than home, develop postoperative delirium, and have a longer hospital length of stay. Preoperative cognitive screening of older surgical patients may be valuable for risk assessment and risk stratification in older surgical patients.	
$\Diamond$	Clinical Effectiveness of Intravenous Exenatide Infusion in Perioperative Glycemic Control at	ter
	Coronary Artery Bypass Graft Surgery: A Phase II/III Randomized Trial G. Besch, A. Perrotti, F. Mauny, M. Puyraveau, M. Baltres, G. Flicoteaux, L. S. du Mont, B. Barrucand, E. Samain, S. Chocron, and S. Pili-Floury	775
	Exenatide alone at the dose used was not enough to achieve adequate blood glucose control in coronary artery bypass grafting patients, but it reduced overall consumption of insulin and increased the time to initiation of insulin.	
$\Diamond \oplus$	Are Anesthesia and Surgery during Infancy Associated with Decreased White Matter Integrity	7
	and Volume during Childhood?	788
	R. I. Block, V. A. Magnotta, E. O. Bayman, J. Y. Choi, J. J. Thomas, and K. K. Kimble	
	Children exposed to anesthesia and surgery during infancy had lower whole brain white matter volumes than control subjects. Regional white matter volumes and integrity were also reduced in the exposed children. Although white matter volumes and integrity were reduced in exposed children, no inference about causality can be made, and comorbid conditions may well have contributed to the structural changes that were observed on magnetic resonance imaging. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT	
BAS	SIC SCIENCE	
<b>◇◆</b>	Effect of Bronchoconstriction-induced Ventilation—Perfusion Mismatch on Uptake and Elimination of Isoflurane and Desflurane M. Kretzschmar, A. Kozian, J. E. Baumgardner, J. B. Borges, G. Hedenstierna, A. Larsson, T. Hachenberg, and T. Schilling	800
	Compared with the fairly insoluble desflurane, the uptake and elimination of the more soluble isoflurane in piglets was less affected by methacholine-induced bronchoconstriction and ventilation/perfusion scatter.	
<b>(</b>	Transient Receptor Potential Vanilloid 1 Antagonists Prevent Anesthesia-induced Hypotherm	ia

The selective transient receptor potential vanilloid 1 antagonists AMG 517 and ABT-102 dose-dependently prevented hypothermia during general anesthesia in rats. These same drugs reduced incisional nociceptive sensitization. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT

A. Garami, M. Ibrahim, K. Gilbraith, R. Khanna, E. Pakai, A. Miko, E. Pinter, A. A. Romanovsky,

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and Decrease Postincisional Opioid Dose Requirements in Rodents

F. Porreca, and A. M. Patwardhan

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	Naphthalene–etomidate only weakly potentiated $\gamma$ -aminobutyric acid–evoked currents. However, it significantly decreased the positive modulatory effects of etomidate, propofol, and pentobarbital at the $\gamma$ -aminobutyric acid type A receptor. The results suggest that naphthalene–etomidate acts as a competitive antagonist of anesthetics at the $\gamma$ -aminobutyric acid type A receptor.	
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	Monosynaptic and multisynaptic excitatory postsynaptic potentials, and spontaneous local field potentials, in the CA1 sector of the hippocampus were significantly suppressed by isoflurane at low doses and in a dose-dependent manner. The results, which confirm previous <i>in vitro</i> work, are consistent with the premise that hippocampal network disruption may underlie isoflurane-induced, hippocampal-dependent cognitive function.	
	CRITICAL CARE MEDICINE	
BAS	IC SCIENCE	
◇◆●	Reversing Dabigatran Anticoagulation with Prothrombin Complex Concentrate versus Idarucizumab as Part of Multimodal Hemostatic Intervention in an Animal Model of Polytrauma  M. Honickel, T. Braunschweig, R. Rossaint, C. Stoppe, H. ten Cate, and O. Grottke	852
	In a porcine polytrauma injury model, blood loss was lower with idarucizumab than with prothrombin complex concentrate (PCC) when administered for dabigatran reversal as part of multimodal therapy. However, survival was 100% in both groups. There were no hypercoagulability effects with idarucizumab, while PCC increased thrombin generation. Without idarucizumab or PCC, tranexamic acid and fibrinogen concentrate were ineffective at reducing bleeding in this model. SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT	
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