

A16 (Poster 10)
EPIDURAL ROPIVACAINE VS. BUPIVACAINE: OBSTETRIC OUTCOMES Breen, T.W.^{1,2}; Campbell, D.C.³; Nunn, R.T.⁵; Kronberg, J.⁴; Halpern, S.H.⁴; Muir, H.A.^{1,5}; Fick, G.² 1. *Anesthesiology, Duke Univ. Hosp., Durham, NC*; 2. *Anesthesia, U. of Calgary, Calgary, AB, Canada*; 3. *Anesthesia, U. of Saskatchewan, Saskatoon, SK, Canada*; 4. *Anesthesia, U. of Toronto, Toronto, ON, Canada*; 5. *Anesthesia, Dalhousie Univ., Halifax, NS, Canada* **Introduction:** Early studies suggested fewer instrumented vaginal deliveries with Rop compared to Bup. The purpose of this prospective, multicenter, double-blind, randomized, controlled study was to determine if epidural analgesia with Rop led to more spontaneous vaginal deliveries (SVD) than Bup. **Methods:** After IRB approval and written consent was obtained, term nulliparous women, scheduled for induction of labor were randomized to standard protocols for labor and anesthesia management using a double blind design. Epidural analgesia was initiated with either Rop or Bup, using 15 ml of local anesthetic 0.1% plus Fent 5 mcg/ml and was maintained with 0.08% local anesthetic plus Fent 2 mcg/ml delivered via PCEA. (5 ml bolus, 5 ml/h infusion). Standardized solutions for top-ups were used if required. Statistical analysis was by the student's t-test and two-tailed Fisher's exact test. **Results:** 576 parturients were recruited into the study; 560 were included in the analysis. Demographic data, reasons and methods for induction were not different between groups. There were no differences in the need for top-ups or total dose of local anesthetic received. A trend towards more SVD was noted with Rop (50.5% vs. 45.9%), but this did not reach statistical significance. There were no differences in the rates of instrumented vaginal deliveries or 2nd stage cesarean sections between groups. Fewer 1st stage cesarean deliveries were seen in the Rop group (9.6% vs. 16.5%). **Discussion:** In parturients at high risk for intervention (e.g., nulliparous induction patients), Rop may lead to more SVD and fewer 1st stage cesarean sections than BUP. A larger study is needed to confirm this suggestion.

A17 (Poster 11)
ANALGESIC MANAGEMENT OF INTRAUTERINE FETAL DEMISE (REVISITED) Con, A.; McGovern, I.; Sasidharan, R. *Anesthesiology, The Royal London Hospital, London, United Kingdom* **Introduction:** The incidence of IUFD ranges from 5-7 per 1000 births in the UK(1). Analgesic management of labour in IUFD has received very little attention. With a lack of guidelines or standards, analgesia is provided on a very ad-hoc basis(2). An audit conducted in our hospital confirmed this(3). As per our recommendations, guidelines were set up which included early counselling and provision of patient controlled iv or epidural analgesia. **Methods:** We retrospectively reviewed the notes of confirmed IUFD in our unit prior to (1997) and following the setting up of guidelines (1999). We included fetal demise occurring at a gestation of greater than 20 weeks. Analgesic methods used were audited. Data were analysed using Student's T and Chi-Squared tests. $P < 0.05$ (*) was considered significant. **Results:** There were 36 cases in 1997 (Group A) and 33 in 1999 (Group B). Groups were similar in maternal age, gestational age and parity. **Discussion:** In both groups the majority of patients required at least one form of analgesia. The use of PCA increased dramatically following the introduction of guidelines. All epidurals were PCEA. The introduction of guidelines appears to have increased the usage of PCA in our hospital. **Reference:** 1. CESDI Annual Reports 1995-1998; Dept of Health, UK 2. Kim-Lo SH et al. Analgesic Management of IUFD. 30th Annual Meeting SOAP 1998; 55. 3. McGovern I et al Analgesic Management of IUFD. ESOA VI Congress 1999; 78.

A18 (Poster 12)
COMPARISON OF ESPOCAN® AND TUOHY NEEDLES FOR COMBINED SPINAL-EPIDURAL (CSE) ANALGESIA Broune, I.M.; Birnbach, D.J.; Stein, D.J.; O'Gorman, D.A.; Santos, A.C.; Kelly-Francis, S.B.; Thys, D.M. *Dept. of Anesthesiology, St.Luke's-Roosevelt Hospital Center, Columbia University, NY, NY* **Introduction:** Some anesthesiologists believe that intrathecal (IT) placement of the epidural catheter may occur following CSE using a needle-through-needle technique. To reduce this risk, epidural needles with separate spinal apertures have been introduced. Although these needles may reduce IT catheter placement, this has not been evaluated. The aim of this study was to compare the efficacy and adverse events of a Tuohy versus a modified epidural needle (Espocan® B. Braun, Bethelhem, PA) for CSE placement. **Methods:** After IRB approval and informed consent, a prospective randomized study of parturients requesting labor analgesia was performed. 85 parturients receiving CSE were enrolled; 43 received analgesia via Espocan® (ES) and 42 via a Tuohy needle. IT or intravascular (IV) catheter placement, paresthesia on introduction of the spinal needle, failure to obtain CSF through the spinal needle on 1st attempt following successful placement of the epidural needle, and unintentional dural puncture were evaluated. Data analyses were performed using two-sided Fisher's exact test with a $p < 0.05$ considered significant. **Results:** No IT catheters were seen and there were no significant differences in the incidence of IV catheters or wet taps. Significant differences were seen both in the incidence of paresthesias on spinal needle insertion (16.3% vs 42.8%; $p < 0.01$) and failure to obtain CSF on 1st attempt (11.6% vs 30.9%; $p < 0.01$) for ES vs Tuohy needles respectively. **Conclusions:** These data confirm that IT catheter placement is a very rare event, and does not support the routine use of more costly special epidural needles. While the expected benefit of ES needles was not observed, a significant reduction of paresthesia and an increase in the ability to obtain CSF via spinal needle on 1st attempt was noted with these needles.

A19 (Poster 13)
CAUSES OF LABOR EPIDURAL CATHETER REPLACEMENT Vasudevan, A.; Hess, P.E.; Soni, A.K.; Sarna, M.C.; Pratt, S.D. *Anesthesiology, Beth Israel Deaconess Medical Center, Boston, MA* We have found that up to 5% of labor epidural catheters at our institution are replaced during labor. However, the indication for replacement varies among cases. Failure of epidural analgesia may not be solely due to poor catheter placement, but may be due to the underlying labor. We investigated the indications for catheter replacement in our population. **Methods:** We reviewed the records of 114 subjects with replaced catheters. Data included dilatation at placement, obstetric outcome, duration of analgesia, and replacement indication. Kruskal-Wallis and Chi-square test were used for comparison. $p < 0.05$ was significant. **Results:** Indications for replacement included: No initial block (NI=28.9%); Missed segments (MS=20.2%); Inadequate continuous analgesia despite established level (IA=27.2%); Miscellaneous (MI=23.7%). MI included catheter migration and failure of anesthesia for cesarean delivery. Mean duration of analgesia (332 min.) and vaginal delivery rate (75.8%) among NI were similar to the population who did not require replacements. The MS and IA groups had longer duration (571min./487min.) and lower vaginal delivery rates (69.6%/58.1%). **Conclusion:** This ongoing study identifies the common indications for epidural catheter replacement. Two of the indications (MS, IA) were associated with longer labor and higher operative delivery rates. It is unclear whether the cause of analgesic failure in these groups is the longer duration of use, or to the underlying difficult labor.

	Group A: Number (%)	Group B: Number (%)
None / oral	7(19)	4(12)
PCA	14(39)*	20(61)*
Epidural	2(6)	3(9)
Total	36(100)	33(100)