

A Comparison of Complications Which Occur Following Combined Spinal-Epidural or Continuous Infusion Lumbar Epidural Analgesia for Labor

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Introduction: Epidural and combined spinal epidural (CSE) techniques are both being used to provide maternal analgesia during labor. Since combined spinal-epidural analgesia for labor is a relatively new technique, there are few studies which have evaluated its complications. We retrospectively reviewed all cases of CSE and epidural analgesia for labor at our institution during a six-month period, to compare the safety and efficacy of these two currently used techniques.

Methods: A retrospective review of all charts of patients who received labor analgesia during the six month period from July 1994-January 1995 was completed. Each chart was evaluated for the following complications at any time between initiation of the block and discharge from the labor and delivery suite: failed block, fetal distress within 15 minutes of initiation of the block, inadequate block when attempt was made to bring up level for cesarean section, total spinal, inability to phonate, inability to swallow, headache, intrathecal placement of catheter, intravascular placement of catheter, or use of less local anesthetic than expected to achieve a block when dosing for cesarean section. Data were analyzed by chi-square testing.

Results: A total of 752 patients requested epidural analgesia during the study period. Of these patients, 296 (39%) received epidural analgesia and 456 (61 %) received CSE. Labor epidurals were initially dosed with 0.25% bupivacaine, followed by an infusion of 0.125% bupivacaine plus fentanyl. CSE was performed with a standard epidural needle and 26 g Gertie Marx needle® (IMD, Utah), with subarachnoid administration of 10 mcg of sufentanil.

	Failed Block	Fetal Distress	Failure for C/S	High Spinal	Inability to phonate	Inability to swallow	Head-ache	Intra-thecal catheter	Intra-vascular catheter	Wet-taps	Less local required for anticipated blocks
Epdi (296)	8	1	1	0	0	0	2	1	1	5	1
CSE (456)	5	1	2	1	1	1	1	5	1	1	12
p	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	>.05	<.05	<.05

Of the parameters examined, there was a statistically significant difference between groups only in regards to wet taps and higher than anticipated blocks. Statistically fewer patients in the CSE group experienced accidental dural punctures and more patients in the CSE group had a T4 block after administration of less than 12 ml of local anesthetic.

Discussion: Our data suggests that CSE is as safe as epidural anesthesia for pain relief in laboring patients. There were no major complications and minor complications, other than pruritis, were not statistically different between epidural and CSE groups. CSE may be protective against accidental dural punctures by allowing an extra method of verification of needle location. Since less local anesthetic may be required to provide a T4 block in CSE patients, caution is necessary when supplementing the epidural catheter for an operative delivery if CSE has been performed.