Options When Labor Epidural Fails for Cesarean Section

Abstract Type: Case Report/Case Series
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Introduction: Of our patients who receive labor epidural, approximately 15 to 20% may require a cesarean section (C/S) for a variety of indications, accounting for our C/S rate of 32%. The anesthesiologist is faced with a dilemma when a labor epidural, which seemed to be working is not adequate for C/S. Depending on the urgency of the case, general anesthesia is always an option especially if the airway is not a problem.

Method: A review of cases reported to our Quality Management Committee shows that a majority (20%) of the cases are managed with spinal anesthesia (SA), some with combined spinal and epidural (CSE) or repeat epidural. Only a handful receive general anesthesia, mostly for nonreassuring fetal heart rate. One or two cases a year develop high spinal which usually requires induction of general anesthesia. Since 2009, we have managed 5 patients with repeat epidural. Upon identifying the loss of resistance, we inject 10mls of normal saline in the epidural space prior to inserting the epidural catheter. In these cases, we were surprised to see that the epidural level was T4 bilaterally upon positioning the patient supine and without any local anesthetic being injected through the new epidural catheter. This may be because the removed epidural catheter may have been coiled one or more times and may be directed downwards in the epidural space thus preventing the upward spread of local anesthesia. The cases included in this case report series were patients who had evidence of epidural block (e.g. warm lower extremities, a discernable motor block and some sensory level to pinprick) and at least 20mins have elapsed since receiving 20mls surgical concentration of local anesthesia and 100 mcgs fentanyl.

Conclusion: Majority of anesthesiologists at our hospital perform a spinal or CSE for C/S after a failed epidural. Even with usual or less than usual doses of spinal bupivacaine, there is always a risk of high spinal. Repeating the epidural has its own risks, namely that the dose of local anesthesia may exceed the maximum recommended; and, if the epidural fails again, surgery will be delayed even further. Based on our experience with these 5 cases, it appears that in carefully selected cases, removing the epidural catheter and injecting 10mls of saline may allow the local anesthetic already in the epidural space to reach T4 level. This happened on all 5 patients we treated in this manner. None required additional local anesthesia until an hour or two after the start of surgery depending on the type of local anesthesia used. Nothing is lost by trying this maneuver and the epidural is available if needed.