Case Report

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Postpartum Eclampsia - Anaesthetic Challenges

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Abstract

Managing a patient with eclampsia for caesarean section is an anaesthetic challenge. Most of the time the patients present for emergency caesarean section. We are reporting two case reports of eclampsia. First patient with eclampsia was referred from primary health centre. Cesarean section was uneventful under spinal anesthesia but patient had multiple seizures in the postoperative period. Patient was managed in the ICU and was discharged on the 7th postoperative period. Second patient was given general anesthesia and was electively ventilated in the ICU.

Keywords: Postpartum, Eclampsia, Challenges.

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Introduction

Eclampsia is a multisystem disorder which is characterized by the occurrence of generalised convulsions during labor or within 7 days of delivery not caused by epilepsy or other convulsive disorders.[1]

It is one of the commonest cause of perinatal maternal and fetal mortality and morbidity in India. We are presenting two case reports of patients with eclampsia for caesarean section. In the first case spinal anesthesia was given for caesarean section but patient had seizures in the immediate postoperative period which was managed by endotracheal intubation and elective ventilation in the ICU.

After experience from the first case, we have managed many more patients with eclampsia for caesarean section under general anesthesia. All the patients were electively ventilated in the ICU. We are presenting case report of similar case.

Case Report 1

20 years old primigravida with full term pregnancy with history of two episodes of convulsions was referred to our hospital. On examination, Patient was drowsy, had pedal edema, pulse rate was 100/ min ,noninvasive blood pressure was 160 / 120 mmHg, urine examination showed urinary albumin +++. Diagnosis of Antepartum eclampsia was made. Inj labetalol 20 mg was given intravenously. Patient was taken up for emergency LSCS. Patient was taking treatment from private hospital and was diagnosed as PIH. Patient received tab methyldopa 500mg and oral nifedipine. when she had seizures, she received loading dose of Mgso4 4gm followed by 5gm in each buttock before being reffered to our hospital. Her baseline investigations were within normal limits.

Preanesthetic checkup was done. Pt was drowsy but was responding to verbal commands. On asking about her name she responded well. So it was decided to give spinal anestheisa. P atient was shifted to operation theatre, monitors were attached to monitor ECG, heart rate, NiBp, Spo2 and O2 by face mask was given at 5 L/min. Patient was positioned in lateral position and under all aseptic precautions subarachnoid block was given with 25 G spinal needle at L3 – L4 space . 1.8 ml of 0.5 % bupivacaine heavy with 25 µg fentanyl was given intrathecally. T6 sensory level was achieved. Adequate sensory and motor blockade was achieved. Male baby weighing 2.8 kg was delivered with apgar score of 8/10, 9/10, 9/10. Injection oxytocin infusion was given for contraction of uterus. Injection Midazolam was given after delivery of baby and injection ondansetron was given to prevent nausea and vomiting. Patient was continuously monitored for blood pressure, heart rate, ECG and seizures. Intraoperatively, systolic blood pressure was between 130- 160 mmHg, diastolic blood pressure was between 84- 96 mmHg. SPO2 was 100 %. ECG showed normal sinus rhythm. Uterus was well contracted. After the surgery, patient was shifted to ICU for further observation. Monitor was attached to monitor ECG, heart rate noninvasive blood pressure, oxygen saturation. After one hour, the blood pressure started to rise, systolic blood pressure went upto 180 mmHg, diastolic blood pressure was 120 mmHg. Injection labetalol 20 mg was given as bolus intravenously. There was no respone to labetalol and blood pressure increased to 180/ 120 mmHg. Another bolus of injection labetalol 20 mg was given. Patient had repeated

episodes of convulsion. Immediately, airway was secured after giving injection propofol 100mg and injection suxamethonium 100mg intravenously. Trachea was intubated with no 7 mm endotracheal cuffed tube and fixed at 18 cm mark after confirming equal bilateral air entry. Patient was put on ventilatory support on SIMV tidal volume 500 ml, Respiratory rate of 12, fio2 0.5 . Non invasive blood pressure was persistently high with systolic blood pressure of more than 180 mmHg and diastolic blood pressure of more than 120 mmHg. Patient was sedated with injection midazolam 2mg /hr and paralysed with injection vecuronium 2mh/ hr. injection magnesium sulphate infusion was started at 1 gm/hr. Injection nitroglycerine infusion was started at 5 µg /kg /min to control the blood pressure. Right internal jugular vein was cannulated and triple lumen CVP line was inserted. CVP guided intravenous fluid was given to prevent pulmonary edema. Urine output was monitored. On the second day, patients blood pressure again started to rise, with systolic blood pressure of 170 mmHg and diastolic blood pressure of 110 mmHg. Patient was on infusions of injection fentanyl, inj midazolam and NTG. Ryles tube was inserted and oral antihypertensive was also started. Tablet Amlodepin 5 mg 12 hourly and tablet telmsartan 40 mg OD was started. Magnesium sulphate infusion was stopped after 24 hours. On the third day of ICU stay, Patient's blood pressure was still on the higher side with systolic blood pressure of 160 mmHg and diastolic blood pressure of 120 mmHg. Injection nitroglycerine infusion was stopped and inj labetalol infusion was started. At 5mg /hr. Patient responded to injection labetalol infusion along amlodepin and telmisartan which was given through ryles tube. Blood pressure was systolic of 122 mmHg abd diastolic of 74 mmHg. On the fourth day, injection fentanyl and midazolam was stopped. Patient was conscious and oriented obeying verbal commands. Her blood pressure was systolic of 130 -140 mmHg and diastolic of 80-90 mmHg. Patient was gradually weaned off from ventilatory support and trachea was extubated after the patient tolerated T- piece trial. On the fifth day, labetalol infusion was stopped and patient was started on oral antihypertensives. She received tablet amlodepin 5mg BD, tablet telmisartan 40 BD, Tab Prazosin 5mg Hs and Tablet labetalol 100mg BD. Patient 's blood pressure was controlled on four antihypertensives. On the 7th day patient was shifted to ward. All the investigations were witnin normal limits.

Case Report 2

21 year old primigravida 36 weeks pregnancy presented to the hospital with history of fits at home. On examination, patient was drowsy not responding to verbal commands, her noninvasive blood pressure was 180/110 mmHg. Patient received inj labetalol and inj. Magnesium sulphate preoperatively. Patient was planned for emergency caesarean section. All blood investigations were within normal limits. High risk consent and a consent for postoperative elective ventilation was taken from the relatives. Patient was taken up for caesarean section under general anesthesia. Rapid sequence induction of anesthesia was done with injection propofol and inj suxamethonium. Trachea intubated with cuffed endotracheal tube. Female baby weighing 2.2kg was delivered with Apgar Score of 7,8,8. Baby was resuscitated and shifted to nursery for further observation. Inj Fentanyl was given after delivery of baby. injection oxytocin infusion given after delivery of placenta for contraction of uterus. Injection vecuronium bromide was given for muscle relaxation. Duration of surgery was 30 minutes. Intraoperatively, all the vitals including heart rate, blood pressure, oxygen saturation were within normal limits. Residual neuromuscular blockade was not reversed and patient was shifted to ICU for further management. Patient was electively ventilated for 24 hours, sedated with inj midazolam infusion and inj magnesium sulphate 1gm /hr infusion was given for 24 hours. Injection labetalol was given for control of blood pressure. On 3rd postoperative day , patient was conscious responding to verbal commands , gradually weaned off from ventilatory support and trachea was extubated. Oral labetalol was started . Patient stayed in the ICU for two more days and was monitored and then shifted to ward.

Discussion

Eclampsia is a complex condition which needs immediate management to save both the mother and the baby. Usually the patients present very late and any delay in the management can lead to maternal and fetal morbidity and mortality.[1] The management requires expertise of anesthesiologist and intensive care unit. In an unconscious patient, general anesthesia is preferred for caesarean section as protection of airway is the main concern. The dilemma arises when the patient is drowsy but responding to commands.[3] General anesthesia has its own problems like difficult airway, exaggerated hypertensive response to laryngoscopy and intubation, risk of aspiration pneumonitis and drug interaction between magnesium sulphate and non-depolarizing muscle relaxants.[2] Regional anesthesia seems safer if we try to avoid the pitfalls of general anesthesia but there is always a risk if the patient throws seizures in the intraoperative or the immediate postoperative period as happened in the first case report.

Single shot spinal anesthesia with finer needle is a safer option in conscious eclampsia without coagulopathy.[4,5] Studies have demonstrated benefits of regional anesthesia in stable eclamptic patients. General anesthesia is preferred in patients with coagulopathy, pulmonary edema or in unconscious patients with GCS <9.[6,7]

In case 1, patient had eclampsia at primary health centre where she received inj magnesium sulphate and labetalol. patient was responding to verbal commands and told her name when asked. Her coagulation profile was normal. So spinal anesthesia was given for caesarean section. Patient had seizures in the postoperative period. Immediate management saved the life of patient.

In case 2, patient was drowsy on presentation. so general anesthesia was planned. Patient was electively ventilated in the ICU. Her trachea was extubated after she was fully conscious.

Conclusion

General anesthesia is a safe technique for caesarean section

in eclamptics. If spinal anesthesia is planned, patients should be monitored in the postoperative period. Aggressive management can save the life of patients. All eclamptic patients should be monitored atleast for 24 hours in the intensive care unit.

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