Abstract # 100

Anesthetic Management of a Parturient with Double-Chamber-RV and VSD Requiring Emergent C-Section

Abstract Type: Case Report/Case Series
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Introduction - 17-yo-153cm-102kg gravid African American female at 33 weeks presented to L&D with abdominal discomfort and a vague history of cardiac disease. Physical exam was remarkable for a holosystolic murmur, 5/6, radiating to the axilla and carotid arteries. NRFHT was observed by the obstetricians and the patient was taken to the OR for emergent C-section. Anesthetic plan: Regional anesthesia[RA] (CSEA) with a small dose of intrathecal(spinal) local anesthetic[LA] with narcotic, supplemented with epidural normal saline. Preoperative medication: IV: Reglan 10mg PO: Bicitra 30 ml Intraoperative monitoring: Standard ASA monitoring Preparation: patient in sitting position, chloroprep with sterile technique Regional Technique: 6 mg of 0.75% hyperbaric bupivacaine + 30 mcg fentanyl in the intrathecal space(spinal), epidural catheter placed, patient told to remain seated for approximately 1 minute to allow the local anesthetic to ‘settle’(and limit sympathectomy), patient placed in supine position with left uterine displacement[T10-T12 level achieved], 2 minutes later, block supplemented via epidural catheter with 5 cc of sterile saline twice to increase block height by volume effect without addition of local anesthetic [T6 level achieved]. 5 cc of Lidocaine 1.5% with epinephrine ‘test dose’ given to rule out intravascular placement of catheter.

Intraoperative Course: Painless incision, healthy baby Girl delivered during uneventful 1.25 hr surgery. PACU course: patient to PACU on room air, PCEA with Ropivacaine 0.1% + Fentanyl 2 mcg/cc for pain management Post-PACU course: uneventful, no anesthetic complications.

Discussion: A holosystolic murmur, radiating to the axilla and radiating to the carotid arteries implies conflicting anesthetic goals. If the lesion is regurgitant, i.e. mitral regurgitation, as implied by the murmur radiating to the axilla, RA may actually be the preferred anesthetic modality. The afterload reduction seen with a spinal or epidural meets the hemodynamic goals of MR management. However, if the lesion is stenotic, such as aortic valve stenosis, again as suggested by the murmur radiating to the carotids, RA could be detrimental, as decreasing afterload on an already ‘fixed’ cardiac output may cause significant hypotension, ischemia, and placental insufficiency. Because of possible untoward effects of a sympathectomy on the patients hemodynamics, a very small dose of intrathecal (spinal) anesthetic was used in the technique described above with epidural supplementation of normal saline. Post-operatively, TTE revealed double chamber RV and restrictive VSD.

Conclusion: Small intrathecal doses of LA, supplemented by epidural saline may prove a useful and safe technique in patients with cardiac pathology and conflicting anesthetic goals (MR + AS or double-chamber-RV + VSD), cases where minimal hemodynamic changes are essential.