

Anesthesiology

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A. M. Zbinden, M. Maggiorini, S. Petersen-Felix, R. Lauber, D. A. Thomson, and C. E. Minder

MAC_{awake} of isoflurane is 0.37 vol%, the concentration to prevent motor response in 50% of all patients is 0.84 vol% for trapezius squeeze, 1.00 vol% for laryngoscopy, 1.03 vol% for tetanic stimulation, 1.16 vol% for skin incision, and 1.76 vol% for tracheal intubation.

261 Anesthetic Depth Defined Using Multiple Noxious Stimuli during Isoflurane/Oxygen Anesthesia: II. Hemodynamic Responses

A. M. Zbinden, S. Petersen-Felix, and D. A. Thomson

Isoflurane does not prevent the increase in blood pressure caused by various noxious stimuli but does decrease the prestimulation blood pressure.

268 Epidural Anesthesia Impairs Both Central and Peripheral Thermoregulatory Control during General Anesthesia

Jean Joris, Makoto Ozaki, Daniel I. Sessler, Anne Francoise Hardy, Maurice Lamy, Joseph McGuire, Don Blanchard, Marc Schroeder, and Azita Moayeri

The core temperature triggering thermoregulatory vasoconstriction in the arms is $\approx 1^\circ\text{C}$ less during combined epidural/general anesthesia than during general anesthesia alone; this decreased threshold, combined with direct impairment of leg vasoconstriction by epidural anesthesia, prevents normal development of the core-temperature plateau.

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278 Relationship between Oxygen Uptake and Mixed Venous Oxygen Saturation in the Immediate Postoperative Period

J. P. Viale, G. Annat, J. J. Lehot, S. Quard, L. Quintin, J. Parlow, P. G. Durand, J. M. Zobot, J. Villard, and S. Estanove

During the early postoperative period following coronary artery bypass surgery, oxygen consumption was found to be most often less than 50% of preoperatively measured maximal oxygen consumption, and the measurement of mixed venous oxygen saturation provided an indirect evaluation of the intensity of the "exercise test" imposed on patients.

284 Long-term Intrathecal Morphine and Bupivacaine in Patients with Refractory Cancer Pain: Results from a Morphine:Bupivacaine Dose Regimen of 0.5:4.75 mg/ml

Magnus Sjöberg, Petre Nitescu, Lennart Appelgren, and Ioan Curelaru

A continuous intrathecal infusion of a combination of 0.5 mg/ml morphine and 4.75 mg/ml bupivacaine gives satisfactory pain relief, decreases consumption of opioid and nonopioid analgetics and sedatives, improves sleep, apparently reduces side effects from the intrathecal morphine, and facilitates the care of patients with refractory cancer pain.

298 Recovery Characteristics of Desflurane *Versus* Halothane for Maintenance of Anesthesia in Pediatric Ambulatory Patients

Peter J. Davis, Ira Todd Cohen, Francis X. McGowan, Jr., and Karen Latta

In premedicated ambulatory pediatric patients, desflurane anesthesia allows for a faster recovery from anesthesia. However, depending upon an institution's hospital discharge criteria, desflurane may or may not affect overall hospitalization time.

303 Epidural Bupivacaine/Sufentanil Therapy for Postoperative Pain Control in Patients Tolerant to Opioid and Unresponsive to Epidural Bupivacaine/Morphine

Oscar A. de Leon-Casasola and Mark J. Lema

Epidural sufentanil/bupivacaine infusions provided adequate postoperative analgesia to chronic cancer patients with high preoperative morphine requirements.

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310 Comparison of Twitch Depression of the Adductor Pollicis and the Respiratory Muscles: Pharmacodynamic Modeling without Plasma Concentrations

Paul Bragg, Dennis M. Fisher, Jun Shi, Francois Donati, Claude Meistelman, Marie Lau, and Lewis B. Sheiner

Pharmacodynamic modeling was used to assess the relative sensitivity and rate of equilibration of the adductor pollicis and the respiratory muscles to vecuronium.

320 Is Intramuscular Mivacurium an Alternative to Intramuscular Succinylcholine?

Charles B. Cauldwell, Marie Lau, and Dennis M. Fisher

When mivacurium was administered intramuscularly to infants and children undergoing nitrous oxide/halothane anesthesia, onset of paralysis was markedly slower than that with intravenous administration and not sufficiently rapid to facilitate routine tracheal intubation.

326 Autonomic Reflex Dysfunction in Patients Presenting for Elective Surgery Is Associated with Hypotension after Anesthesia Induction

Terry W. Latson, T. H. Ashmore, Douglas J. Reinhart, Kevin W. Klein, and A. H. Giesecke

Some degree of autonomic reflex dysfunction is common in elective surgical patients older than age 39 yr and may contribute to the occurrence of postinduction hypotension.

338 On-site Prothrombin Time, Activated Partial Thromboplastin Time, and Platelet Count: A Comparison between Whole Blood and Laboratory Assays with Coagulation Factor Analysis in Patients Presenting for Cardiac Surgery

G. J. Despotis, S. A. Santoro, E. Spitznagel, K. M. Kater, P. Barnes, J. L. Cox, and D. G. Lappas

Whole blood prothrombin time, activated partial thromboplastin time, and platelet count assays enable physicians to accurately assess the role quantitative platelet and Factor deficiencies play as etiologies of microvascular bleeding.

■ **LABORATORY INVESTIGATIONS**

352 Effects of Volatile Anesthetics, Thiopental, and Ketamine on Spontaneous and Depolarization-evoked Dopamine Release from Striatal Synaptosomes in the Rat

Jean Mantz, Catherine Varlet, Jean-Baptiste Lecharny, Danielle Henzel, Patrice Lenot, and Jean-Marie Desmots

Volatile anesthetics, thiopental, and ketamine induce significant changes in spontaneous and/or depolarization-evoked dopamine release from striatal synaptosomes in the rat.

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Myron Yaster, Raymond C. Koehler, and Richard J. Traystman
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- 372** Volatile Anesthetic Effects on Sarcoplasmic Reticulum Ca Content and Sarcolemmal Ca Flux in Isolated Rat Cardiac Cell Suspensions
David M. Wheeler, Ana Katz, R. Todd Rice, and Richard G. Hansford
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- 383** Systemic Lidocaine Blocks Nerve Injury-induced Hyperalgesia and Nociceptor-driven Spinal Sensitization in the Rat
Stephen E. Abram and Tony L. Yaksh
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- 392** The Cerebral and Systemic Effects of Movement in Response to a Noxious Stimulus in Lightly Anesthetized Dogs: Possible Modulation of Cerebral Function by Muscle Afferents
William L. Lanier, Paul A. Iaizzo, James H. Milde, and Frank W. Sharbrough
 During light anesthesia, noxious stimuli cause changes in the brain that are mediated in part by muscle afferent receptors.
- 402** Ketamine Suppresses Endotoxin-induced Tumor Necrosis Factor Alpha Production in Mice
Ichiro Takenaka, Masanori Ogata, Kazunori Koga, Takahiro Matsumoto, and Akio Shigematsu
 Ketamine suppresses endotoxin-induced tumor necrosis factor- α production in both thioglycolate-elicited peritoneal macrophages and thioglycolate-pretreated mice.

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409 Nitrous Oxide Induces Preemptive Analgesia in the Rat That Is Antagonized by Halothane

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417 Does Halothane Interfere with the Release, Action, or Stability of Endothelium-derived Relaxing Factor/Nitric Oxide?

Gilbert Blaise, Quy To, Martin Parent, Benoit Lagarde, Francisco Asenjo, and Remy Sauvé

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The Guide for Authors is published in the January and July issues. Please refer to the Guide for the preparation of any material for submission to ANESTHESIOLOGY.

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