THE EFFECT OF EPIDURAL NORMAL SALINE BOLUS PRIOR TO CATHETER REMOVAL ON PARTURIENT SENSORY AND MOTOR FUNCTION RECOVERY: A PILOT STUDY

[1,2]LT Maria Williams, NC, USN, SRNA, [1,2]LT Tiffany Dodson, NC, USN, SRNA, [1,2]LT Rafal B. Banek, NC, USN, SRNA, [1,2]CDR Lisa Osborne, NC, CRNA, PhD, CRNA, PhD, [1,3]CAPT (ret) Joseph Pellegrini NC, USN, CRNA, PhD, [1,2]LCDR Dennis Spence, NC, USN

[1]Navy Nurse Corps Anesthesia Program, Bethesda, MD

[2]Uniformed Services University of the Health Sciences, Graduate School of Nursing, Bethesda, MD

[3]University of Maryland Graduate School of Nursing

Abstract

Introduction: A normal saline bolus administered prior to discontinuation of the epidural catheter has been reported to hasten return of motor function following epidural anesthesia. However, this technique has not been investigated in parturients following vaginal delivery.

Methods: In this randomized, prospective experimental pilot study all enrolled parturients received 0.125% bupivacaine/2 mcg/ml fentanyl by continuous infusion. After delivery, the experimental group received a 30mL normal saline bolus through the epidural catheter: the control group did not. Sensory and motor function were evaluated at baseline and every 15 minutes for 60 minutes: groups were compared using Mann-Whitney U.

Results: A total of 53 subjects were included (experimental n= 27; control n= 26). Median sensory dermatome levels were significantly different at baseline (experimental-T8, control-T10, P=.01), but not at any other time point. The experimental group had less motor blockade than the control group at every time point, however the difference was only statistically significant at the 45 minute measure (p=.047).

Conclusion: Though the experimental group exhibited a tendency to less motor blockade, the baseline difference in sensory dermatome levels made it difficult to draw definitive conclusions as to the efficacy of a saline bolus in this parturient population. Future research is needed to confirm these results.

The views expressed in this abstract are those of the authors and do not reflect official policy or position of the Department of the Navy, Department of Defense, Uniformed Services University of the Health Sciences, or the United States Government.