

THIS MONTH IN *Anesthesiology*

A Rational Approach to Perioperative Fluid Management (Review Article) 723

Developing perioperative fluid management protocols may improve patient outcome in the future.

Detecting Awareness in Children by Using an Auditory Intervention 619

The incidence and timing of awareness in children during anesthesia is studied.

Lumbar Plexus Block Using High-pressure Injection Leads to Contralateral and Epidural Spread 683

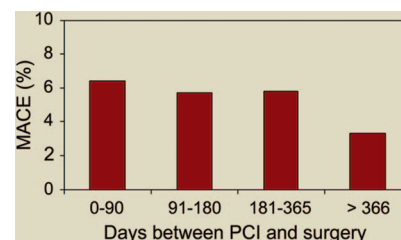
Injection with high injection pressure during lumbar plexus block commonly results in bilateral blockade.

Biologic Effects of Nitrous Oxide: A Mechanistic and Toxicologic Review (Review Article)..... 707

The evidence for the putative toxicity of nitrous oxide is discussed.

Cardiac Risk of Noncardiac Surgery after Percutaneous Coronary Intervention with Drug-eluting Stents..... 596

This single-center retrospective study examined the risk for complications of noncardiac surgery (NCS) performed within 2 yr after drug-eluting stent (DES) placement and examined whether this risk of major adverse cardiac events (MACE) changed based on the time between percutaneous coronary intervention (PCI) and surgery. The frequency of MACE was not found to be significantly associated with the time between PCI and NCS (rate of MACE 6.4%, 5.7%, 5.9%, and 3.3% at 0–90, 91–180, 181–365, and 366–730 days after PCI with DES, respectively). This study confirms guidelines, which recommend delaying elective NCS for at least 1 yr after DES implantation. *See the accompanying Editorial View on page 573*



Time and Cardiac Risk of Surgery after Bare-metal Stent Percutaneous Coronary Intervention 588

This large, single-center retrospective study examined the relationship between complication rate in patients with bare-metal stents (BMS) undergoing noncardiac surgery (NCS) and the length of time between percutaneous coronary intervention (PCI) and NCS. Primary end-points included in-hospital major adverse cardiac events (MACE). The frequency of MACE was 10.5% when NCS was performed less than 30 days after PCI with BMS, 3.8% when NCS was performed between 31 and 90 days after PCI with BMS, and 2.8% when NCS was performed more than 90 days after PCI with BMS. These data indicate that the incidence of MACE is lowest when NCS is performed at least 90 days after PCI with BMS and confirm guidelines, which recommend delaying elective NCS for at least 6 weeks after BMS implantation, and highlight the very high risk of adverse cardiac events if surgery is performed within 30 days of placement of these stents. *See the accompanying Editorial View on page 573*

Effect of Progressive Mandibular Advancement on Pharyngeal Airway Size in Anesthetized Adults 605

The purpose of this study was to determine the effect of progressive mandibular advancement using an intraoral appliance on pharyngeal airway size in normal adults during intravenous infusion of propofol for anesthesia. Magnetic resonance imaging was performed across four airway levels on adults during wakefulness and during propofol anesthesia. Anteroposterior and lateral airway diameters during anesthesia without mandibular advancement were decreased compared with wakefulness and restored to their wakefulness values with 50% maximal or maximal mandibular advancement. The results of this study indicate maximal mandibular advancement should be a key intervention for effective mask ventilation and provide the physiological basis for strategies for airway management of patients with difficult mask ventilation. *See the accompanying Editorial View on page 576*

Brief Periods of Nitric Oxide Inhalation Protect against Myocardial Ischemia-Reperfusion Injury 675

Prolonged breathing of nitric oxide (NO) reduces myocardial ischemia-reperfusion injury in animals. This study examined a brief period of NO inhalation (5 min) on ischemia-reperfusion injury in mice and tested whether the accumulation of NO metabolites correlated with protection against cardiac ischemia-reperfusion injury. Breathing NO for 5 min before reperfusion decreased myocardial infarction area at risk ratio by 31%. Breathing NO leads to a rapid increase of a broad spectrum of NO metabolites within 30 sec after beginning NO inhalation, contributing to the ability of brief periods of NO inhalation to provide cardioprotection against ischemia-reperfusion injury. The findings suggest that brief durations of NO inhalation may prove beneficial in patients at risk for cardiac ischemia-reperfusion injury.