

Anesthesia for emergency lower segment caesarian section in a patient with short stature¹Dr.Shradha Yogish Shetty, Junior Resident, A.J. Institute of Medical Science and Research center, Mangalore, India²Dr.Gurudutt S Rao, Professor, A.J. Institute of Medical Science and Research center, Mangalore, India³Dr.Ranjana Karanth, Junior Resident, A.J. Institute of Medical Science and Research center, Mangalore, India**Corresponding Author:** Dr. Shradha Yogish Shetty, Junior Resident, A.J. Institute of Medical Science and Research center, Mangalore, India**How to citation this article:** Dr.Shradha Yogish Shetty, Dr.Gurudutt S Rao, Dr. Ranjana Karanth, “Anesthesia for emergency lower segment caesarian section in a patient with short stature”, IJMACR- May – June - 2021, Vol – 4, Issue - 3, P. No. 184 – 186.**Copyright:** © 2021, Dr. Shradha Yogish Shetty, et al. This is an open access journal and article distributed under the terms of the creative commons attribution noncommercial License 4.0. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Case Report**Conflicts of Interest:** Nil**Introduction**

Short stature or Dwarfism is defined as height less than 145cm in male and less than 135cm in female. Short stature parturient undergoes caesarian section due to cephalopelvic disproportion or due to contracted pelvis. Caesarian section under spinal anesthesia is preferred over general anesthesia due to lesser maternal mortality rates.

Case report

29-year-old multigravida with 38 weeks and 4 days of gestational age presented in labor to the ER. On examination she was found to be short stature with the height of 131cm and weight 51kg. She appeared to have proportionate dwarfism with normal intelligence. She was diagnosed with hypothyroidism 10 years back and was treated with Tab. Levothyroxine. Currently on Tab. Levothyroxine 100mcg once daily. She had not been evaluated for short stature. She had undergone elective LSCS 4 years back in view of contracted pelvis under spinal anesthesia.

Emergency blood investigations was sought and were found to be within normal limits. Rapid antigen testing for Covid 19 was done and was reported to be negative. On examination of airway patient was found to be MP-2 with normal extension of neck and other parameter within the normal limits. Spine examination revealed a mild lumbar scoliosis. NPO status was 2 hours for both solid and liquid food.

Written informed risk consent was obtained. Premeditated with i.v. pantaprazole 40mg and i.v. metachlorpramide 10mg.

Patient was shifted to the OR, all non-invasive monitors connected. The patient was put in sitting position for spinal anesthesia. Using 25G Quincke Babcock spinal needle, subarachnoid space identified in the L3-L4 space with free flow of CSF following a single attempt. 1.5cc of 0.5% heavy bupivacaine with 20mcg fentanyl injected into the subarachnoid space. Patient immediately made to lie supine with a left uterine displacement using a wedge.

Block level was assessed and was found to be T4. Hypotension managed with i.v. fluids and vasopressor – Ephedrine.

Oxytocin was administered according to protocol after delivery of fetus. APGAR score of the infant was found to be normal. Urine output was monitored. The procedure lasted for 30 minutes. Following this the patient was shifted to post-operative unit for further monitoring. Block level was reassessed and was found to be T6. No perioperative or post-operative complications were noted and the patient was discharged 3 days following the surgery.

Discussion

The link between maternal anthropometric parameters, particularly maternal weight status and pregnancy weight growth, and pregnancy outcome is extensively recognized. Short maternal stature, in particular, has been linked to negative pregnancy outcomes, such as high incidence of low-birth-weight babies and low APGAR scores.^[1] In addition, maternal height has been identified as an obstetric risk factor, as short maternal height has been linked to cephalo-pelvic disproportion (CPD), which can lead to obstructed labor.^[1]

The anesthesiologist faces a problem during spinal and GA procedures because of the physiological changes that occur during pregnancy. The amount of volatile anesthetic required is lowered by 28–30%.^[2]

Difficult airway, medication overdose, risk of intraoperative and postoperative pulmonary complications, risk of neck injury, and cardiovascular compromise such as pulmonary hypertensive crisis, acute heart failure, and perioperative MI are some of the difficulties encountered during general anesthesia.^[3] Because a normal-sized foetal head fails to engage in the tiny pelvic inlet, the uterus remains a completely

intraabdominal organ. As a result, diaphragmatic splinting ensues, resulting in even more FRC reduction and severe aortocaval compression.^[4]

There can be difficulties in situating and identifying anatomical landmarks with neuraxial anesthesia, as well as unanticipated usage of local anesthetic drug diffusion (high spinal or whole spinal) and block failure.^[3] Epidural vein engorgement reduces the amount of accessible cerebrospinal fluid, allowing injectates to distribute further into the subarachnoid area.^[2]

Combination spinal epidural anesthesia is the most common anesthetic therapy for caesarean section. However, in individuals with considerable physical anomalies, such as severe lumbar lordosis, spinal deformity, and possible cord compression, it may be technically challenging to perform. Furthermore, due to a lack of X-ray evaluation, which is not frequently advised for pregnant patients, the danger of intrathecal anesthesia for pregnant women with dwarfism is significant. As a result, determining the degree of a spinal abnormality can be challenging.^[5]

For our patient we decided on spinal anesthesia due to lack of NPO status and previous history of LSCS under spinal anesthesia. Dose of heavy bupivacaine was adjusted by reviewing multiple literature to 0.06mg/cm of height. Adequate neuraxial block was achieved and hemodynamic parameters remained fairly normal. Hypothyroidism and dwarfism are possibilities that should be studied further.

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