

C-46 Monday Morning on Labor & Delivery: Inadequate/Failed Spinal for Cesarean Delivery. Now What Do You Do? Mechanisms, Management and Prevention

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Objective

After completion of this session, the participant will be able to:

- Evaluate and manage an inadequate spinal anesthetic.

Case Stem Question

A 31 yo G2P1 parturient, 5'1" and 61kg presented for elective repeat C-section at term. PMHx significant only for remote hx IVDA. Pt reports that, for her first elective C-section, she "went to sleep" and doesn't remember any other details. During OR preparation, it was noted that, over the weekend, the usual spinal tray had been replaced by a substitute tray. The sub tray had no meds in it and there was a different 25G pencil-point needle instead of the one we were used to (due to supply chain disruption.) Spinal was placed by a CA1 resident starting the second week of his OB Anesthesia rotation. He withdrew an ampule of hyperbaric bupivacaine from the drug machine and mixed it with fentanyl 10mcg and preservative-free morphine 100mcg and then discarded and wasted all the ampules and partial amounts of drugs leftover. He then transferred the mixture to the syringe on the tray all before you came into the OR. He performed the spinal, involving multiple redirects of the needle and needed assistance finding the correct angle to achieve successful dural puncture. CSF was aspirated and meds were injected. Phenylephrine infusion was started immediately per protocol but was stopped after 2 minutes because the BP was going too high and not seemingly needing pressor support. After 10 minutes, the patient was still able to lift both legs with only slight weakness on the left. She was able to feel sharp testing and cold at every level on the right and below T10 on the left. After 15 minutes the exam was unchanged and the BP/Pulse remained at pre-block values.

Guiding Questions for Discussion

1. What are the most likely and less likely causes for spinal failure in general, and in this case? What clues can you take from the nature of the inadequate block that might help you deduce the cause?
2. What steps might be taken to reduce the chance of spinal failure or inadequacy?
3. What are the best ways to test a spinal to ensure that it is adequate for C-section surgery? What level of block is needed and why?
4. How much time should one wait after spinal injection for full affect to be appreciated? Would you wait more time in this case?
5. Knowing that the spinal is inadequate, what would you then do? Describe the pros and cons/complications of the different alternatives available.
6. How would your management change if the case were urgent or emergent?
7. What are the factors - including adjunct drugs and different maneuvers - that influence onset, duration, quality and distribution of a spinal block?
8. What things, if any, should the patient be counseled to tell future anesthesiologists?

9. How and when do you present the information that your spinal is inadequate? Assess your own ability to be clear, confident and fully honest with the patient and the team.

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