

# THIS MONTH IN *Anesthesiology*

## Management of In-flight Medical Emergencies (Clinical Concepts and Commentary) ..... 749

The goal of in-flight medical assistance is to stabilize the patient and advise the crew as to a diagnosis and treatment.

## Inhaled Hydrogen Sulfide: A Rapidly Reversible Inhibitor of Cardiac and Metabolic Function in the Mouse ..... 659

Breathing hydrogen sulfide induces a "suspended animation-like" state.

## Remifentanyl Inhibits Rapid Eye Movement Sleep but Not the Nocturnal Melatonin Surge in Humans ..... 627

Consequences of opioid-induced sleep inhibition are important concerns in postoperative patients.

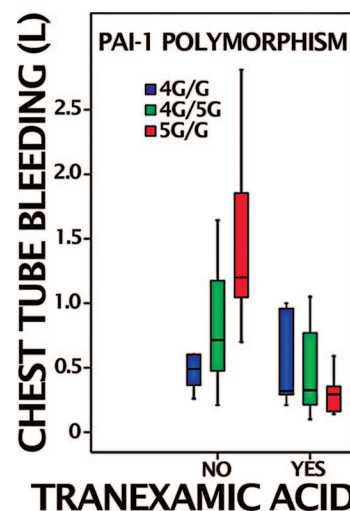
### CME

## Impact of Heart Failure on Patients Undergoing Major Noncardiac Surgery ..... 559

This article has been selected for the ANESTHESIOLOGY CME Program. See the accompanying Editorial View on page 551

## A Genetic Link to Efficacy of Tranexamic Acid for Reducing Blood Loss? ..... 596

Iribarren *et al.* used data obtained from a randomized, double-blind, placebo-controlled study to explore the possible links between genotype and efficacy of tranexamic acid (TA) administered before and after cardiopulmonary bypass surgery. The original 50 study patients (the study had been halted due to a higher rate of excessive bleeding in the placebo group) had been classified according to plasminogen activator inhibitor-1 (PAI-1) genotype. The authors' secondary analysis from this trial revealed that in patients not receiving TA, those with the 5G/5G genotype had significantly higher chest tube blood loss and transfusion requirements compared with other patients. 5G/5G homozygotes who received TA showed the greatest blood-sparing benefit.



## Ambulatory Continuous Femoral Nerve Blocks in Arthroplasty Patients .... 703

Ilfeld *et al.* compared a 4-day ambulatory continuous femoral nerve block (cFNB) to overnight cFNB in patients who had undergone tricompartiment total knee arthroplasty. Compared with those receiving overnight cFNB, patients in the group receiving four days of perineural ropivacaine (*via* a portable infusion pump) showed a 53% decrease in the time required to reach three important discharge criteria: adequate analgesia, independence from intravenous analgesics, and ambulation of at least 30 m.

## Statins, Hyperglycemia, and Ischemic Preconditioning ..... 634

Statins appear to confer greater cardiovascular benefits in diabetic patients. To further elucidate this observed benefit, Gu *et al.* designed experiments to investigate whether simvastatin improves the beneficial effects of ischemic preconditioning during hyperglycemia in dogs subjected to coronary artery occlusion and reperfusion. Simvastatin restored the cardioprotective effects of ischemic preconditioning during hyperglycemia *via* nitric oxide-mediated signaling. The results suggest that enhanced cardioprotective signaling could be a mechanism for statin-induced decreases in perioperative cardiovascular risk.

## Avoidance of Nitrous Oxide Warranted in Ischemic Brain Injury? ..... 568

In this issue, McGregor *et al.* report on their *post hoc* analysis of data from the large multicenter Intraoperative Hypothermia for Aneurysm Surgery Trial (IHAST). In the IHAST, anesthesia was dictated by a limited-options protocol and the decision about using nitrous oxide was left to individual anesthesiologists. Of the 1,000 patients for whom data were available, 373 had received nitrous oxide. According to various instruments used in the IHAST to assess neurologic and neuropsychological outcomes, intraoperative use of nitrous oxide was not associated with delayed ischemic neurologic deficits, long-term neurologic deficits, or neuropsychological deficits. See the accompanying Editorial View on page 553