The Gerard W. Ostheimer Lecture:
What’s New in Obstetric Anesthesia?

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"The great tragedy of Science - the slaying of a beautiful hypothesis by an ugly fact." Thomas H. Huxley (1825 - 1895)

This index was produced through a combination of search techniques. Foremost, a hand search of the table of contents of each 2003 issue of the following journals was performed.

**Anesthesia Journals**

**Obstetrics & Gynecology Journals**

**General Medical Journals**
JAMA, New England J Medicine, Lancet, Science

In addition, Pub Med, All Science Citation Index, and Lexis/Nexis web searches were performed for various keywords related to obstetric anesthesiology.

Almost all contributions in this index (even letters) are accompanied by a short synopsis. If I misinterpreted or missed a tasty piece of literature (especially yours), for this I claim ignorance or inexperience and extend my apologies! Thanks to all authors for your contributions to our collective learning and to my own mentors who, despite working with limited substrate, have engendered an enthusiasm for reading the literature. I hope this index assists your own research and/or clinical efforts and contributes to improved outcomes for the special patients that we serve.

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ARTICLES

THE PREGNANT PATIENT, THE FETUS, AND THE NEWBORN

Assisted Reproductive Technologies


3. Nassar AH, Usta IM, Rechdan JB, Harb TS, Adra AM, Abu-Musa AA. Pregnancy outcome in spontaneous twins versus twins who were conceived through in vitro fertilization. Am J Obstet Gynecol 2003; 189:513-8. IVF twins are more likely to be delivered by cesarean and have a higher incidence of preterm birth and have longer nursery stays.

4. Schieve LA, Tatham L, Peterson HB, Toner J, Jeng G. Spontaneous abortion among pregnancies conceived using assisted reproductive technology in the United States. Obstet Gynecol 2003; 101:959-67. 62,228 clinical pregnancies from 1996-1998 US clinic data noted that the risk of spontaneous abortion does not appear higher; however older women using their own eggs still need to consider than their risk is quite high.

5. Klein J, Pena JE, Thornton MH, Sauer MV. Understanding the motivations, concerns, and desires of human immunodeficiency virus 1-serodiscordant couples wishing to have children through assisted reproduction. Obstet Gynecol 2003; 101:987-94. Couples were aware of risks and understood that their child might contact HIV.

6. de La Rochebrochard E, Thonneau P. Paternal age ≥40 years: an important risk factor for infertility. Am J Obstet Gynecol 2003; 189:901-5. Retrospective, multinational study of 6188 European women selected randomly; paternal age is a factor!

7. Jones HW. Multiple births: how are we doing? Fertil Steril 2003; 79:17-21. Editorial suggests that the issue of multiple births needs to be addressed by the medical societies, and perhaps the legislative process.


9. Gleicher N. Modern obstetrical and infertility care may increase the prevalence of disease: an evolutionary concept. Fertil Steril 2003; 79:249-52. Selective review of literature suggesting that evolutionary barriers to reproduction had lead to an increased prevalence in diseases.


Coexisting Disease

Aging


Autonomic Dysfunction


Cardiac


21. Mulder BJ, Bleker OP. Valvular heart disease in pregnancy. N Engl J Med 2003; 349:1387. Letter following Reimold article noting that the review did not include the critical need to observe these parturients in the early (<72hr) puerperium.


31. Webster JA, Self DD. Anesthesia for pericardial window in a pregnant patient with cardiac tamponade and mediastinal mass. Can J Anaesth 2003; 50:815-8. G2P1 parturient at 29 wks with acute cardiac tamponade and an anterior mediastinal mass in late pregnancy underwent a GA for creation of the window, then underwent regional at a later date for a vaginal delivery!


35. Thaman R, Varnava A, Hamid MS, et al. Pregnancy related complications in women with hypertrophic cardiomyopathy. Heart 2003; 89:752-6. Report of 127 consecutively referred women with this entity; suggest most tolerate pregnancy well, however, planned delivery and monitoring necessary. Moreover, states epidural analgesia should continued to be used cautiously.


Connective Tissue


Endocrine


Gastrointestinal

45. Alstead EM, Nelson-Piercy C. Inflammatory bowel disease in pregnancy. Gut 2003; 52:159-61. IBD may lead to SGA babies; more research needed.


Hematologic


57. Samama CM. Should a normal thromboelastogram allow us to perform a neuraxial block? A strong word of warning. Can J Anaesth 2003; 50:761-3. Editorial to letter below suggesting that TEG for clinical decision making regarding neuraxial blockade should be discouraged at this time.

58. Frolich MA, Gibby G, Mahla ME. Thromboelastography to assess coagulation in the thrombocytopenic parturient. Can J Anaesth 2003; 50:853. Letter describing two cases of TEG being used to decide whether neuraxial blockade was appropriate.


70. Fattorutto M. Evaluation of platelet aggregation in flow and platelet aggregometry during pregnancy. Br J Anaesth 2003; 90:252; author reply 252. The PFA-100 needs to be validated in comparison with aggregation tests.


74. Prochazka M, Happach C, Marsal K, Dahlback B, Lindqvist PG. Factor V Leiden in pregnancies complicated by placental abruption. Bjog 2003; 110:462-6. FVL was not associated with placental abruption in this retrospective case control study of 102 women vs. 2371 prospectively collected controls; however, venous thrombosis was increased in women with placental abruption, indicating thrombophilias.
78. Pegoraro RJ, Hira B, Rom L, Moodley J. Plasminogen activator inhibitor type 1 (PAI1) and platelet glycoprotein IIIa (PGIIIa) polymorphisms in Black South Africans with pre-eclampsia. Acta Obstet Gynecol Scand 2003; 82:313-7. Neither the 4G allele of the plasminogen activator inhibitor Type 1 nor the PLA2 allele of the platelet glycoprotein IIIa have any significant role as risk factors in the patho-etiology of pre-eclampsia in Black South Africans.

79. Hira B, Pegoraro RJ, Rom L, Moodley J. Absence of Factor V Leiden, thrombomodulin and prothrombin gene variants in Black South African women with pre-eclampsia and eclampsia. Bjog 2003; 110:327-8. Genotyping was performed in 100 patients with pre-eclampsia and 100 normotensive pregnant controls to detect the G or A allele at residue 506 of the Factor V gene, and the C or T allele at residue 455 of the thrombomodulin gene. No relationship was found.


82. Guasch Arevalo E, Suarez Cobian A. Platelet count and hematologic function with epidural block in obstetrics. Rev Esp Anestesiol Reanim 2003; 50:130-4. Retrospective review of 1,168 obstetric patients given regional blocks for labor. Seventy-two bloody punctures were observed, for an incidence of 6.16%, and the incidence was significantly higher in the group of patients with over 350,000 platelets/mm3 (p < 0.05).

83. Al-Kouatly HB, Chasen ST, Kalish RB, Chervenak FA. Causes of thrombocytopenia in triplet gestations. Am J Obstet Gynecol 2003; 189:177-80. Review of 126 triplet pregnancies from 1993-2001 observed that thrombocytopenia was most likely to be related to preeclampsia than gestational changes.


Hepatic


Hypertension


Immunologic


94. Jacobsen AF, Qvigstad E, Sandset PM. Low molecular weight heparin (dalteparin) for the treatment of venous thromboembolism in pregnancy. Bjog 2003; 110:139-44. Observational study in 20 pregnant women with acute venous thromboembolism notes that dalteparin may be used for the treatment (with a 10-20% higher dose than non-pregnant) of acute venous thromboembolism in pregnancy.


100. Birnbach DJ, Meadows W, Stein DJ, Murray O, Thys DM, Sordillo EM. Comparison of povidone iodine and DuraPrep, an iodophor-in-isopropyl alcohol solution, for skin disinfection prior to epidural catheter insertion in parturients. Anesthesiology 2003; 98:164-9. Cultures obtained in 60 parturients prior to, immediately following antisepsis and just prior to removal of the catheter, suggest that DuraPrep is better than providone iodine in the number of positive skin cultures immediately after disinfection and in combating bacterial regrowth and colonization.


103. Eldor J. Local anaesthetic antibacterial activity. Anaesthesia 2003; 58:926-8; discussion 928. Letter suggests that manufacturers should declare the limited antibacterial activity of their drugs. Response by Astra Zeneca suggests clinical setting is different.


**Local Anesthetic Allergy**


**Lymphatic**


**Musculoskeletal**


Neoplasm


Neurologic


118. Buettner A. Anaesthesia for caesarean section in a patient with spinal muscular atrophy. Anaes Intens Care 2003; 31:92-4. Case report of primigravid woman with spinal muscular atrophy Type III (Kugelberg-Welander syndrome). Elective caesarean section was performed at 38 weeks gestation under spinal anaesthesia.


**Orthopedic**


129. Russell R, Comara S. Regional blocks for delivery in women with scoliosis or previous spinal surgery. International Journal of Obstetric Anesthesia 2003; 12:308-10. Letter reviews case series of 57 deliveries in 45 women with scoliosis or prior spinal surgery where very few cases of epidural or spinal difficulty were noted.

130. Villevieille T, Mercier FJ, Benhamou D. [Is obstetric epidural anaesthesia technically possible after spinal surgery and does it work?]. Ann Fr Anesth Reanim 2003; 22:91-5. Retrospective analysis of 31 parturients with previous spine surgery notes technical and analgesic failures in 18%; authors conclude, not surprisingly, that epidural techniques appear to be less reliable in this patient group.

**Pain**


**Psychiatric**

132. Johnson RC, Slade P. Obstetric complications and anxiety during pregnancy: is there a relationship? J Psychosom Obstet Gynaecol 2003; 24:1-14. Review of recent work in the field; on balance the evidence reviewed suggests that a general association between anxiety and obstetric complications per se does not exist, but specific types of anxiety, such as psychosocial stress, family functioning, or fear of childbirth may have associations with specific complications, such as prolonged labor or Cesarean section.

133. Pinto N, Koren G. Research on maternal and fetal safety after exposure to antidepressants in utero. Am J Obstet Gynecol 2003; 189:1810-1; author reply 1811. Letter suggests that these studies are difficult and should include findings of registries.

**Renal**

134. Gyenge CC, Bowen BD, Reed RK, Bert JL. Mathematical model of renal elimination of fluid and small ions during hyper- and hypovolemic conditions. Acta Anaesthesiol Scand 2003; 47:122-37. Renal response to the provision of fluids and blood loss modeled in a 70kg man. For the very interested reader only!

**Respiratory**


141. Bracken MB, Triche EW, Belanger K, Saftlas A, Beckett WS, Leaderer BP. Asthma symptoms, severity, and drug therapy: a prospective study of effects on 2205 pregnancies. Obstet Gynecol 2003; 102:739-52. Cohort study of 873 pregnant women with asthma vs 1333 without asthma; No effect of asthma symptoms or severity was found on preterm delivery; however, use of oral steroids and theophylline reduced gestational length.

142. Bromilow J, McCormick A. A novel role for magnesium? Anaesthesia 2003; 58:1246-7. Letter highlights case of asthmatic parturient for c/s under CSE who was treated with magnesium only to assist asthma.

Substance Abuse


148. Kuczkowski KM. Caesarean section in a cocaine-intoxicated parturient: regional vs. general anaesthesia? Anaesthesia 2003; 58:1042-3. Letter notes case of parturient where regional anesthesia was used following acute crack cocaine use.


**Trauma**


**Vascular**


**Complementary and Alternative Medicine**


162. Seibel MM. A guest editorial: complementary and alternative medicine and women's health--time to catch up! Obstet Gynecol Surv 2003; 58:149-51. Editorial notes need to be familiar, ask patients and establish referral patterns for CAM practitioners.
Fetal Monitoring


165. Esen UI. Fetal distress and the 30-minute rule. Anaesthesia 2003; 58:1249. Letter suggests that the 30 min rule is based on arbitrary and unscientific data.


167. Elimian A, Lawlor P, Figueroa R, Wiencek V, Garry D, Quirk JG. Intrapartum assessment of fetal well-being: any role for a fetal admission test? J Matern Fetal Neonatal Med 2003; 13:408-13. Irrespective of the definition of reactivity, women with a non-reactive fetal admission test were more likely to be delivered by Cesarean section, to have fetal distress resulting in Cesarean section and to have a longer neonatal hospital stay.


169. Kitlinski ML, Kallen K, Marsal K, Olofsson P. Gestational age-dependent reference values for pH in umbilical cord arterial blood at term. Obstet Gynecol 2003; 102:338-45. A physiologic linear decline of umbilical artery pH with gestational age at term was found in an evaluation of 24,390 term singleton vaginal deliveries with an Apgar score of 9 or greater. Authors suggest a gestational age adjusted umbilical artery pH reference should be used, and will result in fewer diagnoses of cord academia than a stationary cutoff of pH of less than 7.10.

Fetal Surgery


173. Strumper D, Durieux ME, Gogarten W, Van Aken H, Hartleb K, Marcus MA. Fetal plasma concentrations after intraamniotic sufentanil in chronically instrumented pregnant sheep. Anesthesiology 2003; 98:1400-6; discussion 5A-6A. Fetal lamb absorbs intraamniotic sufentanil and achieves significantly greater plasma concentrations than the ewe; suggests may be a potential approach for fetal analgesia following in-utero fetal surgery.


**Maternal Infection, Fever and Neonatal Sepsis Workup**


180. Banerjee S, Steer PJ. The rise in maternal temperature associated with regional analgesia in labour is harmful and should be treated. International Journal of Obstetric Anesthesia 2003; 12:280-4. Proposer of debate (see below) suggests the need for better studies, and potentially treatments to avoid temperature increases.

181. Irestedtz L. The rise in maternal temperature associated with regional analgesia in labour is harmful and should be treated. International Journal of Obstetric Anesthesia 2003; 12:284-6. Opposer of debate (see above) suggests causal relationship has not been established.


**Newborn Behavior**


**Breast Feeding**


190. Radzyminski S. The effect of ultra low dose epidural analgesia on newborn breastfeeding behaviors. J Obstet Gynecol Neonatal Nurs 2003; 32:322-31. Two groups of neonates in this study. One group was born to mothers who received epidural analgesia, and one group was born to mothers who received no pain medication for labor. Both groups were observed for initial breastfeeding behaviors using the Premature Infant Breastfeeding Behavior Scale following birth and at 24 hours. No differences were observed.

**Cerebral Palsy**


192. Willoughby RE, Jr., Nelson KB. Chorioamnionitis and brain injury. Clin Perinatol 2002; 29:603-21. Retrospective case-control study noting that exposure to intrauterine infection was not an independent risk factor for CP in very premature infants when gestational age and other confounders were tightly controlled.


**Low Birth Weight**


Macrosomia


200. Boulet SL, Alexander GR, Salihu HM, Pass M. Macrosomic births in the united states: determinants, outcomes, and proposed grades of risk. Am J Obstet Gynecol 2003; 188:1372-8. As analyzed in linked live birth and infant death cohort files from 1995-7 in the US after 37 wks gestation, macrosomia >4000 g is useful for increased risks of labor and newborn complications, >4500 g is more predictive of neonatal morbidity, and >5000 g may be a better indicator of infant mortality risk.

Meconium Aspiration


Morbidity

203. Gherman RB, Ouzounian JG, Satin AJ, Goodwin TM, Phelan JP. A comparison of shoulder dystocia-associated transient and permanent brachial plexus palsies. Obstet Gynecol 2003; 102:544-8. Retrospective case-control analysis from a national registry noted that there is no significant difference in antepartum and intrapartum characteristics which ultimately resulted in either a transient or a permanent injury.

Mortality

204. Gould JB, Qin C, Marks AR, Chavez G. Neonatal Mortality in Weekend vs Weekday Births. Jama 2003; 289:2958-62. California linked data from infant birth and death certificates. Neonatal mortality increased from 2.8/1000 births to 3.12/1000 births on weekends, but after adjusting for birth weight, the increase was not statistically significant.


**Pharmacology**


211. Thorp JA, O'Connor M, Belden B, Etzenhouser J, Hoffman EL, Jones PG. Effects of phenobarbital and multiple-dose corticosteroids on developmental outcome at age 7 years. Obstet Gynecol 2003; 101:363-73. Combined antenatal exposure to Phenobarbital and repetitive steroid therapy was not associated with adverse effects on intelligence, achievement, behavior, or head circumference at 7 yrs of age.

**Respiratory Distress**

212. Elimian A, Figueroa R, Spitzer AR, Ogburn PL, Wienczek V, Quirk JG. Antenatal corticosteroids: are incomplete courses beneficial? Obstet Gynecol 2003; 102:352-5. 125 neonates between 23-34 wks gestation noted that an incomplete course of antenatal corticosteroids is associated with a reduction in the need for vasopressors, rate of intraventricular hemorrhage, and neonatal death.

**Resuscitation/Evaluation**

213. Burlingame JM, Esfandiari N, Sharma RK, Mascha E, Falcone T. Total antioxidant capacity and reactive oxygen species in amniotic fluid. Obstet Gynecol 2003; 101:756-61. Interesting study suggests that antioxidants are present in the amniotic fluid at least as early as the second trimester and increase with gestational age. Reactive oxygen species are not necessarily present.

**Umbilical Cord Issues**


216. Lotgering FK, Bishai JM, Struijk PC, et al. Ten-minute umbilical cord occlusion markedly reduces cerebral blood flow and heat production in fetal sheep. Am J Obstet Gynecol 2003; 189:233-8. Autoregulation of cerebral blood flow was lost within 4 minutes of occlusion, probably as a result of hypoxia, combined with hypotension. A reduction in cerebral heat production preceded and exceeded the reduction in blood flow perhaps suggesting an active down-regulation of cerebral metabolism. Recovery of cerebral blood flow and heat production to control values was incomplete for more than 60 minutes after restoration of umbilical flow.
Non-Obstetric Surgery during Pregnancy

217. ACOG Committee Opinion Number 284, August 2003: Nonobstetric surgery in pregnancy. Obstet Gynecol 2003; 102:431. This one paragraph opinion states that there are "no data to allow us to make specific recommendations", but states that a team approach (anesthesia, obstetrics, surgery) is necessary for the optimal safety of the woman and her baby.


Pharmacologic Alterations in Women/Pregnancy


222. Grewal S. To refuse or not to refuse, that is the question? Anaesthesia 2003; 58:715; author's reply 715. Letter with reply noted by S. Yentis discussing reduction of syntocinon dose.

223. Sato N, Tanaka KA, Szlam F, Tsuda A, Arias ME, Levy JH. The vasodilatory effects of hydralazine, nicardipine, nitroglycerin, and fenoldopam in the human umbilical artery. Anesth Analg 2003; 96:539-44. The noted agents used to treat acute hypertension have no adverse effects on umbilical artery tone; however, in larger concentrations (> 10-5 M), fenoldopam may produce contraction of the umbilical artery.


Physiologic Alterations in Women/Pregnancy


Placental Issues


OBSTETRIC ISSUES AND IMPLICATIONS

Complications-Obstetric

Abdominal Pregnancy


Amniotic Fluid Embolism


Hemorrhage

251. Friedman Z, Berkenstadt H, Preisman S, Perel A. A comparison of lactated ringer's solution to hydroxyethyl starch 6% in a model of severe hemorrhagic shock and continuous bleeding in dogs. Anesth Analg 2003; 96:39-45. Non-pregnant animal model observed that fluid resuscitation to a target mean arterial blood pressure of 60 mmHg during uncontrolled bleeding resulted in larger oxygen delivery and smaller systemic lactate concentrations when hydroxyethyl starch 6% was used in comparison to LR.


258. Caliskan E, Dilbaz B, Meydanli MM, Ozturk N, Narin MA, Haberal A. Oral misoprostol for the third stage of labor: a randomized controlled trial. Obstet Gynecol 2003; 101:921-8. In a trial of 1474 women, oral misoprostol alone was as effective as oxytocin but less effective than oxytocin + methylergonovine or misoprosol.


Hyperemesis Gravidarum

265. Lagiou P, Tamimi R, Mucci LA, Trichopoulos D, Adami HO, Hsieh CC. Nausea and vomiting in pregnancy in relation to prolactin, estrogens, and progesterone: a prospective study. Obstet Gynecol 2003; 101:639-44. Lower levels of prolactin and a trend for high levels of estradiol were correlated with n/v at any time during pregnancy until the 27th wk.

266. Rosen T, de Veciana M, Miller HS, Stewart L, Rebarber A, Slotnick RN. A randomized controlled trial of nerve stimulation for relief of nausea and vomiting in pregnancy. Obstet Gynecol 2003; 102:129-35. 21 day trial during first trimester notes in 187 that nerve stimulation therapy is effective in reducing nausea/vomiting and promoting weight gain in symptomatic women.


Maternal Mortality


Multiple Gestation


Neurologic Injury


277. Whiteside JL, Barber MD, Walters MD, Falcone T. Anatomy of ilioinguinal and iliohypogastric nerves in relation to trocar placement and low transverse incisions. Am J Obstet Gynecol 2003; 189:1574-8; discussion 1578. Courses of iliohypogastric and ilioinguinal nerves mapped from 11 adult female cadavers note that surgical sites below the level of the anterior superior iliac spine have potential for ilioinguinal or iliohypogastric injury.

**Ovarian Hyperstimulation Syndrome**


**Pain**


**PIH/Preeclampsia**


289. Dyer RA, Els I, Farbas J, Torr GJ, Schoeman LK, James MF. Prospective, randomized trial comparing general with spinal anesthesia for cesarean delivery in preeclamptic patients with a nonreassuring fetal heart trace. Anesthesiology 2003; 99:561-9; discussion 5A-6A. 70 parturients with severe preeclampsia (160/110) randomized to spinal versus general for cesarean delivery. Maternal hemodynamics were similar, but spinal anesthesia required more ephedrine and was associated with lower umbilical artery pH and base deficits.


291. Santos AC, Birnbach DJ. Spinal anesthesia in the parturient with severe preeclampsia: time for reconsideration. Anesth Analg 2003; 97:621-2. Editorial for the following article suggests that spinal anesthesia may be an appropriate choice for women with severe preeclampsia having a cesarean delivery.


300. Cotter AM, Molloy AM, Scott JM, Daly SF. Elevated plasma homocysteine in early pregnancy: a risk factor for the development of nonsevere preeclampsia. Am J Obstet Gynecol 2003; 189:391-4; discussion 394-6. 71 cases of nonsevere preeclampsia sampled at approx 15 wks noted an increased homocysteine level compared to normal controls.


303. Isler CM, Magann EF, Rinehart BK, Terrone DA, Bass JD, Martin JN, Jr. Dexamethasone compared with betamethasone for glucocorticoid treatment of postpartum HELLP syndrome. Int J Gynaecol Obstet 2003; 80:291-7. Prospective with some randomized patients (n= 36) noted that dexamethasone was superior.


305. Isler CM, Barrilleaux PS, Rinehart BK, Magann EF, Martin JN, Jr. Postpartum seizure prophylaxis: using maternal clinical parameters to guide therapy. Obstet Gynecol 2003; 101:66-9. 503 patients prospectively followed; clinical criteria, when compared to arbitrary protocols, can shorten the duration of postpartum magnesium sulfate for seizure prophylaxis.

306. Chipchase J, Peebles D, Rodeck C. Severe preeclampsia and cerebral blood volume response to postural change. Obstet Gynecol 2003; 101:86-92. In normotensive (n = 13), and pregnancy induced hypertensive (n=9) a fall in median cerebral blood volume was noted; conversely in preeclamptic women a median rise in cerebral blood volume was noted.

307. Scott JR. Magnesium sulfate for mild preeclampsia. Obstet Gynecol 2003; 101:213. Editorial notes the inadequate power of article below, but suggests should be preserved for a future meta-analysis.

308. Livingston JC, Livingston LW, Ramsey R, Mabie BC, Sibai BM. Magnesium sulfate in women with mild preeclampsia: a randomized controlled trial. Obstet Gynecol 2003; 101:217-20. 222 women with mild preeclampsia to magnesium or placebo; no major impact on disease progression noted. However, as stated above, the study is under-powered.


311. Macarthur A. Best evidence in anesthetic practice: prevention: magnesium sulfate reduces the risk of eclampsia in women with pre-eclampsia. Can J Anaesth 2003; 50:1035-8. Commentary reviews the 2 major studies (as above); notes that abnormal cerebral perfusion caused by these agents may be important in future investigations and clinical considerations.

313. Subtil D, Goeusse P, Puëch F, et al. Aspirin (100 mg) used for prevention of pre-eclampsia in nulliparous women: the Essai Regional Aspirine Mère-Enfant study (Part 1). Bjo 2003; 110:475-84. 3294 nulliparous women between 14 and 20 wks randomized to 100 mg aspirin vs. placebo; found aspirin does not reduce incidence of pre-eclampsia, however, it did result in an increase in bleeding complications.

314. Subtil D, Goeusse P, Houfflin-Debarge V, et al. Randomized comparison of uterine artery Doppler and aspirin (100 mg) with placebo in nulliparous women: the Essai Regional Aspirine Mère-Enfant study (Part 2). Bjo 2003; 110:485-91. 1853 nulliparous women between 14 and 20 wks gestation randomized to a uterine Doppler examination between 22 and 24 wks or a placebo. Women with abnormal Doppler waveforms received 100 mg of aspirin daily through 36 wks. Despite an observed sensitivity in screening for pre-eclampsia, routine uterine Doppler analysis could not be recommended, as aspirin was ineffective.


317. Hazra S, Waugh J, Bosio P. 'Pure' pre-eclampsia before 20 weeks of gestation: a unique entity. Bjo 2003; 110:1034-5. Just when you believed that the pre-20 wk timeframe was safe….this case report describes the first case of pre-eclampsia at 18 wks gestation not associated with triploidy, trophoblastic disease or antiphospholipid syndrome.


**Perineal Trauma/Lacerations**

321. Williams A. Third-degree perineal tears: risk factors and outcome after primary repair. J Obstet Gynaecol 2003; 23:611-4. Authors made no comments on epidural techniques as cause (for once!), but noted that regional and general techniques are often required (76%) for their repair.

322. Gupta N, Kiran TU, Mulik V, Bethel J, Bhal K. The incidence, risk factors and obstetric outcome in primigravid women sustaining anal sphincter tears. Acta Obstet Gynecol Scand 2003; 82:736-43. Retrospective database analysis noted fetal macrosomia and doctor conducted deliveries were independent risk factors for anal sphincter tears; also suggested that "spinal analgesia at delivery' was associated (as were use of forceps, being postdates, etc. etc.).
Preterm Labor


326. Low JA, Killen H, Derrick EJ. Antepartum fetal asphyxia in the preterm pregnancy. Am J Obstet Gynecol 2003; 188:461-5. Fetal asphyxia in pregnancies that are delivered preterm is present frequently before labor, as noted by nonstress tests, fetal heart rate monitoring and biophysical profiles.


331. Sakai M, Sasaki Y, Yamagishi N, Tanebe K, Yoneda S, Saito S. The preterm labor index and fetal fibronectin for prediction of preterm delivery with intact membranes. Obstet Gynecol 2003; 101:123-8. The preterm labor index was similar to the fetal fibronectin assay in its ability to predict preterm delivery in 185 women with preterm labor and intact membranes.


334. ACOG Practice Bulletin. Clinical management guidelines for obstetrician-gynecologist. Number 43, May 2003. Management of preterm labor. Obstet Gynecol 2003; 101:1039-47. The purpose of this document is to present the various methods proposed to manage preterm labor and the evidence for their roles in clinical practice. Despite the numerous management methods proposed the incidence of preterm birth has changed little over the past 40 years. Uncertainty persists about the best strategies for managing preterm labor.

336. ACOG Committee Opinion. Use of progesterone to reduce preterm birth. Obstet Gynecol 2003; 102:1115-6. Opinion notes that limited data exists, but appears to support the use in women with a documented history of previous spontaneous birth at less than 37 wks gestation.


339. Friese K. The role of infection in preterm labour. Bjo 2003; 110 Suppl 20:52-4. Good review suggesting that bacterial vaginosis and intruterine infection are believed to be important risk factors for preterm delivery.


Pulmonary Embolism


Retained Placenta


345. Jha S, Chiu JW, Yeo IS. Intravenous nitro-glycerine versus general anaesthesia for placental extraction--a sequential comparison. Med Sci Monit 2003; 9:CS63-6. Case report of a 34-year-old gravida 4, para 3 parturient with retained placenta and postpartum haemorrhage on two consecutive deliveries who had the placenta successfully removed manually by the same surgeon under general anaesthesia versus fentanyl and nitro-glycerine on the first and second deliveries, respectively.


Surprise Delivery of Infant


**Umbilical Cord Issues**


351. Bythell V. Cord prolapse demands general anaesthesia. International Journal of Obstetric Anesthesia 2003; 12:287-9. Proposer of debate (see below) notes that although improved fetal outcome with speedier delivery of these infants is insufficient, we should continue to facilitate delivery as promptly as possible.


**Uterine Rupture**


**Critical Care for the Obstetric Patient**

357. Zeeman GG, Wendel GD, Jr., Cunningham FG. A blueprint for obstetric critical care. Am J Obstet Gynecol 2003; 188:532-6. Prospective study evaluating admissions to an obstetric intermediate care unit and obstetric admissions to a medical/surgical ICU. Suggests that an intermediate care unit decreases admissions to a med/surg ICU, and should be a considered option for tertiary care centers.


Obstetric Management Issues

Birth Centers


Breech

363. Bujold E, Marquette GP, Ferreira E, Gauthier RJ, Boucher M. Sublingual nitroglycerin versus intravenous ritodrine as tocolytic for external cephalic version: a double-blinded randomized trial. Am J Obstet Gynecol 2003; 188:1454-7; discussion 1457-9. 74 randomized parturients noted ECV success higher with ritodrine (45% vs. 24%); headache and lower blood pressure more common with nitroglycerine.


370. Bujold E, Boucher M, Rinfret D, Berman S, Ferreira E, Marquette GP. Sublingual nitroglycerin versus placebo as a tocolytic for external cephalic version: a randomized controlled trial in parous women. Am J Obstet Gynecol 2003; 189:1070-3. 99 patients randomized to 2 sublingual sprays of 400 µg nitroglycerin or placebo; nitroglycerin was less successful (48% vs 63%).


Cerclage Placement


375. Odibo AO, Elkousy M, Ural SH, Macones GA. Prevention of preterm birth by cervical cerclage compared with expectant management: a systematic review. Obstet Gynecol Surv 2003; 58:130-6. Meta-analysis notes trend towards cervical cerclage reducing preterm births before 34 weeks in use, however, no improvement in neonatal mortality and an increase in postpartum fever were observed.

Cesarean Delivery


378. Bost BW. Cesarean delivery on demand: what will it cost? Am J Obstet Gynecol 2003; 188:1418-21; discussion 1421-3. 1 year cost data from not-for-profit community hospital suggest cesarean on demand should have little impact on overall costs; discussion following this by other individuals detail other implications.


383. Nygaard I, Cruikshank DP. Should all women be offered elective cesarean delivery? Obstet Gynecol 2003; 102:217-9. Editorial suggests that it is "ill advised to routinely give all prenatal patients the choice of their desired mode of delivery".


385. Joseph KS, Young DC, Dodds L, et al. Changes in maternal characteristics and obstetric practice and recent increases in primary cesarean delivery. Obstet Gynecol 2003; 102:791-800. Recent increases in primary cesarean delivery rates are a consequence of increasing maternal age (>35) weight (>70kg), and weight gain during pregnancy (>20kg).

386. Wilkes PT, Wolf DM, Kronbach DW, Kunze M, Gibbs RS. Risk factors for cesarean delivery at presentation of nulliparous patients in labor. Obstet Gynecol 2003; 102:1352-7. Case control, chart review study of 325 nulliparous patients presenting in labor at term with singleton vertex fetus with cesarean (study subjects) or vaginal (controls) delivery. Suggests within 2 hrs of admission, slow cervical dilation change, fetal station, as well as maternal weight, gestational age, and preeclampsia, are independent variables that increase cesarean delivery.


389. Danielian P, Nikolaou D. The unfacts of "request" caesarean section. Bjog 2003; 110:784; author reply 784-5. Letter suggests that the available evidence suggests that any claim of knowing whether vaginal versus elective cesarean delivery is safer is not justified.


**Feeding during Labor**


392. O'Sullivan G, Scrutton M. NPO during labor. Is there any scientific validation? Anesthesiol Clin North America 2003; 21:87-98. Author concludes that current evidence suggests that solids and semi-solids should be avoided once a woman is in active labor or requests analgesia but allow a carefully audited introduction of isotonic drinks.
Induction of Labor


394. Johnson DP, Davis NR, Brown AJ. Risk of cesarean delivery after induction at term in nulliparous women with an unfavorable cervix. Am J Obstet Gynecol 2003; 188:1565-9; discussion 1569-72. Retrospective study of 2647 nulliparous women undergoing induction noted that a significantly increased risk of cesarean delivery, especially when the Bishop score is less than or greater/equal to 5 (31.5% vs. 18.1%).


Instrumental Delivery

397. Sadan O, Ginath S, Gomel A, et al. Vacuum application through a nonfully dilated cervix: a viable option. Arch Gynecol Obstet 2003; 268:281-3. Case control cohort study of 39 women with vacuum deliveries through a nonfully dilated cervix larger than 9 cm and station of the head at S or more +2 cm. Based on predefined criteria, vacuum extraction through a nonfully dilated cervix is a viable alternative to emergency cesarean section and is apparently not associated with higher maternal or infant morbidity.

Intrapartum Care


403. ACOG committee opinion number 286, October 2003: patient safety in obstetrics and gynecology. Obstet Gynecol 2003; 102:883-5. Elements of safety for patients are discussed; communication and system error identification are discussed.

Malpresentation

405. Buhimschi CS, Buhimschi IA, Malinow AM, Weiner CP. Uterine contractility in women whose fetus is delivered in the occipitoposterior position. Am J Obstet Gynecol 2003; 188:734-9. Laboring women generate normal intrauterine pressure despite an occipitoposterior fetal position. Also comments that malpresentation is not the result of epidural use.


Multiple Gestation


409. Williams KP, Galerneau F. Intrapartum influences on cesarean delivery in multiple gestation. Acta Obstet Gynecol Scand 2003; 82:241-5. Retrospective analysis of 10 yr, 967 consecutive twin pregnancies with a gestational age >/=32 weeks with twin A presenting as a vertex and eligible for vaginal delivery were reviewed. A number of influences discussed, however, authors concluded that the presence of an epidural technique reduced the likelihood of a cesarean section.


Postpartum Care


Termination of Pregnancy

412. Keder LM. Best practices in surgical abortion. Am J Obstet Gynecol 2003; 189:418-22. Review noted that the majority of first trimester surgical abortions are done under paracervical block; suggests that addition of sedation improves patient satisfaction but "does not significantly affect pain ratings".

413. Barnett EH. Witnesses testify on first of five abortion bills. The Oregonian. Salem, OR, 2003:B04. Testimony on bills including the two cited below.


VBAC


418. Mankuta DD, Leshno MM, Menasche MM, Brezis MM. Vaginal birth after cesarean section: trial of labor or repeat cesarean section? A decision analysis. Am J Obstet Gynecol 2003; 189:714-9. A model that suggests if additional pregnancies after cesarean were wished for, a trial of labor had a 50% or greater chance of success.


420. Delaney T, Young DC. Spontaneous versus induced labor after a previous cesarean delivery. Obstet Gynecol 2003; 102:39-44. Retrospective review of 3746 patients with one prior cesarean notes that induced labor is associated with higher rate of early postpartum hemorrhage, cesarean delivery, and neonatal ICU admission.

OB ANESTHETIC ISSUES AND IMPLICATIONS

Analgesia for Labor and Delivery

Alternative Techniques


423. Cyna AM. Hypno-analgesia for a labouring parturient with contra-indications to central neuraxial block. Anaesthesia 2003; 58:101-2. Letter suggests that hypnotherapy works, however, the patient utilized Entonox during labor!

424. Leeman L, Fontaine P, King V, Klein MC, Ratcliffe S. Management of labor pain: promoting patient choice. Am Fam Physician 2003; 68:1023, 1026, 1033 passim. Editorial to the two articles below (interesting that editorialist is also the author of the two articles!) which suggests that parturients, family practitioners and hospitals are actively dissuaded from using alternative pain relief modalities.


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428. Waters BL, Raisler J. Ice massage for the reduction of labor pain. J Midwifery Womens Health 2003; 48:317-21. A one-group, pretest, posttest use of ice massage of the acupressure energy meridian point large intestine 4 (LI4) to reduce labor pain during contractions; an effect was suggested.


430. Chung UL, Hung LC, Kuo SC, Huang CL. Effects of LI4 and BL 67 acupressure on labor pain and uterine contractions in the first stage of labor. J Nurs Res 2003; 11:251-60. The study suggests in 127 randomized paturtients that LI4 and BL67 acupressure may lessen labor pain during the active phase of the first stage of labor. There were no verified effects on uterine contractions.

431. Nesheim BI, Kinge R, Berg B, et al. Acupuncture during labor can reduce the use of meperidine: a controlled clinical study. Clin J Pain 2003; 19:187-91. randomized, unblinded, controlled study. One group received acupuncture (N = 106); another did not (N = 92). A second control group (N = 92), drawn from the labor ward protocol, consisted of patients who met the eligibility criteria for the study and were matched to the "no acupuncture" group by parity, but who had not been offered the opportunity to take part. Meperidine was given to 11% of the acupuncture group, 37% of the no acupuncture group (P < 0.0001), and 29% of the control group.

432. Bodner K, Bodner-Adler B, Wierrani F, et al. Effects of water birth on maternal and neonatal outcomes. Wien Klin Wochenschr 2002; 114:391-5. Case control of 140 women who wanted a water birth. A statistically significant decrease in the use of medical analgesia (p = 0.0001) and oxytocin (p = 0.002) was observed in women who had water births. No difference in neonatal parameters.


435. Geissbuhler V, Eberhard J. [Alternative obstetrics: bed, chair or tub? Have alternative birthing methods become established?]. Ther Umsch 2002; 59:689-95. Article suggests that nonpharmacologic alternatives are common to obstetrics.

**Ambulation**


437. Karraz MA. Ambulatory epidural anesthesia and the duration of labor. Int J Gynaecol Obstet 2003; 80:117-22. 221 women with uncomplicated pregnancies in spontaneous labor between 36-42 weeks of gestation or scheduled for induced labor randomized to ambulatory and non-ambulatory. All were given intermittent epidural injections of 0.1% ropivacaine with 0.6 microg/ml sufentanil for analgesia during labor. No significant differences in mode of delivery, consumption of local anesthetic, or oxytocin requirement, but shorter duration (173.4+/-109.9 min vs. 236.4+/-130.6 min; P=0.001) in ambulating parturients.

**Anatomy**

438. I.Kim J T, Bahk JH, Sung J. Influence of age and sex on the position of the conus medullaris and Tuffier's line in adults. Anesthesiology 2003; 99:1359-63. Nonpregnant, mixed ages and gender; 690 patients evaluated by MRI. A safety margin of 2-4 vertebral bodies and intervertebral spaces between conus medullaris and tuffier's line exists regardless of gender or presence of transitional vertebra. However, closer with age and palpation of subcutaneous fat must be considered.
439. Shiroyama K, Izumi H, Kubo T, Nakamura R. Distance from the skin to the epidural space at the first lumbar interspace in a Japanese obstetric population. Hiroshima J Med Sci 2003; 52:27-9. Prospective examination of 95 parturient women found a correlation of body weight with epidural space distance was the highest of the physical factors ($r^2 = 0.800, p = 0.0001$), and a simple regression equation was formulated to aid in predicting SE distance: "SE distance (cm) = 0.05 x body weight (kg) + 0.36".

**Benefit of Anesthesia**


**Breastfeeding**


**Breech Delivery**


**CSE Technique**


**Equipment**


446. Beilin Y, Hossain S, Bodian CA. The numeric rating scale and labor epidural analgesia. Anesth Analg 2003; 96:1794-8. In a post hoc analysis of three previous studies with mixed parity women noted that the use of a verbal numeric rating scale correlated with desire for additional analgesic medication.


**Epidural Techniques**


455. Zwissler B. Regional anesthesia and analgesia for labor and delivery. N Engl J Med 2003; 348:1818-20; author reply 1818-20. Letter to Eltzschig article emphasizing that epidural analgesia is very unlikely to have any clinically relevant effect on cesarean delivery.


458. Gadalla F, Lee SH, Choi KC, Fong J, Gomillion MC, Leighton BL. Injecting saline through the epidural needle decreases the iv epidural catheter placement rate during combined spinal-epidural labour analgesia. Can J Anaesth 2003; 50:382-5. Injecting saline 10 mL through the epidural needle prior to epidural catheter placement in 100 women requesting CSE with intrathecal opioid, noted to decrease venous catheter placements.


460. Lang SA. Identification of the epidural space: air or saline? Can J Anaesth 2003; 50:860-1; author reply 861-2. Letter suggests air is a good technique but technique and judgment required.

461. Errando CL. Identification of the epidural space: air or saline? Can J Anaesth 2003; 50:861; author reply 861-2. Letter suggests that volume of air is important to sequelae.

462. Sobue K, Tsuda T, Yumoto M, Nakagawa T, Nakano M, Katsuya H. Skin analgesia with lidocaine tape prior to epidural blockade. Can J Anaesth 2003; 50:95-6. Use of lidocaine tape (18 mg lidocaine 60% in a 30.5x50 mm film) prior to epidural blockade is effective in decreasing pain of insertion.


467. Lee BB, Chen PP, Ngan Kee WD. Status of obstetric epidural analgesia services in Hong Kong public hospitals: postal questionnaire survey. Hong Kong Med J 2003; 9:407-14. Compared to 1995, the availability has increased but still not 24/7 at all hospitals; overall epidural analgesia rate 15% (8-20% range).


**Fetal Effects**


474. Hill JB, Alexander JM, Sharma SK, McIntire DD, Leveno KJ. A comparison of the effects of epidural and meperidine analgesia during labor on fetal heart rate. Obstet Gynecol 2003; 102:333-7. Cohort study of 200 women with epidural compared to 156 women with meperidine PCA; Incidence and type of FHR deceleration were not significantly different between methods within 40 minutes of initiation (41% meperidine, 34% epidural exhibited decelerations).

475. Soncini E, Grignaffini A, Anfuso S, Cavicchioni O. [Epidural analgesia during labour: maternal, fetal and neonatal aspects]. Minerva Ginecol 2003; 55:263-9. Prospective comparative study of epiduralized versus control parturients suggests with the use of intermittent bolus of ropivacaine (0.2%) + Fent, no differences in delivery modalities or neonatal outcomes were noted.

Fluid Preloading

477. Kubli M, Shennan AH, Seed PT, O'Sullivan G. A randomized controlled trial of fluid pre-loading before low dose epidural analgesia for labour. International Journal of Obstetric Anesthesia 2003; 12:256-60. 168 parturients randomized to 7mL/kg Hartmann's solution vs. no-preload prior to low dose epidural (0.1%B 15 mL + fentanyl 2 µg/mL). No differences noted in decrease in MAP, proportion dropping >20%, or FHR changes. ; 350 participants in each group needed to exclude type 2 error.

Forceps Delivery


479. Carroll TG, Engelken M, Mosier MC, Nazir N. Epidural analgesia and severe perineal laceration in a community-based obstetric practice. J Am Board Fam Pract 2003; 16:1-6. Retrospective cohort study of 2,759 patients noted 65 of 634 had an epidural placement and severe perineal lacerations. Concluded that epidural analgesia was associated with an increase in severe perineal trauma, but as a result of an associated threefold increased risk of instrument use. Instrument use in vaginal delivery more than tripled the risk of severe perineal laceration.

Maternal Education


481. Stewart A, Sodhi V, Harper N, Yentis SM. Assessment of the effect upon maternal knowledge of an information leaflet about pain relief in labour. Anaesthesia 2003; 58:1015-9. Parturients receiving the OAA leaflet (n=37) improved their knowledge over those receiving the standard booking information (n = 39).


483. Olayemi O, Aimakhu CO, Udoh ES. Attitudes of patients to obstetric analgesia at the University College Hospital, Ibadan, Nigeria. J Obstet Gynaecol 2003; 23:38-40. A Structured questionnaire administered to 1,000 antenatal patients notes awareness of obstetric analgesia is relatively low (only 10% were aware of epidural analgesia); however, a high proportion of patients would accept analgesia in labour if offered.

Maternal Position

484. Soetens FM, Meeuwis HC, Van der Donck AG, De Vel MA, Schijven MP, Van Zundert AA. Influence of maternal position during epidural labor analgesia. International Journal of Obstetric Anesthesia 2003; 12:98-101. Dosing of catheter with 0.125% bupivacaine 10mL with 1:800,000 epi + sufenta 7.5 µg in 77 women randomized to the left lateral or 15 degree left tilt positions. The 15 degree lateral tilt resulted in better bilateral sensory blockade at 20 and 30 min; however, supine hypotensive syndrome occurred in 3 patients (vs. none in other group) in this position.


Maternal Satisfaction

487. Elkadry E, Kenton K, White P, Creech S, Brubaker L. Do mothers remember key events during labor? Am J Obstet Gynecol 2003; 189:195-200. 60% of mothers (277 women with median of 10 wks since delivery, mean age 26yrs) could not recall accurately at least one major labor management event. Studies that rely on recall are likely to have high error rates. (NB. No anesthetic variables).

Obstetric Management

488. Roberts CL, Raynes-Greenow CH, Upton A, Douglas ID, Peat B. Management of labour among women with epidural analgesia. Aust N Z J Obstet Gynaecol 2003; 43:78-81. Survey of delivery suites in New South Wales (NSW) that annually provide at least 100 epidurals to 'standard primipara'. Epidural rates among 'standard primipara' at these hospitals ranged from 14 to 85% (median 46%). Continuous epidural infusion was the most commonly used technique (63%). For 'standard primipara' with an epidural 62% of units usually augmented labour with oxytocin, 89% discontinued the epidural in second stage and 67% had policies of delayed pushing.

PCEA

489. Boselli E, Debon R, Duflo F, Bryssine B, Allaouchiche B, Chassard D. Ropivacaine 0.15% plus sufentanil 0.5 microg/mL and ropivacaine 0.10% plus sufentanil 0.5 microg/mL are equivalent for patient-controlled epidural analgesia during labor. Anesth Analg 2003; 96:1173-7. Ropivacaine 0.10% + sufentanil 0.5 µg/mL via PCEA for labor analgesia is equally effective as ropivacaine 0.15% + 0.5 µg/mL. A 30% local anesthetic sparing effect and a 40% reduction in cost was also observed, however, no change in motor block or side effects were observed.

490. Ledin Eriksson S, Gentele C, Olofsson CH. PCEA compared to continuous epidural infusion in an ultra-low-dose regimen for labor pain relief: a randomized study. Acta Anaesthesiol Scand 2003; 47:1085-90. 80 parturients randomized to CEI with ropiv 1 mg/ml + sufent 0.5 µg/ml at 6 ml/h or PCEA with 4 mL demand doses with a 20 min lockout. PCEA consumed 33% less study solution with no differences in pain relief, efficacy, side effects or obstetric outcome.

Pharmacology


495. Arakawa M, Aoyama Y, Ohe Y. Block of the sacral segments in lumbar epidural anaesthesia. Br J Anaesth 2003; 90:173-8. 27 Nonpregnant patients given L4-5/L5-S1 blocks with 17 mL of agent suggests the addition of epinephrine and bicarbonate increases pain thresholds at S1 and S3 segments and decreases onset time.


499. Roelants F, Rizzo M, Lavand'homme P. The effect of epidural neostigmine combined with ropivacaine and sufentanil on neuraxial analgesia during labor. Anesth Analg 2003; 96:1161-6. Neostigmine (4 µg/kg) + ropivacaine 10 mg provided equivalent initial labor epidural analgesia to ropivacaine 20 mg; however was less effective than sufentanil 10 µg + ropivacaine 10 mg in terms of potency and duration.


502. Connelly NR, Parker RK, Pedersen T, et al. Diluent volume for epidural fentanyl and its effect on analgesia in early labor. Anesth Analg 2003; 96:1799-804. 60 laboring primigravid women receiving 3 mL epidural test dose of 1.5% lidocaine + 1:200K epi with 100 µg fentanyl in 2 mL, 10 mL, or 20 mL volume. When placed approx at 5cm, volume in which fentanyl given does not affect onset or duration of block or ability to ambulate.

503. Panni M, Segal S. New local anesthetics. Are they worth the cost? Anesthesiol Clin North America 2003; 21:19-38. Authors conclude that the large difference in cost cannot currently justify the use of these new agents in the obstetric setting.

504. Hart EM, Ahmed N, Buggy DJ. Impact study of the introduction of low-dose epidural (bupivacaine 0.1%/fentanyl 2É g.mL-1) compared with bupivacaine 0.25% for labour analgesia. International Journal of Obstetric Anesthesia. 2003; 12:4-8. Retrospective analysis of 300 parturients all receiving intermittent boluses, half receiving 0.25% bupiv versus 0.1% bupiv + fent 2 µg/mL 10mL. Concluded low dose reduces incidence of instrumental deliveries and bladder catheterization, but increases anesthetic interventions.

506. Polley LS, Columb MO. Ropivacaine and bupivacaine: concentrating on dosing! Anesth Analg 2003; 96:1251-3. Editorial on article below noting the difficulties in meta-analyses noting the importance of attention to relative potencies of local anesthetics.


510. Shin SW, Eisenach JC. Intrathecal morphine reduces the visceromotor response to acute uterine cervical distension in an estrogen-independent manner. Anesthesiology 2003; 98:1467-71; discussion 6A. Intrathecal morphine reduced the visceromotor reflex response to UCD in a dose-dependent manner that was unaffected by estrogen treatment.


513. Teoh WH, Sia AT. Hyperbaric bupivacaine 2.5 mg prolongs analgesia compared with plain bupivacaine when added to intrathecal fentanyl 25 microg in advanced labor. Anesth Analg 2003; 97:873-7. 37 nulliparous parturients noted hyperbaric formulation had longer median duration (122 min; 80-120 min) vs. (95 min;75-125 min).

514. Mather LE, Cousins MJ. The site of action of epidural fentanyl: what can be learned by studying the difference between infusion and bolus administration? The importance of history, one hopes. Anesth Analg 2003; 97:1211-3. Editorial queries whether the question is truly dichotomous, ie. Spinal or supraspinal only.

515. Ginosar Y, Riley ET, Angst MS. The site of action of epidural fentanyl in humans: the difference between infusion and bolus administration. Anesth Analg 2003; 97:1428-38. 10 nonpregnant volunteers in randomized crossover design to receive epidural bolus or infusion; authors conclude that for the dose range evaluated, epidural fentanyl acts predominantly at the spinal sites when given as a bolus, and supraspinal sites when administered as an infusion.

516. Ginosar Y, Columb MO, Cohen SE, et al. The site of action of epidural fentanyl infusions in the presence of local anesthetics: a minimum local analgesic concentration infusion study in nulliparous labor. Anesth Analg 2003; 97:1439-45. 48 women received epidural bupiv 0.125% 20-30mL then randomized to IV or epidural fentanyl 30 µg/h. MLAC then performed. Authors conclude that a marked increase in potency for epidural route.

517. Lacassie HJ, Columb MO. The relative motor blocking potencies of bupivacaine and levobupivacaine in labor. Anesth Analg 2003; 97:1509-13. 60 parturients in labor randomized to MLAC with epidural bupiv or levobupiv demonstrates levo provides less potent motor block.


521. Polley LS, Columb MO, Naughton NN, Wagner DS, van de Ven CJ, Goralski KH. Relative analgesic potencies of levobupivacaine and ropivacaine for epidural analgesia in labor. Anesthesiology 2003; 99:1354-8. 105 parturients at = 7cm dilated randomized to epidural with levo or ropiv in a MLAC study. Ropiv:levobupiv potency ratio 0.98; no difference in motor effects.

522. Benhamou D, Ghosh C, Mercier FJ. A randomized sequential allocation study to determine the minimum effective analgesic concentration of levobupivacaine and ropivacaine in patients receiving epidural analgesia for labor. Anesthesiology 2003; 99:1383-6. 94 parturients = 5cm dilated randomized to epidural with levo or ropiv in a MLAC study. Levo found to be 19% more potent than ropiv but similar sensory, motor and safety.

523. Castro C, Tharmaratnam U, Brockhurst N, Tureanu L, Tam K, Windrim R. Patient-controlled analgesia with fentanyl provides effective analgesia for second trimester labour: a randomized controlled study. Can J Anaesth 2003; 50:1039-46. 3 fentanyl PCA regimens compared with morphine PCA; no difference with respect to pain, however, morphine had highest side effects. Fent 50 µg q 6 min lockout had satisfactory analgesia.


527. Fernandez C, Sala X, Plaza A, Lopez A, Celemín M, Gomar C. [Epidural anesthesia with ropivacaine vs. bupivacaine in continuous perfusion for the treatment of labor pains]. Rev Esp Anestesiol Reanim 2003; 50:70-6. The analgesic efficacy and extent of motor block of 0.125% ropivacaine or 0.125% bupivacaine by continuous epidural perfusion in 60 ASA I-II women, each carrying a single fetus at full term and in spontaneous labor. Ropiv group required more boluses (NS), and motor block was greater in the Bupiv group (p < 0.05).


**Physiology**


532. Reynolds F. Fetal and maternal lactate increase during active second stage of labour (what about the effect of maternal analgesia?). Bjog 2003; 110:86. Letter suggesting the benefit of epiduralized labor having less severe metabolic acidosis and lower lactate levels at birth, and poses the question: Shouldn't the possible benefits to the baby of a maternal epidural be disclosed?


Progress of Labor


535. Reynolds F, Russell R, Porter J, Smeeton M. Does the use of low dose bupivacaine/opioid epidural infusion increase the normal delivery rate? International Journal of Obstetric Anaesthesia 2003; 12:156-163. Almost 600 parturients of mixed parity randomized to 0.0625% bupiv+fent 2.5 µg/mL or sufenta 0.25 µg/mL versus 0.125% bupiv. No increase in normal delivery rate with low dose infusion.


537. Plunkett BA, Lin A, Wong CA, Grobman WA, Peaceman AM. Management of the second stage of labor in nulliparas with continuous epidural analgesia. Obstet Gynecol 2003; 102:109-14. Randomizing approximately 200 nulliparous parturients with low dose bupivacaine 0.0625% with fentanyl 2 µg/ml to push immediately on full cervical dilation or to wait until a "strong urge" to push, the investigators found no difference in the time spent pushing (approximately 60 min), mode of delivery, or neonatal or maternal morbidity. However, "delayed" group only waited an average of 10 minutes longer.

538. Kuczkowski KM. Combined spinal-epidural analgesia and cervical dilation: Is there an association? Acta Anaesthesiol Scand 2003; 47:1305. Letter describes 2 multiparous women with rapid cervical dilation after CSE; queries if this can be a physiologic effect of the technique as previously reported in nulliparous patients.

539. Lewis NL, Plaat F, Qureshi AM. Syntocinon and 'epidurals' in labour--which comes first? Anaesthesia 2003; 58:1249-50. Nice letter reviews 500 consecutive mixed parity parturients. Notes that in 302 women who received regional analgesia and syntocinon augmentation of labor, 62% had the syntocinon already planned or in progress. Authors conclude epidural analgesia is not solely responsible for high rates of augmentation.

540. O'Connell MP, Hussain J, Macclennan FA, Lindow SW. Factors associated with a prolonged second state of labour--a case-controlled study of 364 nulliparous labours. J Obstet Gynaecol 2003; 23:255-7. Retrospective case control study of nulliparous women with a second stage less and more than 2 hours' duration. Shorter second stage of labour noted in patients significantly younger (mean age 23.2 vs. 24.9 years) with significantly smaller babies (mean weight 3315 g vs. 3463 g); longer labors were not surprisingly significantly associated with oxytocin and epidural use. The intervention rate did not rise above 50% until the second stage exceeded 5 hours duration. The fetal outcome was good in both groups of patients.
541. Wadland LP, Sveigaard AL, Jensen AG. [A study of labor pain experiences, knowledge of epidural pain relief and satisfaction with pain relief]. Ugeskr Laeger 2003; 165:4527-30. Retrospective study with epiduralized parturients (339) versus controls (6868) suggesting epidural has an effect on instrumental deliveries.

Retained Placenta


Spinal Technique


Termination of Pregnancy


Test Dose


546. Dalal P, Reynolds F, Gertenbach C, Harker H, O'Sullivan G. Assessing bupivacaine 10 mg/fentanyl 20 µg as an intrathecal test dose. International Journal of Obstetric Anesthesia 2003; 12:250-5. 42 patients: 20 scheduled for elective cesarean section via spinal and 22 for labor via epidural. Both groups received B 10 mg + F 20 µg either spinally or epidurally. At 4 minutes, the presence of warm toes and motor or sensory block were seen only in the spinal groups.


548. Khan RM, Chabra J, Alam MT, Ashraf M, Jain D. Whoosh test 2 and confirmation of lumbar epidural space. Anaesthesia 2003; 58:1251. Authors describe their "Whoosh test 2" which uses saline + air via epidural when placement unclear and an assistant auscultates two dermatomes above. Unclear description of result.

Timing of Placement

549. Carvalho B, Coghill J. Vaginal examination: a requirement before calling the anaesthetist? Br J Anaesth 2003; 90:402. Letter authors suggest that vaginal examination should be done immediately before placement to assist selection of labor analgesia.

Volatile Agents


Anesthesia for Cerclage Placement


Anesthesia for Cesarean Delivery

General Anesthesia


Duggal K. Propofol should be the induction agent of choice for caesarean section under general anaesthesia. International Journal of Obstetric Anesthesia 2003; 12:275-6. Proposer of debate (see below) notes propofol is a good choice.


Jenkins JG, Khan MM. Anaesthesia for Caesarean section: a survey in a UK region from 1992 to 2002. Anaesthesia 2003; 58:1114-8. Use of regional anesthesia has increased dramatically for cesarean over the time period; authors site concern regarding limited trainee exposure to GA.

Lateral Tilt

Mendonça C, Griffiths J, Ateleanu B, Collis RE. Hypotension following combined spinal-epidural anaesthesia for Caesarean section. Left lateral position vs. tilted supine position. Anaesthesia 2003; 58:428-31. 87 parturients randomized to full or 12 degree left lateral after CSE in seated position; less early hypotension in full lateral group, however, when turned supine, developed hypotension; overall 80 vs. 90% hypotension respectively. Ephed requirements overall similar. 3 in full lateral position needed activation of epidural catheter.


Kinsella SM. Lateral tilt for pregnant women: why 15 degrees? Anaesthesia 2003; 58:835-6. Editorial reviews the degree of lateral tilt, noting that 15 degrees is the amount needed to reliably reduce IVC compression.

Bamber JH, Dresner M. Aortocaval compression in pregnancy: the effect of changing the degree and direction of lateral tilt on maternal cardiac output. Anesth Analg 2003; 97:256-8. Brief report on 33 third trimester parturients placed in 7 positions with bioimpedence cardiography measurements. Full left lateral recumbent position has the optimal cardiac output; movement from left 5 to 12.5 degree had little advantage.

Siegmueller C. A simple device as a guide to 15 degrees tilt during Caesarean section. Anaesthesia 2003; 58:934. Letter described a weight suspended from the left edge of the OR table which just reaches the group with at 15 degrees tilt. Photo.

Law AC, Lam KK, Irwin MG. The effect of right versus left lateral decubitus positions on induction of spinal anesthesia for cesarean delivery. Anesth Analg 2003; 97:1795-9. 60 parturients placed in decubitus positions for placement of hyperbaric bupiv (2.2 mL 0.5%) + 15 µg fent, then immediately placed in 20 degree left lateral position, shows no difference in levels, vasopressor use, or complications.

Oxygenation

Edmark L, Kostova-Aherdan K, Enlund M, Hedenstierna G. Optimal oxygen concentration during induction of general anesthesia. Anesthesiology 2003; 98:28-33. Routine induction of general anesthesia in 36 non-pregnant women using 80% oxygen instead of 100% caused minimal atelectasis (recorded by computed tomography), but the time margin (303 ± 59 vs. 411 ± 84 s) before <90% oxygen saturation was significantly shortened.

Levy DM. F1O2 at emergency caesarean section. International Journal of Obstetric Anesthesia 2003; 12:140. Letter notes disagreement with authors (below); states insufficient evident to recommend optimal FiO2 for cesarean delivery under GA.

**Pruritis**


**Postoperative Nausea and Vomiting**

577. Nortcliffe SA, Shah J, Buggy DJ. Prevention of postoperative nausea and vomiting after spinal morphine for Caesarean section: comparison of cyclizine, dexamethasone and placebo. Br J Anaesth 2003; 90:665-70. 50 mg of cyclizine, an antiemetic, lessened the incidence and severity of n/v after bupiv 0.5% 2mL + fent 10 µg + 0.2 mg MSO4 better than dexamethasone 8mg or placebo.


579. Numazaki M, Fujii Y. Reduction of emetic symptoms during cesarean delivery with antiemetics: propofol at subhypnotic dose versus traditional antiemetics. J Clin Anesth 2003; 15:423-7. 100 parturients randomized to placebo, propofol 1mg/kg/hr, droperidol 1.25 mg or metoclopromide 10 mg. All non-propofol groups received intralipid placebo. Propofol, droperidol, and metoclopromide were equally effective (20% incidence nausea, retching, or vomiting) vs. 60% in placebo group.

**Postoperative (Cesarean) Pain Management**


584. Lowder JL, Shackelford DP, Holbert D, Beste TM. A randomized, controlled trial to compare ketorolac tromethamine versus placebo after cesarean section to reduce pain and narcotic usage. Am J Obstet Gynecol 2003; 189:1559-62; discussion 1562. 44 parturients randomized to PCA (morphine, hydromorphone, or meperidine!) with 2 q 6hr doses of ketorolac vs. placebo notes ketorolac effective for reduction of postoperative cesarean pain.

585. Duale C, Frey C, Bolandard F, Barriere A, Schoeffler P. Epidural versus intrathecal morphine for postoperative analgesia after Caesarean section. Br J Anaesth 2003; 91:690-4.  CSE with 6mg hyper bupiv + sufenta 5 µg with additional epidural lido.  2mg epid vs. 0.075 mg spinal morphine noted VAS pain scores and additional morphine consumption over 24 hrs was higher in spinal group.

Postoperative Shivering/Hypothermia


Regional Anesthesia

589. Choi DM, Kliffer AP, Douglas MJ. Dextromethorphan and intrathecal morphine for analgesia after Caesarean section under spinal anaesthesia. Br J Anaesth 2003; 90:653-8.  The addition of 60 mg oral dextromethorphan did not augment bupiv 0.75% 1.2-1.6 ML + fent 10 µg + 0.05, 0.1, or 0.2 mg MSO4.  Decreased N/V with dextromethorphan groups.


591. Cooper DW. Intrathecal diamorphine or intrathecal fentanyl to supplement spinal anaesthesia for cesarean section? Br J Anaesth 2003; 90:107.  Letter suggests fentanyl is superior due to lower risk of dosing error and contamination.  Authors disagree.

592. Ngan Kee WD, Lee A. Multivariate analysis of factors associated with umbilical arterial pH and standard base excess after Caesarean section under spinal anaesthesia. Anaesthesia 2003; 58:125-30.  Concludes that ephedrine should not be used before delivery, uterine incision-to-delivery times should be minimized, and alpha-agonists should be used to minimize the magnitude and duration of hypotension.

593. Loughrey JP, Eappen S, Tsen LC. Spinal anesthesia for cesarean delivery shortly after an epidural blood patch. Anesth Analg 2003; 96:545-7,  Case reporting the successful outcome of a parturient undergoing a usual dose spinal anesthetic 6hr following an EBP.

595. Saravanan S, Robinson AP, Qayoum Dar A, Columb MO, Lyons GR. Minimum dose of intrathecal diamorphine required to prevent intraoperative supplementation of spinal anaesthesia for Caesarean section. Br J Anaesth 2003; 91:368-72. The ED95 in 200 parturients note that 0.4 mg of intrathecal diamorphine is required to prevent intraoperative supplementation during spinal (hyperbaric 0.5% 12.5mg) anesthesia for C/S. Time to first request for analgesia, N, V, pruritis increase with dose.

596. Tortosa JC, Parry NS, Mercier FJ, Mazoit JX, Benhamou D. Efficacy of augmentation of epidural analgesia for Caesarean section. Br J Anaesth 2003; 91:532-5. Retrospective analysis of 194 parturients using lido 2% + epi for extension of an existing epidural noted general anesthesia and sedation required in 2.6% and 13.9%, respectively. Concludes augmentation of existing epidural for cesarean is reliable and effective.

597. Gautier P, De Kock M, Huberty L, Izudorczic M, Vanderick B. Comparison of the effects of intrathecal ropivacaine, levobupivacaine, and bupivacaine for Caesarean section. Br J Anaesth 2003; 91:684-9. 90 parturients randomized to bupiv 8mg, L-bupiv 8mg, and Ropiv 12 mg (all with 2.5 µg sufenta) noted effective anesthesia in 97%, 80% and 87%, respectively. Concludes spinal racemic bupiv + sufenta remains an appropriate choice for C/S.


602. Meininger D, Byhahn C, Kessler P, et al. Intrathecal fentanyl, sufentanil, or placebo combined with hyperbaric mepivacaine 2% for parturients undergoing elective cesarean delivery. Anesth Analg 2003; 96:852-8, table of contents. 100 parturients randomized to 5 intrathecal groups: 60 mg mepivacaine (2%) + fentanyl (5 or 10 µg) or sufentail (2.5 or 5 µg). Mepiv is appropriate for elective cesarean delivery; the addition of narcotics markedly improved postoperative analgesia.

603. Cooper DW, Mowbray P. Can choice of vasopressor therapy affect rostral spread of spinal anaesthetic? Anesthesiology 2003; 98:1524. Observation and retrospective analysis suggesting that cervical level from CSE for cesarean delivery was lowest when hypotension was prevented with intravenous infusions of phenylephrine and highest with ephedrine.

604. McAndrew CR, Harms P. Paraesthesiae during needle-through-needle combined spinal epidural versus single-shot spinal for elective caesarean section. Anaes Intens Care 2003; 31:514-17. Seventeen of forty-six (37%) women in the needle-through-needle CSE group and four of forty-three (9%) in the SSS group had paraesthesiae upon spinal needle insertion (P < 0.05, Chi-squared test). No patient had persistent neurological symptoms at postoperative day one.

605. Arakawa M, Aoyama Y, Ohe Y. Efficacy of 1% ropivacaine at sacral segments in lumbar epidural anesthesia. Reg Anesth Pain Med 2003; 28:208-14. Nonpregnant patients randomized to lido 2%, lido 2% + epi + bicarb, and Ropiv 1% via lumbar epidural. Lido + epi + bicarb had significantly faster and higher pain thresholds at S1 and S3. 1% Ropiv may be inadequate at sacral levels at 20 min.

607. Faccenda KA, Simpson AM, Henderson DJ, Smith D, McGrady EM, Morrison LM. A comparison of levobupivacaine 0.5% and racemic bupivacaine 0.5% for extradural anesthesia for caesarean section. Reg Anesth Pain Med 2003; 28:394-400. 62 parturients undergoing cesarean randomized to epidural 25 mL levobupiv 5% vs. bupiv 5%. Similar block characteristics noted.


Timing of Delivery

610. O'Regan M. Delivery times for caesarean section at Queen Elizabeth Central Hospital, Blantyre, Malawi: is a 30-minute 'informed to start of operative delivery time' achievable? Anaesthesia 2003; 58:756-9. In a "developing world" urban teaching hospital, the 30 min decision to delivery time was reached in 69% of the time where an immediate threat to the lie of the mother or fetus was noted.

611. Yentis SM. Whose distress is it anyway? 'Fetal distress' and the 30-minute rule. Anaesthesia 2003; 58:732-3. Editorial observes that the indications for emergent cesarean should be continuously scrutinized; these indications lead to "chronological nit-picking".

612. McCahon RN, Catling S. Time required for surgical readiness in emergency caesarean section: spinal compared with general anaesthesia. International Journal of Obstetric Anesthesia 2003; 12:178-182. Observational retrospective study indicates that the average time for readiness was 15.4 min (range 2-44) versus 27.6 min (range 13-55 min) for general versus regional, respectively.


Vasopressors


615. Adsumelli RS, Steinberg ES, Schabel JE, Saunders TA, Poppers PJ. Sequential compression device with thigh-high sleeves supports mean arterial pressure during Caesarean section under spinal anaesthesia. Br J Anaesth 2003; 91:695-8. 50 parturients randomized to SCD 50 mmHg versus without had a 20% decrease in MAP 52% vs. 92% following 12 mg bupiv, 0.2 MS04, 10 µg fent.


617. Davies P, Howells H. Hypotension following combined spinal epidural anaesthesia. Anaesthesia 2003; 58:932; author reply 932-3. Letter suggests that placing parturients in full lateral position following CSE for cesarean delivery is a pointless to prevent hypotension; author Collis replies disagreement.


Anesthesia for Tubal Ligation


Complications-Anesthesia

Airway


623. Ovassapian A. Management of failed intubation in a septic parturient. Br J Anaesth 2003; 91:154; author reply 154-5. Letter suggests a number of intubations techniques that need to be learned and applied to the parturient, including the use of face mask ventilation during RSI. Response by authors of a 2002 case report agree.


627. Vaughan RS. Extubation--yesterday and today. Anaesthesia 2003; 58:949-50. Editorial querying what position (head down left lateral versus flat supine or head up positions) is best for extubation (non pregnant).


634. Gupta S, Pareek S, Dulara SC. Comparison of two methods for predicting difficult intubation in obstetric patients. Middle East J Anesthesiol 2003; 17:275-85. 372 obstetric patients undergoing elective or emergency cesarean under GA. When used as a predictor of difficult laryngoscopy sensitivity, specificity and positive predictive value for modified Mallampati test were 60%, 97.6% and 65% respectively and for Wilson risk sum they were 36%, 98.5% and 64% respectively, but when both tests were combined as predictors (with either of tests positive) sensitivity improved to 100% while specificity was marginally decreased to 96.2% and positive predictive value (64.8%) remained almost the same.

**Allergy**


**Aspiration Prophylaxis**


641. Mearns C, Elliott J. Midwives putting the pressure on...? Anaesthesia 2003; 58:297-8. Letter cites testing of members of theatre staff and concludes that no difference exists in the effectiveness of cricoid pressure applied by frequent vs. nonfrequent users, especially with inadequate training techniques.

643. Haslam N, Syndercombe A, Zimmer CR, Edmondson L, Duggan JE. Intragastric pressure and its relevance to protective cricoid force. Anaesthesia 2003; 58:1012-5. 100 consecutive patients studied with intragastric pressure manometry noted that 20N of force is sufficient to protect paralyzed patients from regurgitation.

644. Wilson NP. No pressure! Just feel the force. Anaesthesia 2003; 58:1135-6. Use of plunger of 20 mL syringe withdrawn to 20 mL mark with end occluded with an obturator. Depressing to 10 mL requires 30 N of force.

**Cardiac Arrest**

645. Pollard JB. High doses of local anaesthetic during spinal anaesthesia may increase the risk of life-threatening vagal reactions. Br J Anaesth 2003; 90:525-6; author reply 526. Letter commenting on vagal predominance with high spinal levels; reply suggests can occur with even low or moderate doses of meds.


647. Krishnam, Mallick A. Air in the epidural space leading to a neurological deficit. Anaesthesia 2003; 58:292-3. Letter noting ST segment depression during CS. Cardiac enzymes negative. Authors ask are we treating the patient or the ECG?


649. Lefrant JY, Muller L, de La Coussaye JE, et al. Hemodynamic and cardiac electrophysiologic effects of lidocaine-bupivacaine mixture in anesthetized and ventilated piglets. Anesthesiology 2003; 98:96-103. The alterations of ventricular conduction parameters are greater with 4mg/kg bupivacaine than with a mixture of 16 mg/kg lidocaine + 4 mg/kg bupivicaine; hemodynamic parameters, however, were similarly altered.


652. Polley LS, Santos AC. Cardiac arrest following regional anesthesia with ropivacaine: here we go again! Anesthesiology 2003; 99:1253-4. Editorial commenting on first reports of cardiac arrest with ropivacaine for surgical regional anesthesia (lumbar plexus and lower extremity blocks in nonpregnant individuals- not included); Suggests the need for more reliable injection and monitoring techniques for these types of blocks.

Drug Error


Drug Exposure


Equipment


657. Sturgess JE, Browne D. Complication of the combined spinal epidural technique 1. Anaesthesia 2003; 58:486; discussion 487. Letter. RapID extra-length pencil point spinal needle, 26G. Authors noted acute needle deformity during apparently atraumatic insertion.


Hearing Impairment


665. Letter indicating a case in a parturient that tinnitus can occur with a dural puncture and deserves attention. Resolved with a blood patch more slowly than headache.

666. Hardy PA. Transient hearing loss with labour epidural block. Anaesthesia 2003; 58:1041. Letter notes that the mechanism is straightforward but not often reported.
High Spinal


Hypoglycemia


Hypotension


Inadequate Anesthesia


Infection

672. Hearn M. Epidural abscess complicating insertion of epidural catheters. Br J Anaesth 2003; 90:706-7; author reply 707. In high risk patients (immunosuppression, diabetes, cancer, underlying infection, in ICU), epidural sites should be evaluated even after catheter removal.


682. Hebl JR, Horlocker TT. You're not as clean as you think! The role of asepsis in reducing infectious complications related to regional anesthesia. Reg Anesth Pain Med 2003; 28:376-9. Editorial reiterates the concerns articulated with the article below; also mentions the convening of ASRA Consensus Conference on The Infectious Risks Associated with Regional Anesthesia (March 2004).

683. Yentur EA, Luleci N, Topcu I, Degerli K, Surucuoglu S. Is skin disinfection with 10% povidone iodine sufficient to prevent epidural needle and catheter contamination? Reg Anesth Pain Med 2003; 28:389-93. 67 nonpregnant patients underwent epidural placement following 10% povidone-iodine disinfection; a significant number of skin surface, epidural needles and catheters cultures were positive for colonization.


**Intravenous Toxicity**

688. Stewart J, Kellett N, Castro D. The central nervous system and cardiovascular effects of levobupivacaine and ropivacaine in healthy volunteers. Anesth Analg 2003; 97:412-6. Levo and ropiv found to produce similar CNS and CV effects when infused in volunteers at equal concentrations (0.5%), mg doses, and infusion rates.


692. Groban L. Central nervous system and cardiac effects from long-acting amide local anesthetic toxicity in the intact animal model. Reg Anesth Pain Med 2003; 28:3-11. Review of animal models of these local anesthetic toxicities and extrapolates to the clinical setting.


694. Weinberg G, Ripper R, Feinstein DL, Hoffman W. Lipid emulsion infusion rescues dogs from bupivacaine-induced cardiac toxicity. Reg Anesth Pain Med 2003; 28:198-202. Non-blinded dog model noted survival after bupiv 10 mg/kg IV over 10 sec successful only when lipid (vs. saline) infusion was given 10 min after internal cardiac massage.


Nausea/Vomiting


697. Borgeat A, Ekatodramis G, Schenker CA. Postoperative nausea and vomiting in regional anesthesia: a review. Anesthesiology 2003; 98:530-47. Nonpregnant individuals under a variety of blocks, however, includes good information on intrathecal and epidural medications and risk of PONV.

Neurologic Injury


701. Krishnam, Mallick A. Air in the epidural space leading to a neurological deficit. Anaesthesia 2003; 58:292-3. Letter. Suggests air in the epidural space, confirmed by CT, resulted in sensory deficit in buttock, leg, and foot which resolved over 9 days.

702. Aldrete JA. Recurrent neurological symptoms in a patient after repeat combined spinal and epidural anesthesia. Br J Anaesth 2003; 90:402-4; author reply 403-4. Letter suggests TNS was the result of sequential full doses of local anesthetics.


Other Injury


**Prolonged Spinal Anesthesia**


**Pruritis**

728. Mahajan R, Kumar Grover V. Neuraxial opioids and Koebner phenomenon: implications for anesthesiologists. Anesthesiology 2003; 99:229-30. Two case reports (nonpregnant) of a disease process where in persons with certain skin diseases, trauma is followed by new lesions identical to those in diseased skin; this may occur with pruritis following neuraxial opioids.

**Recurrent Anesthesia**


Respiratory Depression

731. Anwari JS, Iqbal S. Antihistamines and potentiation of opioid induced sedation and respiratory depression. Anaesthesia 2003; 58:494-5. Letter. Author suggests chlorpheniramine for treatment of pruritis was responsible for sedation/respiratory depression in parturient who received epidural local anesthetic + fentanyl for post c/s analgesia.


Seizures


Spinal Headache


736. Clark MJ, Sellers WFS. Post dural puncture headache. Anaesthesia 2003; 58:101. Letter notes that neurologists don't yet know the value of non-quinke tip needles. "Today's lumbar puncture may be tomorrow's spinal or epidural anaesthetic on an unwilling patient".


744. Zimet A. Encourage the use of noncutting needles for diagnostic lumbar punctures. Anesth Analg 2003; 97:303. Letter noting the need for anesthesiologist to share their knowledge of needles with those practitioners doing lumbar punctures.


754. Ayad S, Demian Y, Narouze SN, Tetzlaff JE. Subarachnoid catheter placement after wet tap for analgesia in labor: influence on the risk of headache in obstetric patients. Reg Anesth Pain Med 2003; 28:512-5. 115 parturients over 5 yrs divided by consecutive assignment after wet tap to epidural replacement, spinal cath removed at delivery, or spinal cath removed 24 hrs after delivery. PDPH most common in epid (81%), spinal removed (31%), or spinal X24 (3%).


**Urinary Incontinence/Retention**

758. Hershberger JM, Milad MP. A randomized clinical trial of lorazepam for the reduction of postoperative urinary retention. Obstet Gynecol 2003; 102:311-6. 90 nonpregnant women randomized to lorazepam vs. placebo noted no significant difference in postoperative urinary retention after ambulatory gynecologic surgeries (non-pregnant).

759. Rortveit G, Daltveit AK, Hansstad YS, Hunskaar S. Vaginal delivery parameters and urinary incontinence: the Norwegian EPINCONT study. Am J Obstet Gynecol 2003; 189:1268-74. Although a statistically significant association was found between maternal stress incontinence in later life and birth weight >4000 g and epidural anesthesia, the effects were too weak to suggest a real link.


**Consent**


764. Ranganathan M, Raghuraman G. Ethical considerations in obtaining consent under anaesthesia. Anaesthesia 2003; 58:1250-1; author reply 1251. Letter suggests errors in judgement in age (16 yo has capacity to decide in UK) and incorrect diagnosis on consent.


**Economics and Staffing**

768. Nyssen AS, Hansez I, Baele P, Lamy M, De Keyser V. Occupational stress and burnout in anaesthesia. Br J Anaesth 2003; 90:333-7. Questionnaire study of 318 Belgium anaesthetists. Anaesthetists have a mean stress level no higher than in other working populations; however, 40.4% of the group suffered from high emotional exhaustion (burnout). The highest rate was in young trainees under 30 years of age.
769. Qureshi AM, Stevens M, Plaat F. Survey of anaesthetic support staff in obstetric units in England and Wales. Anaesthesia 2003; 58:578-82. Postal questionnaire of which 197 (76% response rate) obstetric units replied, indicating that 86% did not have a operating department practitioner/nurse (ODP/N) or resident exclusively for the maternity unit. Midwives in 76% of the units assisted the anaesthetist with the insertion of regional labor blocks.


Pharmacology


772. Eisenach JC, Yaksh TL. Epidural ketamine in healthy children--what's the point? Anesth Analg 2003; 96:626; author reply 626-7. Letter raises the issue of the need for preclinical toxicity studies prior to studying an agent within the epidural space.


780. Dogru K, Dalgiç H, Yildiz K, Sezer Z, Madenoglu H. The direct depressant effects of desflurane and sevoﬂurane on spontaneous contractions of isolated gravid rat myometrium. International Journal of Obstetric Anesthesia 2003; 12:74-78. In vitro application of 0.5, 1.0, 2.0 MAC desflurane and sevoﬂurane in gravid rat myometrium. In a dose dependent manner, both agents had tocolytic activity, with such activity starting at 0.5 and 1.0 MAC with desflurane and sevoﬂurane respectively.
781. Senat MV, Fischer C, Bernard JP, Ville Y. The use of lidocaine for fetocide in late termination of pregnancy. BJOG 2003; 110:296-300. Lidocaine 1% (7-20 mL) was effective via umbilical vein puncture to induce permanent fetal cardiac asystole for fetocide in late termination of pregnancy.


783. Andaluz A, Tusell J, Trasserres O, et al. Transplacental transfer of propofol in pregnant ewes. Vet J 2003; 166:198-204. This study determines the pharmacokinetics of propofol in pregnant ewes in the last third of pregnancy, and placent al transfer and pharmacokinetics in fetuses after the administration of a 6 mg/kg intravenous (i.v.) bolus (phase 1) or a 6 mg/kg i.v. bolus followed by continued infusion of 0.4 mg/kg/min. In ewes, the area under the blood concentration-time curve (AUC) and C(max) (8.6 mg/h/mL and 9.5 mg/mL, respectively) was higher than those of the fetus (1.6 mg/h/mL and 1.19 mg/mL, respectively). The mean half-life was 0.5h in the dam and 1.1h in the fetus.

784. Karsli B, Kayacan N, Kucukyavuz Z, Mimaroglu C. Effects of local anesthetics on pregnant uterine muscles. Pol J Pharmacol 2003; 55:51-6. Exposure on myometrium isolated from pregnant rats to prilocaine, bupivacaine and ultracaine decreased amplitude, duration and integrated area under the contraction curve. In conclusion, the study drugs at higher concentrations decreased contractions of myometrium, but all drugs at higher concentrations elevated the frequency.

Postoperative Pain Management

Pharmacology


786. Pertovaara A, Kalmari J. Comparison of the visceral antinociceptive effects of spinally administered MPV-2426 (fadolmidine) and clonidine in the rat. Anesthesiology 2003; 98:189-94. Spinal administration of MPV-2426 (fadolmidine), a selective alpha 2 adrenoceptor agonist, induced visceral antinociception equipotent to spinal clonidine. An intact sympathetic nervous system or intact brainstem-spinal pathway is not critical for this visceral antinociception.

787. Cepeda MS, Carr DB. Women experience more pain and require more morphine than men to achieve a similar degree of analgesia. Anesth Analg 2003; 97:1464-8. Prospective cohort study of surgical procedures under GA; post op treatment with morphine based on visual analog score. Found women exhibit higher pain intensity and greater weight adjusted morphine requirements to achieve similar degree of analgesia.


**Physiology**

792. Dolan S, Kelly JG, Huan M, Nolan AM. Transient up-regulation of spinal cyclooxygenase-2 and neuronal nitric oxide synthase following surgical inflammation. Anesthesiology 2003; 98:170-80. Spinal cyclooxygenase and neuronal nitric oxide synthase (NOS) in adult female sheep undergoing midline laparotomy for collection of ova are spinally induced. The findings also suggested a link with these enzymes and superovulatory treatment.

**MISCELLANEOUS**

Abstracts


Education/Residency/Registrar Training


796. Naik VN, Devito I, Halpern SH. Cusum analysis is a useful tool to assess resident proficiency at insertion of labour epidurals. Can J Anaesth 2003; 50:694-8. Cumulative sum analysis (Cusum) can be used to tract proficiency; suggests some residents require as many as 75 attempts.


798. Birnbach DJ. What's New In Obstetrical Anesthesia: Reaffirming our commitment to safety and comfort. ASA Newsletter 2003; 67:34. Commentary on the importance of our sub-specialty.


Ethics


802. Walton S. Birth plans and the falacy of the Ulysses directive. International Journal of Obstetric Anesthesia 2003; 12:138-139. Thoughtful letter presents philosophical arguments why going against the Ulysses directive (desire to be bound by original directive) is acceptable.


History


Labor Support

811. Continuous labor support offers big benefits to mothers and babies, has no known downsides; support from non-hospital caregivers reduced risk of cesarean birth by impressive 26%. PR Newswire Association, Inc., 2003. Article covering the "Continuous support for women during childbirth" study by the Cochrane Collaboration, citing the benefit of non-hospital caregivers (below).

812. Hodnett ED, Gates S, Hofmeyr GJ, Sakala C. Continuous support for women during childbirth. Cochrane Database Syst Rev 2003:CD003766. Fifteen trials involving 12,791 women are included. In general, continuous intrapartum support was associated with greater benefits when the provider was not a member of the hospital staff, when it began early in labour, and in settings in which epidural analgesia was not routinely available.


Medicolegal Issues


Nursing


821. Mahlmeister L. Nursing responsibilities in preventing, preparing for, and managing epidural emergencies. J Perinat Neonatal Nurs 2003; 17:19-32; quiz 33-4. Review of the significant complications related to obstetric epidural with nurse recommendations in preparing for and managing epidural emergencies. Specific responsibilities of nurse managers and educators in competency training, evaluation, and guidance of nurses are also discussed.

Research


Websites/Books/Leaflets/Journal Announcements


838. Quilligan EJ, Zuspan FP. Farewell address from Dr. Quilligan and Dr. Zuspan. Am J Obstet Gynecol 2003; 189:4. Address by our friend in the obstetric community, Dr. F Zuspan.

