



Introduction

The obese parturient is a high-risk patient and the morbidity and mortality is higher in these patients when compared to nonobese patients. As maternal BMI increases, the incidence of concomitant diseases also increase. In the 2000-2002 Confidential Enquiries into Maternal Deaths and Child Health, 35% of all parturients who died were obese.

Case Report

A 33 year old morbidly obese patient G2P0A1 at 39 2/7 weeks was scheduled for induction of labor secondary to Diabetes Mellitus Class B. Her comorbidities included morbid obesity, NIDDM for 8 years, chronic hypertension, and hypothyroidism. Her medications included alomet, labetalol, novolin N and R Insulin.

She was 5'4" tall and weighed 600 lbs, with BMI of 100kg/m². Her airway exam was a Mallampati Class II, thyromental distance >6.5cm, oral opening >3cm, and she had full dentition. The patient requested an epidural for labor pain. It required approximately 30 minutes getting the patient to a sitting position on the side of the bed and subsequent taping of superfluous back tissue laterally to expose the midline. A midline approach at the L3-L4 level using loss of resistance to air was used with a 6-inch 17g Tuohy needle. Loss of resistance to air was found at 12cm. Neither cerebrospinal fluid nor blood was aspirated; a 3ml test dose of lidocaine with epinephrine was given with negative results. The epidural catheter was inserted easily to 20cm, allowing 8cm in the epidural space. The patient tolerated the procedure well; she was given a total of 14 ml of Bupivacaine 0.125% + Fentanyl 2mcg/ml in incremental doses for the initial bolus, and placed on a 10 ml/hr infusion of the same solution. An arterial line was placed due to inaccurate blood pressure readings by the noninvasive blood pressure cuff with ultrasound guidance.

She was comfortable and slept through the night and was snoring. Next morning she delivered a live 3337 gm boy with apgars of 9 at 1 minute and 9 at 5 minutes. On the following day, patient was doing well with no headache or back pain and stable vital signs.



Discussion

Obesity is implicated as a direct cause in the development of disease in many organ systems and therefore significant comorbidities associated with obesity are hypertension, coronary artery disease, restrictive lung disease, obstructive sleep apnea, pulmonary hypertension, diabetes mellitus and fatty liver disease¹.

There is also a high incidence of difficult labor with increased likelihood of instrumental delivery and post partum hemorrhage, conditions that require immediate anesthetic intervention. Morbidly obese parturients are at increased risk for anesthesia-related morbidity and mortality during cesarean delivery and increased risk for failed intubation and gastric aspiration during procedures that involve general anesthesia².

Blood pressure monitoring is problematic in morbidly obese patients. We decided to place an arterial catheter for accurate BP monitoring when the patient was in active labor. Due to technical difficulties in placing the arterial catheter, we opted to place it with ultrasound guidance which was successful.

Successful placement of neuraxial anesthesia is technically more challenging in morbidly obese patients. Early placement of epidural catheter is recommended in these patients. Any epidural catheter with questionable efficacy should be replaced promptly³. We replaced our first epidural catheter as soon as we realized that we did not have a good block. The epidural catheter should be inserted at least 5cm into the epidural space to prevent dislodgement of the catheter. We placed 8cm of catheter in the epidural space and the patient had good analgesia throughout her labor.

Conclusion

Morbid obesity in pregnancy is a growing problem and has a significant impact on maternal morbidity and mortality. Early preoperative assessment, epidural insertion, and replacement for failed regional analgesia are advocated to decrease potential complications.

The anesthesiologist needs to anticipate difficulties during labor and cesarean section and must formulate a plan. Communication with the obstetric team is very crucial and every effort should be made to provide the best possible outcome for the morbidly obese parturient and the fetus⁴. Our patient had a normal spontaneous vaginal delivery and was discharged home on the first postoperative day without any complications.

References

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