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POSTURAL STABILITY FOLLOWING REGIONAL ANALGESIA FOR LABOR

Davies, J.; Fernando, R.; Verma, S.; Found, P.; McLeod, A. Anesthesia, Royal Free Hospital, London, United Kingdom **Introduction:** Spinal labor analgesia preserves balance function despite demonstrable sensory deficits.¹ Using Balance Master posturography we studied the performance of basic maneuvers following combined spinal epidural (CSE) analgesia, compared with pregnant (PC) and nonpregnant controls (NPC). **Methods:** Following ethics committee approval we performed an observational study of 150 women. The CSE group received spinal analgesia (2.5mg bupivacaine + 5µg fentanyl). 10ml of 0.1% bupivacaine + 0.0002% fentanyl was administered epidurally for inadequate spinal analgesia. PCs were awaiting elective cesarean section. Posturography tests included Sit to Stand (STS), Walking Test (WT), Step and Quick Turn (SQT) and Step Up and Over (SUO; 20cm high box). Statistics included ANOVA and t-test. **Results:** NPC mean weight and PC mean height were significantly less than the other groups. Pregnant women regardless of regional analgesia had significantly reduced postural stability in comparison to NPC. In contrast to spinal analgesia alone, women within the CSE group receiving additional epidural topups (n=17/50) had significantly impaired STS sway, SUO lift up and SUO movement time. **Conclusion:** Being pregnant at term reduces postural stability; low dose spinal analgesia does not impair function further. Subsequent epidural topups may potentially have a negative impact on postural control. **Reference:** 1. Anesthesiology 1999;91:436-41.

(Data are mean ± SD)	NPC (n=50)	PC (n=50)	CSE (n=50)	P Value	Comments
¹ STS Rising index (% body weight)	21.9 (6.6)	13.3 (6.4)	11.3 (5.1)	<0.0001	¹ Force exerted on standing up from sitting
WT Step length (cm)	47.4 (8.2)	41.9 (7.6)	40.4 (8.3)	<0.0001	
WT Speed (cm/s)	63.6 (13.1)	56.5 (15.0)	55.6 (12.3)	0.0067	
² SUO Lift up (% body weight)	42.3 (8.3)	32.4 (6.3)	30.4 (7.8)	<0.0001	² Force exerted on stepping onto box
³ SUO Movement time (s)	1.4 (0.2)	1.8 (0.4)	1.9 (0.6)	<0.0001	³ Time taken to step on and off box

ORAL SESSION #3

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REQUIREMENT FOR AND SUCCESS OF EPIDURAL BLOOD PATCH AFTER INTRATHECAL CATHETER PLACEMENT FOR UNINTENTIONAL DURAL PUNCTURE

Spiegel, J.E.; Tsen, L.C.; Segal, S. Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Boston, MA **INTRODUCTION:** Previously we reported the need for fewer blood patches (EBP) when unintentional dural puncture (DP) was managed by intrathecal catheter (ITC) placement vs. a repeated epidural attempt (RE).¹ Further experience led us to question this result and also raised the hypothesis that EBP was less effective after ITC than RE. **METHODS:** In January 1998 our service began encouraging the management of DP during attempted epidural space localization by passing an ITC 3 cm into the subarachnoid space. Analgesia was induced with 1 ml of 0.25% bupivacaine and 25 µg of fentanyl (our usual dose for combined spinal-epidural analgesia), and was maintained with 1-1.5 ml/hr of bupivacaine 0.125% with fentanyl 2 µg/ml. Catheters were left in place for 24 hours before removal. We compared intrapartum analgesia, incidence of PDPH, EBP, and success of EBP in patients managed with ITC vs. RE. **RESULTS:** 153 unintentional DPs from 1997-2000 were studied, 102 ITCs and 52 REs. In 17 cases an ITC could not be threaded. The epidural and intrathecal groups were similar with respect to height, weight, age, parity, mode of delivery, and fetal gestational age and birthweight. The incidence of PDPH did not significantly differ between the groups (RE 81%, ITC 70%, P=.18); neither did EBP (RE 62%, ITC 53%, P=.39). EBP was equally effective after both analgesics (RE 72%, ITC 76%, P=.80). Analgesia, however, was much more effective with ITC (89% vs. RE 47% acceptable analgesia; P<.0001). **CONCLUSIONS:** Inserting an intrathecal catheter for 24 hours following unintentional dural puncture does not reduce the incidence of PDPH or the incidence of severe headache requiring LEBP. EBP is equally effective after either technique. Because analgesia is dramatically better after ITC, we continue to recommend the technique. **Reference:** 1. Anesthesiology 1999; SOAP Supplement (April): A69.