

# Anesthetic Monitoring of Preeclampsia

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## Abstract

**Background:** Preeclampsia is prevalent in 3%-7% of pregnant women globally. The etiology is multifactorial. A pregnant women with preeclampsia presenting with an indication of caesarean section, is an anesthetic challenge. There is an increase in blood volume by 40% after 20 weeks of pregnancy. This can result in severe hypertension in a non-pregnant individual but still blood pressure decreases in second trimester of pregnancy. This happens because of decreased peripheral vascular resistance and increased venous capacitance. If the vascular system is non-resilient and the vessel walls still maintain their stiffness and elastic recoil; pregnancy induced hypertension can result. There is general organ hypo perfusion in severe preeclampsia. The anesthetic challenges are an edematous airway, cardio circulatory dysfunction, dysfunction of cerebro-vascular system and the exaggerated coagulopathy.

**Aims and objectives:** Preeclampsia is a common cause of maternal mortality and morbidity. The etiology is unknown though a lot is known about its pathophysiology. The cardiovascular, pulmonary and cerebral change of severe preeclampsia needs to consider while administering spinal, epidural or general anesthesia. Hypotensive drugs and anesthetic monitoring need special care in severe preeclampsia. This study was designed to assess the effectiveness and safety of epidural and spinal anesthesia in pregnant women with preeclampsia.

**Methods:** It is an ex post facto quasi experimental study to evaluate the effectiveness of spinal anesthesia, epidural anesthesia and general anesthesia in reducing pain severity in cesarean section in preeclampsia. (G1=30, G2=32, G3=31). Pregnant women at term with preeclampsia with chronic hypertension, diabetes, renal disease, anemia and coagulopathy were excluded from the study after a detailed pre-anesthetic assessment.

**Observations and results:** There was a significant improvement in pain scores in epidural anesthesia group as compared with spinal anesthesia group and general anesthesia group.

**Conclusion:** In pregnant women with preeclampsia spinal and epidural anesthesia can be useful during caesarean section. Epidural anesthesia in properly indicated cases provides safe and effective pain relief.

**Keywords:** Anesthesia • Caesarean Section • Hypertension • Preeclampsia • Pregnancy

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