A45 (Poster 4)

HERBAL MEDICINE USE IN OBSTETRIC PATIENTS
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Introduction: Complementary and alternative medicine (CAM) use is becoming prevalent across the United States with a prevalence of 42% and a cost of $27 billion dollars in 1997 (1). A recent report from North Carolina found that among nurse-midwives, 93.9% and 73.2% recommended CAM and herbal remedies respectively (2). Herbal medicine use could lead to herb-drug interactions, may have untoward side effects, or may affect the anesthesia plan. The purpose of this study is to determine the prevalence of herbal medicine use in parturients.
Methods: A one-page questionnaire was distributed to parturients arriving for labor and delivery. The questionnaire inquired about the use of prescription, non-prescription, and herbal medicines. Results were analyzed using appropriate descriptive statistical analysis. P<0.05 was considered statistically significant.
Results: To date, 208 questionnaires have been collected over the first eight weeks of the study. 8% of nulliparous and 10% of multiparous (P<NS) reported the use of herbal remedies during pregnancy. The most common remedies used were echinacea and St John's wort. Other remedies used included Korean herbs, soy extract, ginger, valerian, aloe, melatonin, saw palmetto and gingko. Most of the use occurred among the parturients older than thirty (67% of users), with the greatest prevalence (43%) among those older than forty. Only 14% of parturients considered herbal remedies to be medications.
Discussion: The use of herbal medicines among parturients is less prevalent than previously reported in the general population (1). This may be due to the fact that CAM is used more by older patients, a fact consistent with our study. Further study is needed to elucidate other reasons, including fetal concerns, for the difference between our population and other studies.
However, the fact that most parturients do not consider herbal remedies to be medications makes it imperative for anesthesiologists to ask about their use.

A46 (Poster 5)

The Effect Of Posture And Baricity On The Spread Of Intrathecal Bupivacaine For elective cesarean section
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Introduction: Patient posture and baricity of intrathecally administered agents are believed to be important factors in determining their spread within the CSF. The following randomized, double-blind study was designed to test this theory.
Methods: Following ethics committee approval, 150 patients undergoing elective cesarean section were randomized into six groups (n=25 per group), with each patient receiving either hyperbaric, isobaric or hypobaric intrathecal bupivacaine 10 mg in either the sitting or right lateral position. Following intrathecal injection parturients were placed in the supine wedged position. The density of the intrathecal solutions were determined from a previous study using a density meter (DMA-450 Paar Scientific, Ltd, accurate to five decimal places). Data collection included sensory level and motor block assessed at 5 minute intervals as well as episodes of hypotension and epidural use. Statistical analysis included ANOVA and Kruskal Wallis tests.
Results: Differences in maximal sensory level only reached statistical significance in the hyperbaric and hypobaric sitting groups (figure; P<0.001). There was no significant difference in the degree of motor block, the incidence of hypotension or epidural requirements between the groups.
Conclusion: Patient posture and baricity of bupivacaine had a minimal effect on sensory spread and incidence of hypotension. Choice of technique may be best dictated by the preference and experience of the individual anesthetist, whilst also considering the patients' wishes.

A47 (Poster 6)

Tertiary Cesarean Sections Do Not Take Longer Than Primary Sections
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Introduction: Spinal anesthesia is preferred for cesarean sections (C/S) due to its simplicity, reliability, shorter operating room time, and lower costs (1). With repeat C/S, admissions or other complications may prolong the surgery beyond the duration of spinal anesthesia. Many anesthesiologists therefore perform epidural or combined spinal-epidural (CSE) anesthesia for these cases. The purpose of this study was to determine whether repeat C/S do take longer than primary C/S.
Methods: With IRB approval, we performed a retrospective chart review of patients who underwent primary or secondary C/S from May 1997 to December 1998. Patients at term were included if surgery was scheduled and/or planned and occurred between 7:30am and 7:30pm. Charts were reviewed for maternal demographics, type of C/S and anesthesia, obstetrician, and times of anesthesia, skin incision, and end of surgery. Data was analyzed using ANOVA or Chi-squared and are expressed as mean ± SD.
Results: 153 charts were reviewed. Tertiary C/S lasted an average of 68 minutes while primary C/S lasted 59 (p<0.052). (See Table 1) There was no difference between the groups in the percentage of C/S that lasted longer than 90 minutes. Significantly more epidurals or CSE were performed in the patients having tertiary C/S, and fewer of these patients had private obstetricians.

A48 (Poster 7)

Determination of Dose Response for Intrathecal Ropivacaine in Laboring Parturients
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INTRODUCTION: Intrathecal injections of low doses of local anesthetics and/or opioids are being increasingly used for labor analgesia using the combined spinal epidural (CSE) technique. The purpose of this study was to determine the ideal intrathecal dose of ropivacaine that would provide adequate labor analgesia with minimal or no motor blockade, and without adversely affecting the mother, fetus, or progression of labor.
METHODS: Following institutional approval and written informed consent, 90 healthy, term parturients, aged 15-37 years, who requested labor analgesia, participated in the study. The parturients were randomized into five groups in a double blinded manner: Group A - ropivacaine 15 mcg (n=18), Group B - ropivacaine (ropi) 0.5 mg + fentanyl 15 mcg (n=17), Group C - ropi 1.0 mg + fentanyl 15mcg (n=20), Group D - ropi 1.5 mg + fentanyl 15mcg (n=19), Group E - ropi 2.0 mg + fentanyl 15 mcg (n=18). All parturients received fentanyl 15 mcg intrathecally (with or without ropivacaine), followed by epidural catheter insertion. Hemodynamic parameters, onset and duration of analgesia, duration of first and second stages of labor, visual analog pain scores (VAS), sensory and motor blockade, and neonatal Apgar scores were recorded.
RESULTS: 96% subjects had satisfactory analgesia at 5 min. after the block. The mean duration of analgesia with intrathecal fentanyl was 105.38 ± 43.34 min., while in combination with low ultra dose ropivacaine (groups B, C), it was 112.94 ± 44.30 min (p = 0.075) and in combination with low dose ropivacaine (groups D, E), it was 122.67 ± 41.30 min (p = 0.183), which is statistically not significant, according to the independent sample T- test. The mean duration of the first and second stages of labor were 449.61 ± 194.28 min (p = 0.312) and 52.40 ± 54.67 min (p = 0.595), respectively, with no significant difference across groups. Combining ropi, fentanyl, and low dose ropivacaine (groups A, B, C, D) significantly different in 5 minutes pain score between group A and B (p=0.034). Groups A, B, C (fentanyl + low dose ropi) and D, E (fentanyl + low dose ropi) differed significantly in the 5 min VAS (p = 0.002). Fisher's exact test showed no significant difference in motor blockade (detectable weakness of hip flexion) between fentanyl and fentanyl ropivacaine groups (p = 0.603).
CONCLUSION: Intrathecal ropivacaine (1.5 to 2.0 mg) with fentanyl 15 mcg provides instantaneous analgesia, prolongs the duration (clinically) and improves the quality (both clinically and statistically) of analgesia, without producing motor block or compromising maternal/fetal safety. We recommend the use of low dose ropivacaine (1.5 to 2.0 mg) and fentanyl 15 mcg intrathecally in this CSE technique for labor analgesia.

References: