

PD-10. CONTINUOUS SPINAL ANESTHESIA FOR A PARTURIENT WITH PERIPARTUM CARDIOMYOPATHY

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The anesthetic management of labor and delivery in patients with peripartum cardiomyopathy (PPCM) is not well defined. Using continuous spinal anesthesia (CSA) in such rare clinical situation has not been previously reported. A 30 year old, 107 kg, G4/P1, woman with twin gestation was admitted for a cesarean section at 33 weeks because of diminishing cardiac function. She was diagnosed with peripartum cardiomyopathy, 2 years prior to this admission. At that time she had cardiopulmonary symptoms that persisted after her delivery. With the current pregnancy her cardiopulmonary status diminished at 28 weeks gestation. She was started on digoxin and furosemide. Echocardiogram showed global left ventricular dysfunction, severe mitral regurgitation, moderate tricuspid regurgitation, pulmonary hypertension and pericardial effusion. Hemodynamic measurements during the case are presented in table. Continuous spinal anesthesia was instituted with a 19 gauge catheter at the L3-L4 interspace. A total of 10 mg of bupivacaine, with fentanyl 25 mcg, was titrated in 2.5 mg increments in 5 to 10 minute intervals resulting in initial level of anesthesia of T8 bilaterally. Five minutes prior to delivery, low dose nitroglycerin infusion was started to maintain mean arterial blood pressure between 60-80 mmHg. Both babies were delivered with Apgar scores of 8 and 9, at 1 and 5 minutes, respectively. Preservative-free morphine, 0.2 mg of was given intrathecally for postoperative pain control. The patient did well in the post-partum period and had a tubal ligation several months after delivery. PPCM is a myocardial disease of a dilative (congestive) nature, which typically presents as heart failure during the last trimester or the first 6 months postpartum. Associated risk factors include multiparity, advanced maternal age, multiple gestation, preeclampsia and gestational hypertension. It has a high risk of recurrence with a mortality rate of 30 to 60% (1). Principles of anesthetic management for these parturients are avoidance of myocardial depressants and cautious fluid management. Continuous spinal anesthesia also appears to offer more hemodynamic stability compared with single dose spinal for cesarean section (2). We believe that CSA has a lower failure rate than epidural analgesia and also provides for lower maternal and umbilical cord blood concentration of local anesthetic (3). Potential disadvantages of this technique include risk of postdural puncture headache (our patient was not a candidate for early ambulation) and cauda equina syndrome (use of larger epidural catheters and avoidance of lidocaine should minimize the problem). CSA is a reliable, rapidly titratable technique, which provides excellent analgesia with minimal undesirable hemodynamic changes for patients with PPCM undergoing Cesarean delivery.

1. *Am J Obstet Gynecol* 176:182-188;1997;

2. *Anaesthesia* 53(2);169-173:1998;

3. *Acta Anaesthesiol Scand* 32;61-66:1988.

	Baseline	After CSA	After NTG	After delivery	End of procedure
HR beats/min	117	116	105	114	105
ABP S/D/M mmHg	136/78/96	119/66/84	97/47/63	104/47/66	129/60/81
PAP S/D/M	80/52/67	57/27/43	44/24/34	41/18/28	32/15/21
CI L/min/m ²	3.8	3.7	3.9	3.1	3.6