ORAL SESSION #2

A58 (Poster 48)

This abstract was submitted as a duplicate and removed prior to publication.

ORAL SESSION #2

A59

IS NORMAL LABOR NORMAL? *Vidovich, M.I.; Wong, C.A.; Krejcie, T.C. Dept Anesth, Northwestern Univ, Chicago, IL* **Introduction:** Labor duration fails to conform statistically to normal distribution. Conclusions drawn from studies using statistics that assume normality are unsound. The purpose of this study is to propose a new method to analyze the course of labor. As an example, the duration of labor for nulliparous patients receiving regional labor analgesia was examined. **Methods:** Nulliparous patients with cervical dilation of 4–5 cm at time of initiation of labor analgesia were analyzed (n=1084). Labor duration was defined as time from analgesia until delivery. The mean and median duration for patients who received epidural vs combined spinal-epidural (CSE) analgesia were calculated. The time *remaining* for 50% of parturients to deliver at each interval of elapsed time spent in labor was defined as the "context-sensitive median time-to-delivery". This *median time-to-delivery* was calculated for every 15-min interval for undelivered patients. Mean, median and context-sensitive time curves, were compared using *t*-, Mann-Whitney *U* and KS tests respectively. **Results:** Labor duration for epidural vs CSE analgesia is different by *t*-, *U* ($P<0.001$), KS test ($P<0.05$) and is not normally distributed. **Conclusions:** The proposed method describes the duration of labor and its dependence on the time already spent in labor. It allows for graphical and statistical analysis and does not assume normality.

labor duration (min)	**epidural***n=198*	**CSE***n=886*
mean ± SD	323±157	285±145
median	299	258

A60

COMPARISON OF MINIMUM LOCAL ANALGESIC VOLUMES OF TWO CONCENTRATIONS OF EPIDURAL BUPIVACAINE. *Lyons, G.[1]; Gorton, H.[1]; Robinson, A.[1]; Columb, M.O.[2] 1. Obstetric Anaesthesia, St James' University Hospital, Leeds, United Kingdom; 2. Intensive Care Unit, University Hospital, South Manchester, United Kingdom* **Introduction:** Bupivacaine 0.125%w/v lies above the EC90 point on the epidural concentration response curve[1]. Despite this there are reports of failure of analgesia using this concentration in plain solution for labor analgesia[2]. This study was undertaken to examine the role of bolus volume in failure of analgesia with bupivacaine 0.125%, and investigate the relationship between bolus dose and volume of plain bupivacaine. **Methods:** 80 women were randomised in a double blind manner to receive a first bolus of either bupivacaine 0.125%w/v or 0.25%w/v plain. The arbitrary starting volume was 15mL. Subsequent volumes were decided by sequential allocation according to analgesic efficacy. A visual analogue pain score <10 (0–100) within 30 minutes, indicated effective analgesia, and the next woman received a decrement of 2mL. Failure of VAPS to reach 10 was followed by a 2mL increment for the next woman. Using the formula of Dixon and Massey, the EV50 and ED50, with confidence intervals (CI) were calculated for each group. Comparisons were made using Welch's t test. **Results:** Personal and obstetric characteristics were similar for both groups. Minimum local analgesic volume (MLAV), EV50, and minimum local analgesic dose (MLAD), ED50 are shown in the table. **Conclusion:** Bolus volumes of 15mL plain bupivacaine 0.125%w/v and 10mL 0.25%w/v are slightly above the EV50 volumes for these solutions. Reducing concentration produces a significant reduction in dose. **Reference:** 1. Columb MO, Lyons G. Anesth Analg 1995; 81: 833 2. Yau et al. Anaesth Intensive Care 1990; 18: 532

	0.125%w/v	0.25%w/v	95%CI differences	P
mL	13.6	9.2	1.9–6.9	0.002
mg	17.0	23.1	0.14–12.1	0.045