

Incidental Hypoglycemia with Suspected High Spinal in a Case for Emergency Caesarian

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ABSTRACT

Spinal anaesthesia is a suitable choice for emergency LSCS (lower segment caesarian section). High spinal is common in parturients. We report a case of 25-year-old primigravida with cephalo pelvic disproportion coming for emergency LSCS with no comorbidities. The patient became unresponsive after 5 min of Sub Arachnoid Block (SAB), managed as a case of high spinal. Still the patient remained unresponsive at the end of surgery, 50 min after SAB. Patient started responding to oral commands after correction of hypoglycemia with 25% dextrose infusion.

Keywords: Anaesthesia, High sub arachnoid block, Low blood sugars, Pregnancy

CASE REPORT

A 25-year-old primigravida with 39 wk gestation of height 152 cms weighing 55 kgs was posted for LSCS in view of Cephalo pelvic disproportion (CPD). She was nil by mouth for 10 h. On physical examination patient was moderately built and nourished, pale with alopecia and buck tooth. Patient gives history of fever in childhood at the age of 10 y with loss of hair. Examination of respiratory, cardiovascular and central nervous system revealed no abnormalities, including Investigations (Her blood sugars were normal).

After taking informed consent, Spinal anaesthesia was planned for this patient. Monitors were connected and baseline vitals recorded. Spinal anaesthesia was induced with 2ml (10 mg) hyperbaric bupivacaine 0.5% with a 25 G spinal needle in L2-L3 interspace in sitting position. A wedge was given to right buttock and 10 degree head up was given. Sensory and motor block was adequate for surgery. Within 5 min patient became drowsy not responding to oral commands associated with sweating. As the patient was not responding, high spinal was suspected. Oxygen was administered with assisted ventilation. As it was an emergency LSCS surgery was continued with 100% oxygen throughout the surgical period. Baby extracted after 9 mins cried immediately after birth. Surgery was uneventful with no intraoperative hypotension or bradycardia. Patient was still drowsy, not responding to oral commands after closure of abdomen, after 50 min of Spinal anaesthesia and the level could not be assessed. As the patient had a episode of preoperative hypoglycemia, blood glucose level was checked and it was found to be 50mg/dl. Fifty ml of 25% Dextrose was infused after which the patient started responding to oral commands. There were no further episodes of hypoglycemia postoperatively.

DISCUSSION

High or complete spinal block is a known complication of spinal anaesthesia. Pregnant women demonstrate increased sensitivity to both regional and general anesthetics. From early stages when neuraxial anaesthesia is administered, pregnant women require less local anaesthetic than non-pregnant women do to reach a given dermatomal sensory level [1].

As high spinal is common in parturients, when the patient became unresponsive she was managed as a case of high spinal with 100%

oxygen supplementation with assisted ventilation. As she remained unresponsive after the end of surgery other reasons were sought for her unresponsiveness.

Pregnant women are more prone for fasting hypoglycemia as there is continuous glucose utilization by the fetus that exaggerates the metabolic consequences of starvation [2].

Symptoms of hypoglycemia are typically categorized as neurogenic and neuroglycopenic. Neurogenic symptoms like anxiety, sweating, hunger, tingling sensation stem from the physiological changes that result in activation of the autonomic nervous system during hypoglycemia. Neuroglycopenic symptoms like confusion, tiredness, drowsiness and coma result from the brain's deprivation of glucose during hypoglycemia. The neurogenic symptoms develop at a higher threshold {at a plasma glucose concentration of approximately 58 mg/ dL(3.2 mmol/l)} while neuroglycopenic symptoms and decline in cognitive function tests develop at significantly lower plasma glucose thresholds, approximately 51 and 49 mg/dL (2.8 and 2.7 mmol/l), respectively [3]. Hypoglycemia is treated by intravenous glucose (25g) followed by a glucose infusion guided by serial plasma glucose measurements [4].

In one study by GH Movaseghi, 150 parturients were studied with Lidocaine spinal anaesthesia and serum Glucose levels showed a decrease in values compared to preoperative recordings [5].

One case report by Crites J showed hypoglycaemia in a parturient with pre-existing type-2 diabetes mellitus after induction of a combined spinal-epidural (CSE) technique for labour analgesia [6].

With onset of labor pains blood sugars may increase because of increased release of cortisol and epinephrine, as the labor progresses there may be hypoglycemia and with pain relief with Neuraxial blockade significant decrease in catecholamine levels may prevent raise in blood glucose [7-9].

In our patient as she was not a known Diabetic and symptoms could have been masked by High spinal, we thought about hypoglycemia later as our primary concern was treating the effects of High spinal.

CONCLUSION

Hypoglycemia should be kept in mind as a Differential Diagnosis in this sort of presentations where high spinal was suspected and should be promptly treated.

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