144014 - COMBINED SPINAL EPIDURAL IN PARTURIENT WITH FRONTAL GLIOMA

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INTRODUCTION
Intracranial pathology remains a contraindication to neuraxial technique for fear of herniation or neurologic deterioration. Here we present a careful CSE technique in a morbidly obese parturient undergoing urgent cesarean section with recent asthma exacerbation, signs of difficult airway and frontal glioma with past history of seizure.

Case Presentation
The patient consented to this report. Our patient was a G3P2, 32 year old admitted at 35+0 weeks for non-reassuring heart rate and asthma exacerbation. History was remarkable for severe asthma, obesity (BMI of 53), and frontal low-grade glioma, with past seizures.

MR imaging of her lesion from 2013 showed a stable, 2.6x1.2x1.1 cm mass in the right frontal lobe (Figure 1). No findings of increased mass effect were found. A CT head ordered at 26 weeks gestation showed no change. We consulted with the neurosurgery team who felt it would be safe to proceed with neuraxial technique given the stability in the patient’s lesion.

The patient was 168cm tall and 148kg. Vitals were normal. Airway examination revealed a thick neck, Class III Mallampatti with otherwise normal features. Two anesthesiologists were present for the emergent section. A pre-procedure arterial line was placed. Under aseptic technique and in the sitting position, a combined spinal epidural block was performed at the L3-4 level using an 18G Touhy and 26G Pencan pencil point needle. Two attempts were required for loss of resistance at 9.5cm, after which the dura was punctured and 1.5ml of 0.75% Bupivicaine with 15ug Fentanyl and 100ug of Epimorph were injected.

Two units of RBCs were given for blood loss of 1500ml due to uterine atony. There were no other complications.
DISCUSSION
While there are several reports of successful regional procedures performed for patients with intracranial neoplasms, increases in CSF pressure cannot be confidently avoided\textsuperscript{1,2,3,4,5,6}. Cases of stable, slow growing brain tumours located away from CSF pathways may cause little ventricular compromise due to compensatory caudal displacement of CSF or blood volume instead of brain mass\textsuperscript{7}. In hopes of avoiding theoretical dural compression, we opted for a technique that would allow for titratable analgesia achievable with small volumes and avoid a potential high risk general anesthetic. In our case, the patient’s physical examination, imaging, and multidisciplinary discussion reassured us that there was no rise in intracranial pressure and her tumour was stable.

Anesthesia for parturients with brain tumours or raised intracranial pressure must be approached with caution\textsuperscript{6}. The decision between general or regional anesthesia is one that should be made on an individual patient basis in collaboration with the patient and multidisciplinary care teams.

References:


INTRODUCTION
Pre-exposure to oxytocin has been shown to cause desensitization of the oxytocin receptors (OTR) [1] in both a time and concentration-dependent manner [2]. This desensitization phenomenon means that women who have been augmented for labor require higher oxytocin doses for adequate uterine contractation post delivery and are at more risk of postpartum hemorrhage (PPH). Magnesium sulphate (MgSO$_4$) is widely used within obstetric medicine for preeclampsia, eclampsia and fetal neuroprotection, and also as a tocolytic agent in preterm labor. There are suggestions MgSO$_4$ may lead to increased oxytocin requirements or PPH in preeclamptic patients [3], however, its effect on oxytocin-induced contractility in the desensitized myometrium is unknown. The objective of this study was to determine the myometrial contraction patterns induced by oxytocin, in oxytocin desensitized and control specimens exposed to MgSO$_4$. We hypothesize that pretreatment with MgSO$_4$ would reduce oxytocin-induced contractions in both desensitized and control samples.

METHODS
With institutional REB approval and the informed consent of each participant, this study was conducted as a prospective in vitro study. We included women undergoing elective Cesarean section under spinal anesthesia, who had no risk factors for PPH. A small sliver of myometrium was collected by the obstetrician after delivery of the fetus and placenta, but before the administration of oxytocin. The specimen was divided into six strips and each was mounted into six separate organ bath chambers filled with physiological salt solution (PSS) under homeostatic conditions. After washing and re-equilibration, two of the six strips were pre-treated for 2 hours with MgSO$_4$ 3.5mM (Mg group), two with MgSO$_4$ 3.5mM plus oxytocin $10^{-5}$M (Mg-Oxy group) and the other two placed in PSS (untreated control group). After pre-treatment, all strips were subjected to dose-response testing with increasing concentrations of oxytocin from $10^{-10}$M to $10^{-5}$M, as demonstrated in Fig. 1. The primary outcome was the motility index (amplitude x frequency). Sample size was calculated at 20 subjects to provide 120 strips, 40 per group. Numerical contraction data will be analyzed for each sample and with each drug exposure at each increasing concentration. Linear regression models, adjusted for repeated measures through a compound symmetry covariance structure, will be used
for analysis.

RESULTS
Recruitment is underway and we plan to recruit the last patient by April 2016. Discussion: Final discussion and conclusion will be presented at the meeting.

References:

149992 - EVALUATION OF THE INTENSITY OF THE PAIN OF CHILDBIRTH IN THE HOSPITALS

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INTRODUCTION
Studies of Ranta and Melzack showed that the pain of childbirth is one of the most intense. The lack of published studies that evaluate the pain of the work related to childbirth among the Congolese women in general and in Kinshasa in particular, has led to the realization of this study, whose objective is to evaluate the intensity of the obstetrical pain in hospitals from Kinshasa.

PATIENTS AND METHODS
This is a cross-sectional observational and multicentric study. It was conducted as a survey of 488 pregnant women, parturient and delivered women in three health facilities in Kinshasa. Pain was assessed by three validated scales: VAS, SVS and DS. The influence of certain sociocultural and obstetrical factors on this quotation has been sought. The ethics committee gave its recommendation, and statistical analysis was performed with SPSS 12.0 for Windows. Comparison of proportions was made using Chi-square test and Fisher's exact weight. The significance level was set at p

RESULTS
The majority (79%) of women surveyed feel the pain of childbirth is less intense in the SVS and at least 7 / 10 to DS and 71% of women quote at least 7 / 10 to VAS. The status of women before (ANC), during (work) and after (post-partum) the test of pain of childbirth emerged as the only factor influencing the rating of the pain of labour in this study. While age, gender, religion, tribe, occupation, residence, educational level and visited health facility had no influence.
CONCLUSION
This study suggests that the pain of childbirth is at least an intense pain and is influenced by the state before, during and after the ordeal of pain.

References:

PROGRAMMED INTERMITTENT EPIDURAL BOLUSES FOR LABOUR ANALGESIA

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INTRODUCTION
Programmed Intermittent Epidural Boluses (PIEB) for labour analgesia have been proposed to decrease motor blockade\(^1\), decrease total local anaesthetic (LA) consumption and increase maternal satisfaction\(^2\) as compared with Continuous Epidural Infusions (CEI). Following anecdotal reports by midwifery staff of excessive motor block in patients having CEI, a PIEB protocol was introduced. Data was collected before and after introduction for comparison with the previous regime.

METHOD
Following research governance approval at our institution, data was collected using a specially designed form for all women having labour epidurals from August to December 2015. The labour analgesia protocol was changed from CEI to PIEB at the start of October. All patients included in the study had access to patient controlled epidural analgesia (PCEA).

CEI protocol: 0.0625% Bupivacaine + 2.5 mcg/ml Fentanyl - 5ml/hr
PCEA dose: 10ml 0.0625% Bupivacaine + 2.5 mcg/ml Fentanyl (20min lockout)
PIEB protocol: Mandatory Bolus 10 ml 0.0625% Bupivacaine + 2.5 mcg/ml Fentanyl – hourly first bolus 40 minutes after epidural initiation.
PCEA dose: 5ml 0.0625% Bupivacaine + 2.5 mcg/ml Fentanyl (15min lockout)

The primary outcomes were:
Motor Block (using Bromage scores); Duration of second stage of labour; Number of PCEA requests; Number of rescue epidural boluses required; Total LA volume used; Number of instrumental deliveries; Maternal Satisfaction

RESULTS
There were 114 epidurals placed for labour analgesia (with 2 re-sites) between August and September 2015, with 106 (2 re-sites) between October and November. There were less PCEA requests (mean 6.8 vs 4.9) in the PIEB group along with a lower total volume of local anaesthetic administered (mean 74.8mls vs 65.5mls) and less motor block (27/55 events vs 23/78). Maternal satisfaction (Numerical rating scale 0-10) was similar (9.18 vs 9.02). There were also fewer instrumental deliveries (35/112 vs 24/104). Duration of second stage of labour was comparable (84.93 mins vs 83.95 mins).
DISCUSSION
Following institution of the PIEB protocol, the benchmarking showed no major difference in the two regimes, with possibly a slight improvement, suggesting a successful transition to the new protocol.

Given the small size of the sample groups, the benchmarking was not powered to show statistically significant differences in many of the clinically important outcomes. In addition, it was a disappointment that Bromage scores were poorly documented, given that a reported concern from midwifery staff was motor block. Further research would require much higher numbers in this group to ascertain significance. Future studies could also look at specific groups related to gestation and parity, obesity, epidurals for instituted labour vs for induction, and initiating initial analgesia with a combined spinal epidural compared with an epidural.

References:
1. Anesthesia and Analgesia 2011 113: 826-831
2. Anesthesia and Analgesia 2013 116: 133-44
SERIOUS ADVERSE REACTION FOLLOWING PROSTAGLANDIN ANALOGUE USE IN OBSTETRIC PRACTICE

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BACKGROUND
Misoprostol is a synthetic analogue of Prostaglandin E1. Misoprostol is widely used by obstetricians and gynecologists for various purposes: medical termination of pregnancy, cervical priming before hysteroscopy, induction of labor and management of postpartum hemorrhage (PPH), due to its uterotonic and cervical priming action. It is generally considered safe, but fatal and non-fatal complications have been reported.(1-3) The present report describes three cases of severe hypertensive crises to administration of this drug.

Case Report: Patient consent for publication of case data obtained.
Case 1: A 24 year old primigravida at perceived risk of PPH received prostaglandin analogue Misoprostol 600 mcg prophylactically per-rectally to prevent PPH. An hour later when she developed PPH, a second dose of 250 mcg was administered. She adversely reacted to this medication with restlessness, hyperpyrexia (105°F), absent peripheral pulses and sinus tachycardia of 180/min and validated invasive blood pressure recordings of 190/120 mm Hg. She was treated in the intensive care with intravenous fluids, sedation and ventilatory support, packed red cell transfusion and recovered over 12 hours.

Case 2: 32 year old lady, for hysteroscopic resection of submucosal fibroids received 200mcg of misoprostol vaginally 30 minutes prior to the procedure. During resection of the second fibroid there was profuse hemorrhage (loss of about 800ml). An emergency laparotomy was performed. Second dose of 600mcg misoprostol was administered per rectally. After 20 minutes, the peripheral pulses were not felt, non-invasive and invasive monitoring showed systemic hypertension of 204/140 mm Hg and she developed pulmonary edema with peak airway pressures 45 cm H2O which resolved over 2 hours on treatment with crystalloid infusions, increasing depth of anaesthesia and removal of the per-rectal Misoprostol tablet.

Case 3: A lady aged 29 was undergoing caesarian section under general anaesthetic in the cath-lab for placenta accreta in anticipation of profuse bleeding. Femoral vascular access sheaths were placed for possible vascular embolization to control bleeding. Following extraction of new-born, misoprostol 600 mcg was placed rectally. 15 minutes later, peripheral pulses were not palpable and blood pressures were 190/110 mm Hg, heart rate 124/min and blood loss of 1600 mL. Suspecting Misoprostol reaction, she
was treated with crystalloid infusions, packed cell transfusions and recovered over 4 hours.

**DISCUSSION**
All the patients had a few common features; they suffered significant blood loss, received one or more doses of prostaglandin analogues via different routes, peripheral pulses were absent and systemic hypertension was noted. In a study of oral misoprostol (400 mcg) versus placebo, decrease in leg blood flow volume occurred with increase in peripheral vascular resistance in the misoprostol group.\(^4\)
Inference: Based on the three cases, we opine that minimal effective dose may be administered to minimize the side effects, especially in hypovolemic patients.

**References:**

1. International journal of gynecology and obstetrics 2007; 99: S160-167
3. Lancet 2006; 368: 1216-8