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Case Report

Challenges in managing atypical eclampsia with limited resources: a case report from Yei State hospital, South Sudan

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ABSTRACT

The overlap of symptoms between epilepsy and eclampsia can complicate the diagnosis and management of convulsions in pregnancy, especially in low-resource settings. This case report details the challenges faced in diagnosing and managing a primigravida woman with a known history of epilepsy who presented in labor with an intrauterine fetal demise (IUFD) at Yei State hospital, South Sudan. After two generalized seizures, despite initially normal blood pressure, a diagnosis of atypical eclampsia was made. Life-saving decisions were taken, including emergency cesarean section (CS) under ketamine, highlighting the complexities of managing convulsions during pregnancy in resource-limited environments.

Keywords: Atypical eclampsia, Epilepsy, IUFD, Abruptio placenta, Low-resource setting, CS, South Sudan, Convulsions

INTRODUCTION

Eclampsia, typically defined as the onset of generalized tonic-clonic seizures in women with preeclampsia, complicates approximately 1-2% of pregnancies.[1] The diagnosis can become particularly challenging in patients with pre-existing seizure disorders, such as epilepsy. Eclampsia usually presents with hypertension and proteinuria, but atypical cases where blood pressure and other classic symptoms are initially absent can lead to diagnostic confusion.[2] In resource-limited settings like Yei State hospital, South Sudan, these challenges are compounded by limited diagnostic and therapeutic options. This case report illustrates the diagnostic dilemmas and life-saving interventions made for a woman with epilepsy and atypical eclampsia.

CASE REPORT

A 24-year-old primigravida at 35 weeks of gestation presented at Yei State hospital in labor, reporting one day history of painful uterine contractions and absence of fetal movement for five days. She had attended only one antenatal care (ANC) visit, and on examination, she was found to have an IUFD confirmed by obstetric ultrasound scan. On admission, her vital signs were stable, with a blood pressure of 120/80 mmHg, a pulse rate of 90 beats per minute, and a respiratory rate of 18 breaths per minute. Given the IUFD, labor was induced with 25 mcg of misoprostol. The patient had a known history of epilepsy and was on carbamazepine 200mg for seizure control. Two hours after admission, she experienced a generalized tonic-clonic seizure that lasted for about one minute. Her vital signs, including blood pressure, remained within normal limits (120/80 mmHg), raising immediate diagnostic uncertainty: Was this an epileptic seizure, or was it the onset of eclampsia? Given her epilepsy history, this first seizure was initially attributed to her underlying epilepsy. Given the remoteness of the hospital, there was limitations on investigations like complete blood count, liver function test and renal function test. So only simple investigations like urine dipstick which shows no proteinuria,

hemoglobin estimation which was 10 gm/dl, negative rapid test for HIV and malaria.

However, one hour later, the patient had another generalized tonic-clonic seizure, despite being on carbamazepine. Again, her blood pressure was within normal limits, but the recurrence of seizures in pregnancy raised the suspicion of atypical eclampsia. To prevent further seizures, a loading dose of magnesium sulfate (14 gm) was administered, as it is the standard treatment for seizure control in eclampsia, even when classic symptoms like hypertension are absent. This decision was made despite the ongoing uncertainty about the cause of the seizures. Four hours after the second seizure, the patient complained of severe abdominal pain, and her abdomen was noted to be tense. An urgent ultrasound confirmed the presence of abruptio placenta, and at this time, her blood pressure had spiked to 170/120 mmHg with moderate pallor. With this dramatic increase in blood pressure, the diagnosis of eclampsia became clearer, shifting the clinical picture from confusion between epilepsy and eclampsia to one of atypical eclampsia presenting with an initially normal blood pressure. Abruptio placenta, life-threatening complication often associated with hypertensive disorders in pregnancy, necessitated an emergency CS to save the mother's life since she was remote from vaginal delivery (Cervical dilatation of 2 cm).[3]

In the setting of Yei State hospital, where advanced anesthetic options were unavailable, the only anesthesia available for the emergency CS was ketamine. Despite ketamine's known contraindication in eclampsia due to its potential to increase intracranial pressure and precipitate further seizures, the urgency of the situation left no other choice.[4] The surgery was successfully performed, and a macerated stillborn baby was delivered. Despite the use of ketamine, which could have exacerbated her seizures, the patient remained stable throughout the procedure, with no further convulsions and her uterus saved.

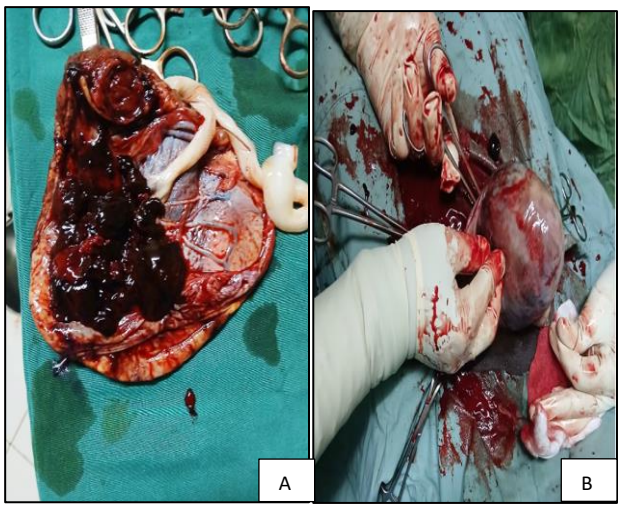

Figure 1 (A and B): Intra-op findings of retroplacental clots and couvelaire uterus of above case.

The patient was closely monitored postoperatively and remained seizure free. Her blood pressure was controlled using antihypertensive medications (IV hydralazine, tablets of nifedipine and methyldopa), and magnesium sulfate was continued for 24 hours as a prophylactic measure against further eclamptic seizures. The patient's epilepsy was managed alongside the eclampsia, and she was discharged after one week in stable condition, with follow-up care arranged for both her epilepsy and hypertension.

DISCUSSION

This case underscores the complexity of managing convulsions in pregnancy when a patient has a pre-existing seizure disorder. The initial presentation of generalized seizures in the context of normal blood pressure and a history of epilepsy led to initial uncertainty about the etiology of the seizures. The lack of elevated blood pressure during the first and second seizures complicated the diagnosis, as eclampsia typically presents with hypertension.[1] However, the occurrence of abruptio placenta and the subsequent rise in blood pressure pointed to a diagnosis of atypical eclampsia, a rare but recognized variant of the condition that can present with normal blood pressure.[2]

The decision to administer magnesium sulfate for seizure control, even in the face of diagnostic uncertainty, proved crucial. Magnesium sulfate is the treatment of choice for eclampsia, and its early administration likely prevented further seizures and complications.[1] This case also highlights the significant challenges faced in low-resource settings, where the lack of alternative anesthetic agents required the use of ketamine despite its risks in eclampsia.[4] In such settings, clinical decision-making must prioritize immediate maternal survival, sometimes at the expense of adhering to ideal treatment protocols.[5]

CONCLUSION

This case report illustrates the diagnostic and management challenges posed by overlapping presentations of epilepsy and eclampsia in pregnancy. The initial confusion due to the patient's normal blood pressure and history of epilepsy delayed the diagnosis of atypical eclampsia. The life-saving interventions, including magnesium sulfate administration and emergency CS under ketamine, underscore the importance of flexible and pragmatic decision-making in resource-limited settings. This case emphasizes the need for heightened awareness of atypical eclampsia and its potential to present without classic symptoms, particularly in women with pre-existing seizure disorders.

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REFERENCES

1. Sibai BM. Diagnosis and management of eclampsia. Obstetr Gynecol. 2005105(2):402-10.
2. Steegers EAP, Von Dadelszen P, Duvekot JJ, Pijnenborg R. Pre-eclampsia. The Lancet. 2010;376(9741):631-44.
3. Lindheimer MD. Hypertensive disorders in pregnancy: Etiology and management. Obstetr Gynecol. 2012;37(2):146-60.
4. Adams HA, Hempelmann G. Ketamine: A review of its use in eclampsia. Brit J Anaesthesia. 1995;74(4):491-7.
5. Duley L. The global impact of pre-eclampsia and eclampsia. Seminars Perinatol. 2009;33(3):130-7.

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