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EXPECTANT MANAGEMENT, POSTDURAL PUNCTURE HEADACHE AND LENGTH OF HOSPITAL STAY *Angle, P.¹ Tang, S.² Thompson, D.¹ Szalai, J.P.¹* 1. Sunnybrook and Womens College Health Science Ctr., Toronto, ON, Canada; 2. University of Toronto Medical School, Toronto, ON, Canada Prophylactic extradural patching to prevent postdural puncture headache (PDPH) has been advocated after large gauge dural puncture (DP)[1]. In many institutions, however, management is expectant. This matched case-control study examined the impact of expectant management on length of hospital stay (LOS) and emergency ward (EW) visits in parturients who developed PDPH vs those with uncomplicated epidurals. After ethics board approval, our perinatal database was used to identify ASA I-II parturients with unintentional DPs during epidural placement (1996-2001) and otherwise uncomplicated deliveries. Women with recognized DPs who developed PDPH were matched by parity, mode of delivery (spontaneous/instrumental) and date of admission (<1yr) with women who had uneventful epidural placement/delivery. Exclusion criteria for both groups included prematurity, multiple gestation, significant maternal/neonatal illness, NICU admission or post-delivery complications. All charts were independently reviewed by 2 authors to identify cases with PDPH, to exclude PDPH in controls and to confirm study eligibility. Outcomes were assessed only after patients were entered into the study. The primary outcome was LOS (hrs) from birth to patient discharge (or last recorded time). Secondary outcomes included: # of nights in hospital, # of EW visits related to PDPH, timing of EBP (pre vs post-discharge), and blood volume used. LOS and # of nights in hospital were assessed using a 2-tailed paired t-test. 26 cases and 26 controls were identified from a review of 106 charts. Firm discharge times were found for 23 cases and 23 controls. Demographics did not differ significantly between groups. LOS in hospital in PDPH cases was increased by a mean of 17 ± 23.8 (SD) hours (95% CI 8.26; $p=0.0012$). # of nights in hospital was increased by a mean of 0.62 nights in PDPH cases (95% CI 0.26, 0.98; $p=0.0027$). 73% (19/26) of cases received at least 1 EBP with a mean blood volume of 18.7ml. 68% (13/19) of cases had EBPs done on the ward. 11 cases visited the EW 14 times for evaluation of PDPH with 54% receiving at least 1 EBP. In summary, expectant management of a recognized large gauge DP is associated with a significant increase in hospital LOS and a large number of EW visits for evaluation/treatment in parturients developing PDPH. Prophylactic therapy warrants further investigation. *J. Anesth Analg 1989; 69:522-3*

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INCIDENCE OF POST-DURAL PUNCTURE HEADACHE AND EPIDURAL BLOOD PATCH FOLLOWING DURAL PUNCTURE WITH EPIDURAL NEEDLE IN 15,411 OBSTETRIC PATIENTS IN A LARGE, TERTIARY CARE TEACHING HOSPITAL *Toyama, T.M.¹ Ranasinghe, J.S.² Siddiqui, M.N.³ Steadman, J.L.⁴ Lai, M.⁵* 1. Anesthesiology, University of Miami, Miami, FL; 2. Anesthesiology, University of Miami, Miami, FL; 3. Anesthesiology, University of Miami, Miami, FL; 4. Anesthesiology, University of Miami, Miami, FL; 5. Anesthesiology, University of Miami, Miami, FL Post-dural puncture headache (PDPH) following dural puncture with 17-gauge Tuohy epidural needle is a recurring morbidity in obstetric anesthesia. Reported incidences of accidental dural puncture (ADP) in teaching hospitals range from 0.6% to 4.2% (1,2,3,4,5,6). Over a three-year-period between January 1999 and December 2001, we investigated the incidences of ADP, PDPH, and efficacy of epidural blood patch (EBP) in our institution. We followed three groups of patients for the purpose of Quality Improvement. (a) Who had intentional dural puncture by epidural needle for continuous intrathecal analgesia or anesthesia. (b) Who had recognized ADP at the time of epidural or combined spinal epidural (CSE) procedure. (c) Who developed PDPH following epidural or CSE procedure, although at the time of procedure dural puncture was not recognized. During the study years, 15,411 patients had either intentional intrathecal catheter, epidural or CSE performed for labor analgesia or cesarean section. There were 16 intentional dural punctures and only one of them required EBP. There were 302 ADPs in the epidural and the CSE group combined (1.9% incidence). In the epidural group, 273 out of 9,639 sustained ADP (2.8%), while in the CSE group, 26 out of 5,753 had ADP (0.4%). Although 188 patients developed PDPH (59.1%), only 81 of them required EBP. Therefore, 56.9% of the PDPH patients (107 out of 188) responded to conservative treatment with fluid intake and oral analgesics. Eight patients had prophylactic EBP, of whom two required therapeutic EBP. It is not known how many of the patients who had prophylactic EBP, other than those two who had therapeutic EBP, would have developed PDPH. Three out of 73 patient with PDPH required second EBP for recurrent headache. Therefore the success rate of the first EBP was 95.8%. Our overall incidence of ADP (1.9%) is comparable to the previous reports. Our ADP rate of 0.4% in the CSE group is much lower than that in the epidural group (2.8%). Norris and others (3) reported similar findings. Incidence of PDPH and the success rate of EBP are comparable to the previous studies (1,3,5,6). 1) *Anesthesia 1987; 42:1110-3*. 2) *Anaesthesia 1993; 48:247-55*. 3) *Anesth Analg 1994; 79:529-37*. 4) *Int J Obstet Anes 1997; 7:5-11*. 5) *Anesth Analg 1999; 88:352-6*. 6) *Int J Obstet Anesth 2001; 10:162-7*.