

Seizure after a Caesarean Section: an unexpected final diagnosis

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Background:

Seizures in the early post-partum period can be a diagnostic dilemma. Here we present a case of a patient with a seizure four hours post a Caesarean section.

Case:

A 34-year-old now P1 had an emergency Caesarean Section at 35 weeks and 3 days gestation for breech and pre-eclampsia (PET) on the background of essential hypertension and Type 2 Diabetes Mellitus. She was normotensive post-partum. A midwife performing routine observations, witnessed a generalised tonic-clonic seizure lasting four minutes. The Medical Emergency Team and Obstetric team attended. Resuscitation principles were followed, and a loading dose of magnesium sulfate was administered, and eclampsia guidelines adhered to. She had no prior history of seizures. The non-contrast CT Head revealed an old multifocal left MCA territory ischaemic stroke, and her CT Venogram did not reveal a venous sinus thrombosis. MRI Brain and Angiogram revealed likely atherosclerotic disease in M1/M2. Neurology advised the seizure was likely in the setting of structural damage from prior ischaemic stroke with PET lowering seizure threshold.

She was commenced on regular levetiracetam and aspirin, 5 days of clobazam, and the following investigations returned unremarkable: CT angiogram, full young stroke screen, TTE, and EEG. Appropriate Neurology and Obstetric Medicine outpatient follow-up was arranged.

Discussion:

A seizure in the early post-partum period is treated as eclampsia unless proven otherwise with a full work-up for other causes post-acute management. The differential diagnosis includes cerebral venous sinus thrombosis, idiopathic epilepsy, regional anaesthesia complications, metabolic disturbances, trauma, intracranial tumour, and drug withdrawal.¹ This case highlights how seizure presentations can be multifactorial and the importance of a thorough multidisciplinary work-up as it drastically changes short-term and long-term management and affects future pregnancies.

Table 1: Differential diagnosis for postpartum seizures¹

Eclampsia, cerebral venous sinus thrombosis, idiopathic epilepsy, pseudoseizures, intracranial trauma, metabolic disturbances, drug and alcohol withdrawal, trauma, dural puncture, meningoencephalitis, intracranial haemorrhage, cerebral infarction or pneumoencephalus, postdural puncture headache treatments

References:

1. Jamadarkhana S, Law RC. Seizures in the early post-partum period: A diagnostic dilemma. Indian J Anaesth. 2012 Mar;56(2):183-5. doi: 10.4103/0019-5049.96339. PMID: 22701214; PMCID: PMC3371498.