



ON THE COVER:

Breastfeeding is an important public health concern. High cumulative doses of epidural fentanyl used for labor analgesia have been associated with early termination of breastfeeding. In this issue of ANESTHESIOLOGY, Lee *et al.* report that labor epidural solutions containing fentanyl concentrations as high as 2 µg/ml do not appear to influence breastfeeding rates at 6 weeks postpartum. In an accompanying Editorial View, Chestnut puts the new research findings in perspective and encourages all anesthesiologists who provide care for obstetric patients to be champions for a culture that supports breastfeeding.

- Lee *et al.*: Epidural Labor Analgesia—Fentanyl Dose and Breastfeeding Success: A Randomized Clinical Trial, p. 614
- Chestnut: Labor Epidural Analgesia and Breastfeeding, p. 593

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■ PERIOPERATIVE MEDICINE

CLINICAL SCIENCE

◆ ◆ **Epidural Labor Analgesia—Fentanyl Dose and Breastfeeding Success: A Randomized Clinical Trial** 614

A. I. Lee, R. J. McCarthy, P. Toledo, M. J. Jones, N. White, and C. A. Wong

A randomized parallel group study of three epidural solutions of bupivacaine with or without fentanyl showed that breastfeeding success at 6 weeks was not influenced by the epidural fentanyl concentration or the cumulative epidural fentanyl dose administered for labor analgesia. Maternal and umbilical cord venous fentanyl and bupivacaine concentrations did not differ between women who discontinued breastfeeding (3 to 6%) and those who were still breastfeeding at 6 weeks postpartum.

◆ ◆ **Effect of Intrathecal Bupivacaine Dose on the Success of External Cephalic Version for Breech Presentation: A Prospective, Randomized, Blinded Clinical Trial** 625



L. A. Chalifoux, J. R. Bauchat, N. Higgins, P. Toledo, F. M. Peralta, J. Farrer, S. E. Gerber, R. J. McCarthy, and J. T. Sullivan

The success of cephalic version was approximately 50% in each group. Spinal anesthetic dose does not influence the success of cephalic version.

◆ **Perioperative Gabapentin Does Not Reduce Postoperative Delirium in Older Surgical Patients: A Randomized Clinical Trial** 633



J. M. Leung, L. P. Sands, N. Chen, C. Ames, S. Berven, K. Bozic, S. Burch, D. Chou, K. Covinsky, V. Deviren, S. Kinjo, J. H. Kramer, M. Ries, B. Tay, T. Vail, P. Weinstein, and the Perioperative Medicine Research Group

Preoperative and postoperative administration of gabapentin reduced postoperative opioid use. However, gabapentin did not reduce the incidence of delirium after major surgery.

🌐 **Investigation of Slow-wave Activity Saturation during Surgical Anesthesia Reveals a Signature of Neural Inertia in Humans** 645

C. E. Warnaby, J. W. Sleigh, D. Hight, S. Jbabdi, and I. Tracey

Slow-wave activity saturation was observed on induction under both propofol and sevoflurane anesthesia. Simultaneous administration of opiates, but not muscle relaxants, reduced the concentration of anesthetic required for slow-wave activity saturation. Anesthetic dose required to induce slow-wave activity saturation was different during induction and emergence, indicating a certain neural inertia on transition to return of consciousness. Interestingly, abrupt changes in slow-wave activity were more often associated with confusion and delirium after emergence. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

◆ 🌐 **Preventing Retained Central Venous Catheter Guidewires: A Randomized Controlled Simulation Study Using a Human Factors Approach** 658

M. Z. A. Mariyaselvam, K. R. Catchpole, D. K. Menon, A. K. Gupta, and P. J. Young

The locked pack is effective to prevent retained guidewires and acceptable to clinicians for improving patient safety. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

■ CRITICAL CARE MEDICINE

CLINICAL SCIENCE

◆ ◆ 🌐 **Combined Thoracic Ultrasound Assessment during a Successful Weaning Trial Predicts Postextubation Distress** 666

S. Silva, D. Ait Aissa, P. Cocquet, L. Hoarau, J. Ruiz, F. Ferre, D. Rousset, M. Mora, A. Mari, O. Fourcade, B. Riu, S. Jaber, and B. Bataille

Ultrasound examination was repeated before and after a pressure support trial (136 patients) and integrated models (lung, heart, and diaphragm) accurately predicted postextubation distress (area under the curve greater than 0.90); interstitial edema and elevated left ventricular diastolic pressure were most predictive. Integrated sonography might be valuable in assessing extubation readiness in the intensive care unit. *SUPPLEMENTAL DIGITAL CONTENT IS AVAILABLE IN THE TEXT*

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K. Jonkman, A. Duma, E. Olofsen, T. Henthorn, M. van Velzen, R. Mooren, L. Siebers, J. van den Beukel, L. Aarts, M. Niesters, and A. Dahan

A simple compartmental pharmacokinetic model characterized the disposition of both inhaled and intravenous esketamine in volunteers. There were two distinct pulmonary absorption pathways, a rapid one and one from which ketamine was released slowly. Inhaled ketamine bioavailability was reduced due to both dose-independent and dose-dependent impairment of pulmonary uptake.

- CME ◇ **Recovery after Nulliparous Birth: A Detailed Analysis of Pain Analgesia and Recovery of Function** 684
R. Komatsu, B. Carvalho, and P. D. Flood

After vaginal delivery, median time was 0.5 days for opioid cessation, 11 days for stopping all analgesics, and 15 days for pain resolution. After cesarean delivery, median time was 8 days for opioid cessation, 17 days for stopping all analgesics, and 21 days for pain resolution. There was substantial interpatient variability in these times.

BASIC SCIENCE

- ◇ **Hydrogen Peroxide Induces Muscle Nociception *via* Transient Receptor Potential Ankyrin 1 Receptors** 695
D. Sugiyama, S. Kang, N. Arpey, P. Arunakul, Y. M. Usachev, and T. J. Brennan



The injection of H₂O₂ solutions into muscle but not more superficial skin tissues caused nociceptive behaviors in rats that were blocked by transient receptor potential ankyrin 1 antagonists. Experiments using capsaicin nerve block suggested that unmyelinated nociceptive neurons transmit nociceptive signals after H₂O₂ administration.

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