A73 (Poster 32)

Labor Outcome with Ropivacaine and Bupivcaine Used for Epidural Analgesia
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Background: Ropivacaine (Ropi) is associated with less motor block than Bupivacaine (Bupi). This study evaluates labor outcome with these two anesthetic agents.
Methods: Using our quality assurance database, we reviewed the labor outcomes of all healthy paturients (>36 weeks gestation) who received continuous lumbar epidural anesthesia over a 6 month period in 1999. Patients in group B received an initial bolus (10 to 12 ml) of bupivacaine 0.25% followed by an infusion of bupivacaine 0.125% with fentanyl 2μc/ml at 10 to 12 ml/hr. Group R received an initial bolus of ropivacaine 0.2% (10 to 12 ml) followed by an infusion of ropivacaine 0.1% with fentanyl 2 μc /ml at 10 to 12 ml/hr. We evaluate outcomes in three categories: NSVD=normal spontaneous vaginal delivery, INST=Instrumental delivery including forceps and/or vacuum, CS=cesarean section. Data were analyzed using chi square test with Yates correction at $p \leq 0.05$.
Results:There were 1733 primip patients (Table1) and 1339 multip patients (Table2)
Conclusion: No significant differences were noticed in any of the delivery modes between the two agents in primiparous and multiparous patients.

Table 1 Primiparous patients: Group B (n=1188), Group R (n=545)

Primi	P	Bupi	Ropi
NSVD	p=0.9	63.6%	64%
Inst	p=0.6	19.7%	18.4%
CS	p=0.7	16.7%	17.6%

Table 2: Multiparous patients (n=1339): Group B (n=1049), Group R (n=290)

Multip		Bupi	Ropi
NSVD	p=0.2	83.2%	86.6%
Inst	p=0.3	13%	10.7%
CS	p=0.5	3.8%	2.7%

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The Dose/Response of Intrathecal Fentanyl Added to Bupivacaine for Labor Analgesia
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Introduction: The addition of bupivacaine to intrathecal (IT) opioid for labor analgesia improves the quality and duration of analgesia (1). The purpose of this study was to determine the optimal dose of IT fentanyl when added to bupivacaine 2.5 mg for initiation of labor analgesia.
Methods: Multiparous patients scheduled for induction of labor gave informed consent to participate in this IRB approved, on-going, double blind, study. Patients were excluded if they received systemic narcotics or if cervical dilation was < 3 or > 5 cm. Patients were randomly assigned to receive fentanyl 0 (G0), 5 (G5), 10 (G10), 15 (G15) or 20 (G20) or 25 μg (G25) added to bupivacaine 2.5 mg for initiation of regional analgesia, followed by a lidocaine epidural test dose. A blinded anesthesia nurse evaluated Visual Analog Scores (VAS) and presence of side effects at 15 min intervals until the patient requested additional analgesia. Data were analyzed by Chi square, Fisher's exact, and Kruskal-Wallace ANOVA with Bonferroni correction for multiple comparisons. Kaplan-Meier survival curves (for patients in each group with ongoing analgesia) were compared by the log rank test. $P < 0.05$ was considered significant.
Results: 78 patients participated (n =10-15 group). Groups were similar for maternal age, height, weight, duration of labor and baseline VAS. Significantly more patients in G0, G5, and G10 had a VAS > 20 mm at 15 min. Duration of action was significantly shorter for G0 compared to the treatment groups (24±15 min vs. 62±36, 57±27, 81±34, 101±33, and 81±29 min) and the Kaplan-Meier curve was significantly different for G0. The incidence and severity of pruritus was greater in G15, G20 and G25 compared to G0, G5 and G10. There was no difference in the incidence of nausea and vomiting between groups.
Conclusions: IT bupivacaine with fentanyl 0, 5, and 10 μg did not provide satisfactory analgesia for some patients, although the incidence and severity of pruritus was lower. The duration of analgesia for IT bupivacaine without fentanyl was unacceptably low. More patients are necessary to determine if there is a difference in analgesia and side effects with fentanyl 15 – 25 μg.
Reference: 1. Anesth Analg 81:305-9, 1995.

A75 (Poster 34)

Histopathology Proven Chorioamnionitis and Neonatal Outcome
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Labor epidural analgesia (LEA) reportedly is associated with increased neonatal sepsis evaluations (NSE).[1] Clinically suspected chorioamnionitis (chorio) is most reliably confirmed by histological exam (presence of acute inflammatory cells).We want to determine if histopathology proven chorio increases NSE and worsens neonatal outcome.

Following local IRB approval, 4784 parturients who received LEA were obtained from the labor data base. Chorio (+/-) was confirmed by histological exam. APGAR scores, birth weight, NSE, confirmed sepsis and cesarean section (C/S) rate were compared. Results are expressed as mean ± 1SD. Analyzed using t-test or X^2. $P \leq 0.05$ is significant.

Results are expressed in the table. A total of 122 parturients were clinically suspected of having chorio (66 chorio +). APGAR scores, neonatal birth wt., NSE and C/S rate were statistically significant. No neonate had confirmed sepsis. (Table)

	Chorio - (n = 56)	Chorio + (n = 66)	P value
APGAR[1] < 7 (%)	7 (12.5%)	26 (39.4%)	0.002
APGAR[5] < 9 (%)	7 (12.5%)	21 (31.8%)	0.021
Birth wt. (kg)	3.4 ± 0.6	2.9 ± 1.1	0.003
NSE (%)	1 (1.8%)	9 (13.6%)	0.040
Confirmed Sepsis	0	0	-
C/S (%)	21 (37.5%)	33 (50.0%)	0.000

Histopathology proven chorioamnionitis is associated with lower APGAR scores, lower neonatal birth weight, increased sespsis evaluations and a higher cesarean section rate than histological negative chorioamnionitis.

References: Lieberman E, et al: Pediatrics 99:415-419, 1997

A76 (Poster 35)

Obstetric Patients Requiring Admission To An Intensive Therapy Unit
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Introduction: Between 0.1% and 0.9% of women develop complications of pregnancy that require admission to an Intensive Therapy Unit (ITU). In a previous study it was found that the admission rate of such patients to our inner city ITU was 0.75%[1] (66% required admission due to hypertension and 19% due to haemorrhage). The purpose of our study was to review all obstetric patients admitted to our ITU over the 5-year period 1994 to 1998 inclusive. We analysed indications for ITU admissions, intervention and clinical outcome and compared these with results from a previous similar study.[1]
Method: The notes of all obstetric patients admitted to the ITU during the 5-year period were examined. Women were included if they were admitted during pregnancy or up to 42 days after delivery. Indications for admission to ITU were categorised as hypertensive disease; haemorrhage; sepsis; respiratory insufficiency; neurological; cardiac or other. Specific interventions were recorded as outlined below.
Results: There were 18,145 deliveries in our obstetric unit over the period of this study, of whom 88 were admitted to the ITU. This represents an admission rate of 0.48%. Of the patients requiring ITU admission, 81% required arterial line placement; 64%, central venus pressure monitoring; 9%, a pulmonary artery catheter; 39%, ventilation and 45% required vasoactive infusions. ITU mortality in this period was 2% (i.e. 2 patients). Surgery was planned prior to ITU admission for 20% of patients, while 59% underwent emergency surgery prior to ITU admission. The mean age of women requiring ITU admission was 30 years (the overall range was 18-41) of whom 25% were Caucasian, 48% Afro-Caribbean, 9% Asian and 2% Hispanic. The population using maternity services in our catchment area consists of 46% Caucasian and 33% Afro-Caribbean. The indications for ITU admission were hypertension:40%; haemorrhage:27%; sepsis:13%; respiratory insufficiency: 10% and neurological problems: 2%.
Conclusion: The admission rate in our unit has decreased from 0.75% of deliveries to 0.48%. This study demonstrates a marked reduction in the number of hypertensive women requiring ITU admission. Admission, however, due to haemorrhage in our unit is increasing.
References: [1] - E. Wheatley, A. Farkas, D. Watson – Obstetric Admissions to an Intensive Therapy Unit, IJOA 1996; 1 to 4.