



Spud's Snippets

Automated regular boluses for epidural analgesia: a comparison with continuous infusion

International Journal of Obstetric Anesthesia – Volume 14, Issue 4 , October 2005, Pages 305-309 – (Y. Lim, A.T.H. Sia and C. Ocampo)

BACKGROUND: Intermittent epidural bolus dosing is a method of drug delivery that can prolong the duration of labour analgesia induced by a combined spinal epidural (CSE). In this randomized, double-blinded study, we compared the analgesic efficacy of two drug delivery systems: regular intermittent epidural boluses and continuous epidural infusion and assessed the incidence of breakthrough pain after CSE.

METHODS: With the approval of the Hospital Ethics Committee, we recruited 60 parturients into this randomized controlled trial. A CSE was performed with intrathecal fentanyl 25 µg in all patients. The parturients were then randomly allocated into two groups. The infusion group received a continuous epidural infusion of levobupivacaine 0.1% with fentanyl 2 µg/mL at a rate of 10 mL/h. The bolus group received 5-mL epidural boluses every half hour. The sample size was computed to detect a 40% reduction in the rate of breakthrough pain.

RESULTS: The bolus group had a lower incidence of breakthrough pain than the infusion group (10% vs. 37%, $P < 0.05$). The bolus group also had significantly higher satisfaction scores for labour analgesia: 97 ± 8 (mean \pm SD) vs. 89 ± 7 ($P < 0.05$).

CONCLUSION: Automated regular bolus delivery of epidural analgesia when compared with continuous infusion decreased the incidence of breakthrough pain and increased maternal satisfaction. In a busy obstetric unit, this may also serve to decrease the anesthetists' workload.

COMMENT: Builds on the work of Wildsmith, who showed progressive block regression with continuous infusion due to leakage via nerve roots. Intermittent boluses are too quick to leak and re-establish a level. Now all we need is the software from an innovative company.

Anterior Cervical Approach for Stellate Ganglion and T2 to T3 Sympathetic Blocks: A Novel Technique

Pain Practice September 2005; Volume 5 Issue 3 Page 244 – (Ricardo Vallejo, Ricardo Plancarte, Ramsin M. Benyamin, Juan Santiago-Palma)

BACKGROUND: Stellate ganglion block is used for the diagnosis and treatment of sympathetically maintained pain syndromes. Multiple anatomic variations and inaccurate sympathetic block may mislead the diagnosis and prevent patients from receiving potentially beneficial interventions. We describe a novel approach to blockade of the sympathetic chain at C7 and at T2 to T3 with a single-needle injection.

TECHNIQUE: With the patient in supine position, the uncinat process of C7 is identified fluoroscopically as a target for insertion of a catheter through a Touhy needle. The catheter is directed caudally to the junction of T2 and T3. Contrast injection confirms the spread to the appropriate levels before injection of local anesthetic.

CONCLUSION: This novel approach to blockade of the upper extremity sympathetic innervation may enhance diagnostic accuracy and therapeutic benefit as compared with traditional approaches to the stellate ganglion alone. This approach may be expected to decrease the risk of pneumothorax when compared with the posterior approach to T2 to T3.

COMMENT: The landmarks stay the same, but using an epidural catheter allows blockade at lower level than that achieved by cervical injection and closer to the plexus ablated by surgeons at thoracoscopic sympathectomy.

Spinal Versus Epidural Anesthesia for Cesarean Delivery in Severe Preeclampsia: A Prospective Randomized, Multicenter Study

Anesth Analg 2005; 101: 862-868 – (Shusee Visalyaputra, Oraluxna Rodanant, Wanna Somboonviboon, Kamthorn Tantivitayatan, MD, Somboon Thienthong, Wanawimol Saengchote.)

In this randomized, multicenter study we compared the hemodynamic effects of spinal and epidural anesthesia for cesarean delivery in severely preeclamptic patients. The epidural group (n = 47) received 2% lidocaine with epinephrine 1:400,000, 18–23 mL, followed by 3 mg of morphine after delivery.

The spinal group (n = 53) received 2.2 mL of 0.5% hyperbaric bupivacaine plus 0.2 mg morphine.

We hypothesized that the lowest MAP (mean arterial blood pressure, the primary outcome) during the delivery period would have to be at least 10 mm Hg less in the spinal group to be of clinical importance. We found that there was a statistically significant difference in MAP, with more patients in the spinal group exhibiting hypotension (P < 0.001).

Although the incidence of hypotension (systolic arterial blood pressure, SAP 100 mmHg) was more frequent in the spinal group than in the epidural group (51% versus 23%), the duration of significant hypotension (SAP 100 mm Hg) was short (1 min) in both groups. There was more use of ephedrine in the spinal group than in the epidural group (median, 6 versus 0 mg) but hypotension was easily treated in all patients. Neonatal outcomes assessed by Apgar scores and the umbilical arterial blood gas analysis were similar in both groups. Adverse neonatal outcomes (5-min Apgar score <7 and umbilical arterial blood pH <7.20) were found in only 2 premature newborns (weight <1500 g) who were born without maternal hypotension after regional anesthesia. We conclude that the results of this large prospective study support the use of spinal anesthesia for cesarean delivery in severely preeclamptic patients.

COMMENT:– Smaller needle, better block, similar neonatal outcomes – looks like spinal is the way to go for severe pregnancy induced hypertension.

Prevalence and factors associated to low back pain among hospital staff

Ismail Bejia, Mohamed Younesa, Hadj Belgacem Jamilaa, Taoufik Khalfallahb, Kamel Ben Salemc, Mongi Touzia, Mohamed Akrouta and Naceur Bergaouia – (Joint Bone Spine May 2005; Volume 72, Issue 3: Pages 254-259)

OBJECTIVES: Because of its frequency and consequences on professional life, low back pain (LBP) represents a real health care problem. Our study is aimed at determining the prevalence of LBP among hospital staff, analyzing the medical and professional consequences as well as investigating into the factors associated to this health problem.

METHODS: We have conducted an inquiry among 350 employees at Fattouma Bourguiba teaching hospital. The employees have answered a pre-established questionnaire including 51 items.

RESULTS: The cumulative life-prevalence was 57.7% of the cases. The annual prevalence was 51.1% of the cases. Chronic LBP prevalence was 12.8% of the cases. Medical care was required in 61.9% of the cases. Radiological explorations were performed in 45% of the cases. Sick leave was observed in 26.1% of the cases and an occupational change was necessary in two cases. Factors associated to LBP were age (P < 0.01), female gender (P = 0.024), high BMI (P = 0.01), the fact of being married or divorced (P < 0.01), smoking (P = 0.016), past medical LBP history (P < 0.0001), extra professional activity (P < 0.01), migraine (P < 0.001), years' service (P = 0.007) as well as heavy weight lifting (P = 0.008). Exercise is rather a protecting factor against LBP (P = 0.019).

CONCLUSION: The prevalence of LBP among hospital staff as well as the socio-professional drawbacks is important. Many factors are associated to LBP urging medical teams to take some preventive measures to reduce this affliction.

COMMENT: – The major risk factor not identified by this study is that surgeons are seldom in theatre to help move patients!

Useful Websites

Free sites: • <http://www.goldenlinks4doctors.com> • <http://www.freemedicaljournals.com> • <http://www.freebooks4doctors.com>

The NHS National Electronic library for health (including Cochrane databases) • <http://www.nelh.nhs.uk>

Clinical evidence from the BMJ (requires free registration) • Three latest topics are:
Trigeminal neuralgia - <http://www.clinicalevidence.com/ceweb/conditions/nud/1207/1207.jsp>
Dysmenorrhoea - <http://www.clinicalevidence.com/ceweb/conditions/woh/0813/0813.jsp>
Neck pain - <http://www.clinicalevidence.com/ceweb/conditions/msd/1103/1103.jsp>