

Table 1. Local Anesthetic (LA) Consumption, Demographics and Labor Characteristics

| | 2ug/mL Fentanyl | 2ug/mL Neostigmine | ug/mL Neostigmine | 8ug/mL Neostigmine | P-value |
|--|------------------------|---------------------------|--------------------------|---------------------------|----------------|
| Sample Size (n) | 35 | 38 | 40 | 38 | |
| Total LA Consumption (ml/hr) | 16.0, [13-21] | 15.3, [13-19] | 14.6, [12-18] | 16.2, [12-23] | 0.550 |
| PECA Volume Consumption (mL/hr) | 14.8, [12-18] | 13.3, [11-17] | 12.6, [11-15] | 13.0, [11-17] | 0.252 |
| Total Study Analgesia Duration (min) | 410±309 | 424±290 | 480±295 | 406±322 | 0.688 |
| Percent required Break Thru Top Up | 57% | 53% | 60% | 55% | 0.930 |
| Pain Score@20min after epidural(0-10) | 0.0, [0-2] | 0.0, [0-2] | 0, [0-1] | 0, [0-2] | 0.584 |
| Percent of subjects with hypotension & treated with ephedrine | 20% | 24% | 15% | 21% | 0.987 |
| | | | | | |
| Epid placed to Cervix Complete (min) | 235, [192-373] | 268, [167-452] | 330, [221-517] | 258, [154-366] | 0.262 |
| To Delivery (min) | 322, [242-484] | 415, [202-579] | 396, [286-703] | 303, [193-520] | 0.285 |
| Percent Required Cesarean Delivery (%) | 14% | 24% | 15% | 21% | 0.671 |
| Patient Satisfaction Score (1-5) | 4.0, [3.0-5.0] | 4.0, [3.0-4.5] | 4.0, [4.0-4.8] | 4.5, 3.0-5.0] | 0.818 |
| | | | | | |
| Cervix Dilation prior to Epidural (cm) | 3.8, [2.3-4.0] | 3.0, [2.1-3.9] | 3.0, [2.0-3.8] | 3.0, [2.0-3.5] | 0.234 |
| Age (years) | 27±6 | 28±6 | 27±6 | 28±5 | 0.682 |
| BMI (Kg/m²) | 31±5 | 31±5 | 30±5 | 30±4 | 0.891 |
| Parity | 1, [0-1] | 0, [0-1] | 0, [0-1] | 0.5, [0-1] | 0.885 |
| Estimated Gestational Age (weeks) | 40±1 | 40±1 | 40±1 | 40±1 | 0.999 |
| Neonatal Weight (grams) | 3424±383 | 3437±485 | 3403±449 | 3448±430 | 0.972 |
| APGAR @ 1 min | 7.4±1.9 | 7.6±1.7 | 7.5±2.0 | 7.7±1.8 | 0.927 |
| APGAR @5 min | 8.9±0.2 | 8.8±0.9 | 8.8±1.0 | 9.0±0.2 | 0.829 |
| | | | | | |
| Average Maximum Bromage Score(0-3) | 0.9±1.3 | 1.0±0.9 | 1.1±1.4 | 0.7±0.7 | 0.334 |
| Average Maximum Nausea Score (0-10) | 1.2±2.2 | 1.8±3.0 | 1.8±3.0 | 1.3±2.5 | 0.662 |
| Average Maximum Sedation Score(0-10) | 4.1±3.2 | 3.3±2.9 | 3.4±3.0 | 3.3±3.0 | 0.639 |
| Average Maximum Shivering Score(0-10) | 0.20±0.41 | 0.32±0.47 | 0.25±0.44 | 0.16±0.37 | 0.396 |
| Average Maximum Pruritus Score (0-10) | 0.86±1.80 | 0.03±0.16 | 0.03±0.16 | 0.05±0.32 | 0.001 |

Total LA Consumption and PCEA consumption are expressed as mL/hour of 0.125% bupivacaine equivalents.

PCEA = Patient Controlled Epidural Analgesia ; IQR =Interquartile Range

Bromage Motor Scale (0-3); Nausea, Sedation , Shivering and Pruritus Score (Verbal analog score from 0 to 10, with 0 being none and 10 being most severe)

Descriptive statistics were calculated for all variables such that mean ± SD were used for normally distributed variables; median [inter-quartile range] for data that were not normally distributed or for data with outliers or ordinal data; and number or percentage for categorical data. ANOVA, Chi-square analysis and Fisher Exact test were applied as appropriate. For all analyses, P was set at 0.05 for statistical significance.