GM-3

EFFECT OF EPIDURAL TEST DOSE ON AMBULATION AFTER A COMBINED SPINAL EPIDURAL TECHNIQUE FOR LABOR ANALGESIA *Calimaran, A.L. Strauss-Hoder, T.P.; McCarthy, R.J.; Wong, C.A. Northwestern University, Chicago, IL* Although the evidence suggests that ambulation during labor has no beneficial effect on the progress of labor (1,2), it remains popular amongst parturients and their health providers. Combined spinal epidural (CSE) analgesia using intrathecal bupivacaine and fentanyl without a local anesthetic epidural test dose provides satisfactory labor analgesia and successful ambulation (3). The purpose of this study is to determine the effect of a lidocaine-epinephrine epidural test dose on the parturient's motor strength and ability to perform simple ambulatory tests after CSE analgesia. Following written informed consent, 110 parturients were included in this randomized, double blinded study. CSE analgesia was initiated with intrathecal bupivacaine 2.5 mg and fentanyl 25 μg. Parturients were randomized to receive either 3-ml lidocaine (45 mg) with epinephrine (15 mg) (LE) or 3-ml 0.9% sodium chloride solution (NS) epidural test dose. Resistance to straight leg raise (SLR), modified Bromage score (MB), ability to step up and stand on a step-stool (ASS), perform a partial deep knee bend (PDKB), and the parturient(s) subjective ability to walk (SAW) were evaluated at 30 and 60-min. Data were compared between groups using a Chi-square test with $P<0.05$ significant (* in table). There were no differences between groups with respect to age, height, weight, parity, gestational age, and cervical dilatation at CSE analgesia. LE impaired the parturients ability to preform a PDKB and their SAW at 30-min, as well as the ability to ASS 30 and 60-min (Table). The important findings of this study are the impairment of the parturients ability to perform simple ambulatory tasks following an epidural test dose of lidocaine with epinephrine administered immediately after initiation of CSE analgesia. In addition the modified Bromage scale was not a sensitive indicator of the parturients ability to perform these ambulatory tasks. This data suggests that early ambulation be discouraged when the test dose is performed immediately after initiation of CSE analgesia, or the test dose should be avoided when early ambulation is desired. *1) N Eng J Med 1998; 339:76-9 2) Anesthesiology 2001; 95:857-61 3) Int J Obstet Anesth 1994; 3:75-81*

	SALINE GROUP	LIDOCAINE-EPINEPHRINE GROUP
SLR 30 min, left %	96.4	88.9
SLR 30 min, right %	96.4	94.4
MB 30 min, left %	94.5	87.0
MB 30 min, right %	94.5	94.3
PDKB 30 min %	71.4	42.6*
PDKB 60 min %	91.1	79.6
ASS 30 min %	69.9	29.9*
ASS 60 min %	85.7	59.3*
SAW 30 min %	74.4	38.9*
SAW 60 min %	75.9	87.5

GM-4

PLATELET COUNT & PLATELET FUNCTION: AN IN VITRO MODEL FOR PRODUCING WHOLE BLOOD WITH LOW PLATELET COUNTS *Patel, N.[1] Fernando, R.[1] Riddell, A.[2] Brown, S.[2]* 1. Dept of Anesthesia, Royal Free Hospital, London, United Kingdom; 2. Katharine Dormandy Center for Hemophilia, Royal Free Hospital, London, United Kingdom The lowest platelet count considered safe for regional techniques has yet to be established in the normally hypercoagulable pregnant patient. This pilot study was conducted to produce an in vitro model to generate artificially low platelet counts in whole blood without disturbing hematocrit, clotting factors or the platelets themselves. This method will subsequently be used to identify the point at which a falling platelet count begins to interfere with platelet function in different pregnant subpopulations, as assessed by the Platelet Function Analyzer (PFA-100) measuring closure time (CT, s) and the Thromboelastograph (TEG)[1] measuring maximum amplitude (MA, mm). After IRB approval, 36ml of blood was withdrawn from male subjects[1] (n=4) and transferred into 3 x 10ml and 1 x 3ml buffered citrate, and 1 x 3ml EDTA collection tubes. Baseline hemoglobin (Hb), hematocrit (Hct), platelet count, coagulation tests (prothrombin time [PT], activated partial thromboplastin time [APTT] and fibrinogen), MA and CT were measured using citrated whole blood. The remaining citrated blood (30ml) was then divided: 20ml carefully centrifuged according to a protocol to prepare platelet depleted blood ("0% Platelets") and 10ml labelled as "100% Platelets" (count known and not centrifuged). Four test samples of varying platelet count were then reconstituted by mixing together different proportions of original whole blood containing "100% Platelets" with "0% Platelets" in predetermined ratios of 2:1, 1:1, 1:2 and 1:3. The above tests were then repeated on these reconstituted samples. Statistical analysis included repeated measures ANOVA ($P<0.05$). Whole blood with a range of low platelet counts, broadly comparable with the predetermined ratios, were generated without significantly altering Hb, Hct, coagulation (Table:data=mean,SD;*$P<0.001$) or platelet integrity. Within subjects, MA and CT showed significant differences with falling platelet count. Artificially low platelet counts created in whole blood using this in vitro model may potentially be used to study how variations in platelet numbers affect platelet function in different pregnant subpopulations. *1. Gorton HJ, Warren ER, Simpson NAB, Lyon GR, Columb MO. Thromboelastography identifies sex-related differences in coagulation. Anesth Analg 2000; 91: 1279-81.*

	100%	2:1	1:1	1:2	1:3
Platelet range (x 10^9 /L)	132-234	60-144	50-116	25-85	15-68
Hb (g/dL)	13.4(1.1)	13.4(1.3)	13.4(1.1)	13.4(1.1)	13.4(1.1)
PT (s)	13.7(0.9)	13.7(0.9)	13.7(1.0)	13.7(0.9)	13.7(1.0)
APTT (s)	36.1(5.9)	36.8(5.4)	36.6(6.3)	37.6(5.3)	36.6(6.0)
Fibrinogen (g/L)	2.4(0.2)	2.2(0.1)	2.4(0.2)	2.3(0.2)	2.4(0.2)
***MA (mm)**	49.8(4.7)	39(4.2)	36(2.6)	32(8.5)	26.8(3.8)
***CT (s)**	95(22)	148(8)	171(20)	248(74)	264(51)