



## 40 YEARS OLD FEMALE GRAVIDA 2 WITH POG 38 WEEKS WITH PREECLAMPSIA WITH FHS 146 BPM POSTED FOR CAESAREAN SECTION UNDER REGIONAL ANAESTHESIA

### Anaesthesiology

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### ABSTRACT

Pregnancy induced hypertension is a hypertensive disorder, which occurs in 5% to 7% of all pregnancies. These parturients present to the labour and delivery unit ranging from gestational hypertension to HELLP syndrome. It is essential to understand the various clinical conditions that may mimic preeclampsia and the urgency of cesarean delivery, which may improve perinatal outcome. The administration of general anaesthesia (GA) increases morbidity and mortality in both mother and baby. The provision of regional anaesthesia when possible maintains uteroplacental blood flow, avoids the complications with GA, improves maternal and neonatal outcome. We report here in 40 years old female gravida 2 with POG 38 weeks with preeclampsia with FHS 146 bpm posted for Caesarean section under regional anaesthesia.

### KEYWORDS

Hypertension, HELLP, Anaesthesia, GA

### INTRODUCTION

Preeclampsia is a hypertensive disorder of gestation, complicating 5% to 7% of all pregnancies. It is characterized by new onset of hypertension ( $\geq 140/90$  mmHg) and proteinuria that develops after 20 weeks of gestation and usually resolves within 48 h of fetal delivery. It can progress to a severe form in 25% of parturients when it is undiagnosed or untreated. It increases both maternal and fetal morbidity with the occurrence of eclampsia in 0.04-0.05% of the affected parturients with an estimated annual mortality rate of 50,000 parturients with preeclampsia world-wide. Parturients with pregnancy induced hypertension may present to the labor and delivery unit with or without a prior diagnosis of preeclampsia and may pose a significant anesthetic challenge. The administration of general anaesthesia (GA) in such high risk parturients may cause exaggerated cardiovascular response to intubation leading to cerebral hemorrhage and edema, cardiovascular decompensation causing pulmonary edema; thereby increasing morbidity and mortality in both mother and child. Similarly, an exaggerated pressor response to intubation may increase the maternal plasma catecholamine concentration, which in turn impairs the uteroplacental blood flow.<sup>(1)</sup>

The administration of regional anaesthesia (RA) not only avoids the maternal complications with GA like difficult intubation, vasopressor response to intubation, but also improves uteroplacental blood flow and neonatal outcome. This review places emphasis on the regional anaesthetic considerations in such parturients presenting to the antenatal wards.

### Case Report

We report here in a case of 40 years old female with gravida 2 with amenorrhea 9 months with POG 38 weeks with FHS 146 bpm with high BP recordings i.e 160/110 mmhg on two occasions in a single day for caesarean section despite of taking antihypertensive drugs since 7 month of pregnancy. No history of headache, blurring of vision, pain in epigastrium, tightening of rings, swelling of feet. Previous normal vaginal delivery 7 years ago. Cardiorespiratory system examination and all blood and urine investigations were normal. Airway assessment done. Before taking pt in OT fresh written informed consent was taken explaining anaesthesia risk and difficult airway cart was prepared. Anaesthetic plan decided for spinal anaesthesia with adjuvant. Patient taken in OT table under ambient room temperature, standard monitoring attached, iv line secured and iv fluid started. Patient lying in left lateral position painting with betadine done for 3 min then cleaned with spirit to maintain asepsis. 26 gauge Quinckes needle inserted in L4-L5 intervertebral space and free flow of cerebrospinal fluid noted and then bupivacaine 0.5% heavy 2 c.c + inj. Fentanyl 25 mcg given. Sensory and motor blockade level until T4 achieved and surgery followed. Injection oxytocin infusion started 10IU in 500 ml after delivery of baby. Intraoperatively patient remained hemodynamically stable and surgery uneventful. Patient was shifted to PACU and postoperative period remain uneventful.

### DISCUSSION

Spinal anaesthesia is a generally preferred anaesthetic technique as it is simple to perform; it provides rapid onset and a dense block. It also

provides excellent post-operative analgesia when intrathecal opioids are used. It has no effect on Apgar scores and umbilical artery pH in preeclampsia as long as the systolic blood pressure is maintained greater than 80% or more of the baseline. The incidence of spinal induced hypotension and the vasopressor requirement were found to be two times lower in preeclamptic parturients when compared with normal parturients undergoing CS delivery. The increased production of circulating factors with potent pressor effect and the increased sensitivity to vasopressor drugs in preeclampsia along with the use of hyperbaric bupivacaine (8-12 mg) with opioids could decrease the spinal induced hypotension in preeclamptic parturients. Cardiac output monitoring after spinal anaesthesia has shown that neither spinal anaesthesia nor the use of phenylephrine to treat hypotension reduce cardiac output during CS delivery, further supporting its safety in preeclamptic parturients.

Continuous spinal anaesthesia offers the flexibility of titration of local anaesthetic agents in small aliquots; thus, graded sympathetic block could be achieved with a lower degree of sympathectomy in these parturients. However, the higher rate of infection, injury to nerve roots, postdural puncture headache and technical difficulty are potential pitfalls and this technique is not frequently used.<sup>(1-6)</sup>

### CONCLUSION

Parturients with mild preeclampsia may safely undergo regional anaesthetic procedures for labor analgesia and CS delivery. A thorough evaluation to detect underlying coagulopathy or thrombocytopenia is essential prior to considering regional anaesthetic procedures in severe preeclamptic parturients.

### Conflict Of Interest-nil

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