

## SOAP ABSTRACTS

### 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 primrose oil. Other remedies used included Korean herbs, soy extract, ginseng, valerian, aloe, melatonin, saw palmetto and ginkgo. 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.

**References:** 1. JAMA 1998;280:1569-75; 2. Obstet Gynecol 2000;95:19-23.

### A46 (Poster 5)

#### The Effect Of Posture And Baricity On The Spread Of Intrathecal Bupivacaine For Elective Cesarean Section

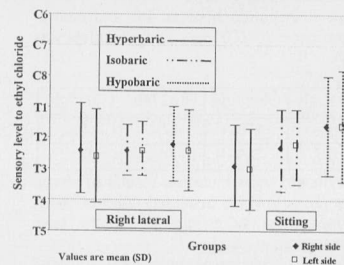
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**Introduction:** Patient posture and baricity of intrathecally administered agents are believed to be important factors in determining their spread within the CSF.<sup>1</sup> The following randomized, double-blind study was designed to test this 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 patients were placed in the supine wedged position. The density of the 3 intrathecal solutions were determined from a previous study using a density meter (DMA-450 Paar Scientific, Ltd), accurate to five decimal places.<sup>2</sup> Data collection included sensory level and motor block assessed at 5 minute intervals as well as episodes of hypotension and ephedrine 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 ephedrine 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.



**Graph:** "Effect of patient posture on the spread of intrathecal bupivacaine"

#### References:

1. Reg Anesth, 1991; 16: 1-6.
2. Br J Anaesth 1999; 83: 520-21.

### 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, adhesions 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 elective 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  $\pm$  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.

	Primary	Secondary	Tertiary or more
number (n)	56	50	47
mean duration (min)	59 $\pm$ 20	64 $\pm$ 17	68 $\pm$ 20
duration > 90min (n)	5	3	7
spinal anesthesia (%)	82	86	45*
mean age (years)	32 $\pm$ 6	34 $\pm$ 6	34 $\pm$ 5
mean height (cm)	164 $\pm$ 8	163 $\pm$ 6	160 $\pm$ 5*
mean weight (kg)	84 $\pm$ 17	80 $\pm$ 14	81 $\pm$ 18
private patients (%)	64	62	40*

**Conclusion:** This study suggests that we cannot predict which C/S will last longer than 90 minutes based on the number of prior C/S. Although the time difference approaches statistical significance, a difference from 59 to 68 minutes, especially in the range of 1 hour, is not clinically significant. Our data suggests that spinal anesthesia need not be avoided simply because of a multiple repeat C/S.

**References:** 1. Anesth Analg 1995;80:709-12.

### A48 (Poster 7)

#### DETERMINATION OF DOSE RESPONSE FOR INTRATHECAL ROPIVACINE 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 - fentanyl 15 mcg ( $n = 16$ ), 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 15mcg ( $n = 18$ ). 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:** 95% subjects had satisfactory analgesia at 5 min. after the block. The mean duration of analgesia with intrathecal fentanyl was 105.38  $\pm$  43.34 min., while in combination with ultra low dose ropivacaine (groups B,C), it was 112.94  $\pm$  44.30 min ( $p = 0.575$ ) and in combination with low dose ropivacaine (groups D, E), it was 122.67  $\pm$  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  $\pm$  194.28 min ( $p = 0.312$ ) and 52.40  $\pm$  54.67 min ( $p = 0.569$ ), respectively, with no significant difference across groups. Combining groups showed a statistically significant difference in 5 minutes pain score between group A and groups B,C,D,E ( $p = 0.034$ ). Groups A,B,C (fentanyl  $\pm$  ultra 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 - 2.0 mg) and fentanyl 15 mcg intrathecally in the CSE technique for labor analgesia.