

THIS MONTH IN *Anesthesiology*

Inhibition of Poly(Adenosine Diphosphate–Ribose) Polymerase Attenuates Ventilator-induced Lung Injury 261

In a rat model, inhibition of poly(adenosine diphosphate–ribose) polymerase attenuated lung injury.

Desflurane but Not Sevoflurane Impairs Airway and Respiratory Tissue Mechanics in Children with Susceptible Airways 216

Sevoflurane exerted mild bronchodilation in children with and without bronchial hyperreactivity.

Proteomics in Neuropathic Pain Research (Review Article) 314

Proteomic approaches in the pathogenesis of nerve injury and neuropathic pain are summarized.

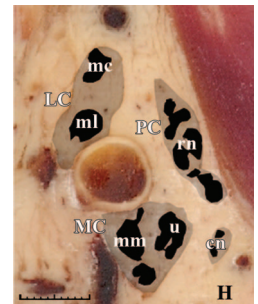
CME

A Randomized, Double-masked, Multicenter Comparison of the Safety of Continuous Intrathecal Labor Analgesia Using a 28-Gauge Catheter versus Continuous Epidural Labor Analgesia 286

This article has been selected for the ANESTHESIOLOGY CME Program. See the accompanying Editorial View on page 184

Mapping the Architecture of the Brachial Plexus 299

Moayeri *et al.* used high resolution images of sagittal cross-sections of four frozen cadaver shoulders to examine neural components and compartments outside the brachial plexus. The team reconstructed cross-sections perpendicular to the axis of the brachial plexus in the interscalene, supraclavicular, midinfraclavicular, and subcoracoid regions. They found marked differences in neural architecture and size of surrounding adipose tissue between the proximal and distal parts of the brachial plexus. The authors surmise that the anatomy within the epineurium may be a factor contributing to the rare incidence of neural injury and that the quantity and location of adipose tissue may affect onset times of brachial plexus blocks.



Aprotinin Implicated in Renal Dysfunction? 189

Concerns about the safety of aprotinin, used to limit bleeding in cardiac surgery, have recently been raised. To assess the drug's effect on renal function, Dietrich *et al.* accessed the cardiac-anesthetic database at their institution. They analyzed records of 8,548 patients who, during a 6-month time frame, underwent cardiac surgery with cardiopulmonary bypass and who were treated with varying doses of aprotinin. Various statistical analyses failed to reveal any significant association between aprotinin dosage and renal outcome. Even in subgroups of patients with preoperative impaired renal function, complex procedures, or insulin-dependent diabetes, aprotinin was not associated with adverse renal outcomes. See the accompanying Editorial View on page 181

Dexmedetomidine's Effects on Cerebral Blood Flow, Velocity, and Metabolic Rate 225

In this issue, Drummond *et al.* report on their observational study of dexmedetomidine in six healthy male volunteers, the first investigation of the drug's effects on cerebral metabolic rate in humans. The team recorded middle cerebral artery velocity continuously during the study; cerebral blood flow velocity (CBFV), jugular bulb venous saturation, cerebral metabolic rate equivalent (CMRe), and the CBFV/CMRe ratio were determined at six intervals before, during, and after administration of dexmedetomidine. Consistent with results of animal studies, CBFV and CMRe decreased in a dose-related manner. However, the CBFV/CMRe ratio was unchanged, suggesting that CMR–CBF coupling is preserved during dexmedetomidine administration.

Heeding the Limitations of Ultrasound-guided Regional Anesthesia (Editorial View) 186

In his commentary in this issue, Hebl emphasizes the need for caution about reliance on ultrasound guidance to prevent perioperative nerve injury during regional anesthesia. As with the case study presented by Koff and colleagues (a patient with multiple sclerosis), anesthesiologists should recognize patients with preexisting neurologic deficits to be at increased risk of nerve injury from regional anesthetic techniques. Other patient risk factors, such as increasing age, gender, and diabetes; surgical risk factors such as direct intraoperative trauma or hematoma formation; and anesthetic risk factors such as needle-induced mechanical trauma should lead anesthesiologists to consider modification of their techniques to guard against injury.