Convulsion on Table in A ASA I Pregnant Patient Posted For Emergency Caesarean Section: Anesthesia Management

Abstract

Convulsions occurring on the operating table in any patient, especially a pregnant patient, can be a nightmare. Initial management with regard to airway, breathing and anticonvulsants remains same. The differential diagnosis include eclampsia, hypoglycaemia, peripartum cerebrovascular thrombosis, subarachnoid haemorrhage, infection, intracranial tumour, head injury, idiopathic epilepsy, vasculitis, amniotic fluid embolism (AFE), etc. MRI brain of our patient revealed posterior reversible encephalopathy syndrome (PRES), a neuro-radiological diagnosis. Management is supportive with anticonvulsants, cerebral decongestants and treating the underlying cause including blood pressure control and early caesarean section. There is a small risk of permanent neurological damage or death.

Keywords: Caesarean section; Convulsions; Posterior reversible encephalopathy syndrome; Eclampsia; Phenytoin

Introduction

Peripartum convulsion can significantly increase both maternal and foetal morbidity and mortality [1]. Any convulsion occurring in a pregnant patient after 20 weeks is always assumed to be eclampsia and treated likewise. Immediate termination of pregnancy is advised only in case of recurrent seizures in labour [1]. But every seizure increases the risk of abrupton and maternal asperation and fetal acidosis, hypoxia, intracranial bleed and death [1]. Other differential diagnosis of peripartum seizure also needs to be ruled out but initial management of convulsion remains airway, breathing and circulation, seizure control and fetal health. We present a case of management of preoperative on table convulsions in an American Society of Anaesthesiologists (ASA) grade I patient posted for emergency caesarean section.

Case Presentation

A 22 year old, G2P1L1 patient with history of one previous caesarean section, was taken for emergency caesarean section for non-reassuring foetal Doppler. Her systemic examination and all her routine blood investigations including complete blood count, renal and liver function test and coagulation profile were normal. In the operating room, her pulse was 56/min, blood pressure 178/108 mm of hg and room air saturation 100%. Left uterine displacement was maintained. Ringer’s lactate was started. Before the patient could be positioned for spinal anaesthesia, patient developed left hand focal convulsion with secondary generalisation which lasted for 2-3 minutes, followed by unconsciousness. Midazolam 1mg was injected. The patient was immediately incubated following rapid sequence induction with thiopentone 250mg and succinylcholine 100mg. Anti-aspiration prophylaxis with ranitidine 50mg and ondansetron 4mg was given. Anaesthesia was maintained with isoflurane 0.8MAC in oxygen: nitrous oxide (50%) and intermittent vecuronium bolus. Her blood sugar level was 81mg/dl. Labetalol 20mg was given for persistent hypertension intra operatively. The baby was delivered in 10 minutes with an Apgar score 9 at 1min. Thereafter fentanyl 100mcg and oxytocin 20U in slow drip were given. The uterus was well contracted and haemostasis achieved. Levetiracetam 500mg was administered. The patient was extubated on table after return of spontaneous ventilation and full consciousness. Patient was shifted to ICU. Hypertension persisted postoperatively which was treated with bolus dose of labetalol 10mg and later shifted to oral alpha-methyladopa 500mg and nifedipine 10mg. The patient had 6 more episodes of generalised tonic clonic convulsions within the next 24 hours. Phenytoin 100mg, mannitol and dexamethasone were added. Postoperative proteinuria was negative. All other postoperative investigations remained normal. Fundoscopy revealed no papilledema. Postoperative MRI brain showed bilateral hyper densities in cerebellar hemispheres, basal ganglia, occipital, parietal, temporal and frontal lobes consistent with posterior reversible encephalopathy syndrome (PRES). She was discharged on day 15 with antihypertensive and anticonvulsant medications.

Discussion

The differential diagnosis of peripartum seizures includes eclampsia, hypoglycaemia, peripartum cerebrovascular
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