

Combined Spinal and Epidural Analgesia for Labor and Delivery Using Gertie-Marx Spinal Needle

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Introduction: The use of combined spinal and epidural technique to relieve the pain of labor and delivery has become a common practice. Some of the advantages of this technique include quick onset of pain relief, lower total dose of the local anesthetic and reduced incidence of complications. Most of the published reports of this technique have been with the use of Quincke, Sprotte or Whitacre spinal needles. In this study we evaluated the use of Gertie-Marx spinal needle.

Methods: Combined spinal and epidural analgesia was done in 148 laboring patients. The ages of the patients ranged from 18-29. They were mostly primi or secundi gravidas. With the patient in the sitting position, the epidural needle (18-g Hustead 3.5") was placed in the L2-L3 interspace using loss of resistance technique. A 26-g Gertie-Marx spinal needle (5" IMD Park City, Utah) was introduced through the epidural needle (NTN). The stylet of the spinal needle was withdrawn when it was felt to puncture the dura or when the spinal needle could not be advanced any further. When CSF dripped out, 25 ug of preservative-free fentanyl was injected intrathecally. Then the spinal needle was removed and a 20-g epidural catheter (Abbott) was then inserted in the epidural space. Following negative aspiration of the catheter, a test dose of 2.5 ml of 0.25% bupivacaine with epinephrine (1:200,000) was injected. Evidence of subarachnoid or an IV injection was observed for. The epidural catheter was then connected to a continuous epidural pump and 10 ml of 0.125% bupivacaine with 1 ug/ml of fentanyl was administered per hour. No further bolus doses of the local anesthetic were administered. If the perineal anesthesia was inadequate local infiltration of the perineum was done with 1% lidocaine by the obstetricians. Upon discharge, the patients were asked to call the anesthesiologist if they had any problems.

Results: Successful spinal tap was accomplished in 142 patients. In 6 patients in spite of negative spinal tap, the epidural catheter was inserted (the block was successful in those patients as well). In 2 patients the catheter had to be replaced in spite of the fact the spinal tap was successful. Only one patient complained of spinal headache, which was treated, with the placement of autologous epidural blood patch. A distinct dural "click" was noted in most of the patients. There was spontaneous return of CSF. Aspiration of the needle was not necessary. None of the patients experienced any respiratory depression. There were no instances of the epidural catheter getting placed in the subarachnoid space. No shearing of the spinal needle occurred.

Conclusion: 26-g Gertie-Marx needle can be used successfully to perform combined spinal and epidural analgesia. The "pop" feeling that one feels with the Gertie-Marx needle is quite unique. The return of CSF is brisk even with this small-bore needle. In certain cases successful spinal tap may not be accomplished. As the Gertie-Marx needle we used is 5" long, the incidence of failure to puncture the dura (5%) is lower than that has been reported with the use of other types of spinal needles (15%).