26343 - POST DURAL PUNCTURE HEADACHE IN MORBIDLY OBESE PATIENTS

Nicola Jones MB BM BA MA MRCP, Marcus Peck, MB Bch FRCA MRCP; Shanmugasundara Gowrie, MB Bch FRCA; Mohammed Cassim, Lister Hospital, Stevenage, HERTS, United Kingdom

Introduction: Accidental dural puncture is a recognized complication of epidural insertion. Post dural puncture headache (PDPH) subsequently develops in approximately 80% of parturients¹. A low incidence (25%) of PDPH has been reported in morbidly obese parturients after (18G) epidural anaesthesia². In this study we compared the incidence of PDPH in morbidly obese parturients with non-morbidly obese parturients.

Method: Approval was obtained for this study from the Local Research Ethics Committee. A prospective observational study was carried out on all patients known to have had an accidental dural puncture with a 16 G needle or complaining of PDPH after 16 G epidural anaesthesia over an eight-year period at our institution. Data was collected prospectively using a standardized form. Demographic data included Body Mass Index (BMI), age and ASA status. Epidural details included reason for request, level of epidural placement, depth of epidural space, severity and associated signs and symptoms of PDPH and subsequent treatment.

Results: Forty seven patients were identified during the study period. Both groups were comparable in terms of age and ASA status. The incidence of dural puncture rate was significantly higher in morbidly obese parturients than non-morbidly obese parturients 15.8% (19/120) versus 0.9% (28/3080), respectively. There was a lower incidence of severe PDPH (needing epidural blood patch) between morbidly obese (52.7%) and non-morbidly obese (75%) parturients, although this did not reach statistical significance.

Discussion: The combined risks of obesity and pregnancy are significant. Regional anaesthesia is the safest approach for the morbidly obese obstetric patients, but may be technically challenging for the anaesthetist. Morbidly obese patients have poorly defined anatomical landmarks that make the identification of the epidural space difficult and increase the possibility of dural puncture. The decreased incidence of PDPH in morbidly obese parturients may relate to the large abdominal panniculus that functions as the equivalent of an abdominal binder, elevating intraabdominal pressures and retarding the degree of spinal fluid leakage through the dural puncture site.

References

1. Anaesthesia 1993; 48: 247-255.
2. Regional anesthesia 1994; 19:361-363.

	M.Obese (BMI >35)	Nonmorbidly obese (BMI<35)
Number of parturients	19	28
Incidence of dural tap	15.8% (19/120)	0.9% (28/3080)
Age (mean & range)	29.5 (22-42)	29.9 (18-41)
BMI (mean & range)	43.4 (36 – 58.3)	24.7(17.9–30.5)
PDPH – severe	10 (52.7%)	21 (75%)
mild	4 (21.1%)	3 (10.7%)