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Conservative Management of Atypical Eclampsia Remote from Term: A Case Report

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Abstract: Except in association with molar or hydropic degeneration of the placenta, with or without a coexistent fetus, eclampsia before 20 weeks of gestation is rare and only few cases have been described. The case reported was that of a 24 year old primipara who had tonic-clonic seizures at 19 weeks gestation without prior Preeclampsia. She remained stable and was managed closely up to 36 weeks gestation. She had spontaneous vaginal delivery of a live baby at 38 weeks with good outcome. Atypical eclampsia may develop before 20 weeks of gestation and could pose serious management challenges. Such patients if carefully selected and closely monitored may have satisfactory outcome. This case deserves reporting because of its rare nature as several literature search did not reveal any reported case of eclampsia before 20 weeks that was successfully managed to term.

Keywords: Atypical eclampsia; Expectant; Eemote; Preterm: North-east Nigeria.

1. Introduction

The diagnosis of eclampsia is certain in the presence of hypertension, proteinuria, and convulsions in the second half of pregnancy [1]. However, women with eclampsia develop a wide spectrum of signs, ranging from severe hypertension, severe proteinuria, and generalized oedema to absent or minimal hypertension, no proteinuria, and no oedema [1]. About 1.5% of eclampsia cases occur at less than 20 weeks of gestation [1]. Also, proteinuria has been found to be absent in 14% of those with Eclampsia [1]. The term 'atypical eclampsia' is therefore used for occurrence of eclampsia before 20 weeks of gestation, after 48 hours postpartum or in the absence of hypertension and/or proteinuria [2].

Eclampsia before 20 weeks of gestation has usually been reported with molar or hydropic degeneration of the placenta, with or without a coexistent fetus [1, 3]. Eclampsia occurring during this period without molar degeneration of the placenta (atypical eclampsia) is rare and only few cases have been described [1, 3]. Although the management of such patients is challenging, they have less morbidity and mortality [4].

The aim of this report is to present a case of atypical eclampsia remote from term managed at the University of Maiduguri Teaching Hospital, Maiduguri, Nigeria.

2. Case Report

A 24 year old G₄P₁⁺ 1 alive presented at 19 weeks' gestation with a 10 hour history of convulsions. She had five episodes of the seizures which were tonic clonic, each lasting about one minute and associated with frothing of mouth. There was preceding headache which appeared to be severe by her account. There were no visual changes or epigastric pains. She had no previous history of hypertension, diabetes mellitus or epilepsy. Her previous pregnancies were not complicated by hypertension and there was no family history of hypertension. Although she was yet to register for antenatal care, the pregnancy had been uneventful before the seizure.

On examination, she was fully conscious and calm at presentation. She was not pale or jaundiced. There was no pedal oedema. Her pulse was 96 beats per minute and blood pressure was 110/80 mmHg. The weight was 57 kg. Her

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lung fields were clinically clear. The abdomen was full and non tender. The uterus was 20 weeks' gestational size. Vaginal examination revealed a closed cervix that was 2 cm long, firm and central. Urinalysis was negative for protein and glucose. The bedside clotting time was 8 minutes. A clinical diagnosis of atypical eclampsia was made. She was counselled on the management and the risk of continuing with the pregnancy. Blood sample was taken for investigations. Results of investigations were: Packed Cell Volume 35%, Absolute platelets $138 \times 10^9/L$, WBC $6.8 \times 10^9/L$, serum uric acid 273mmol/L, serum creatinine 60 μ mol/L, Aspartate amino transaminase (ASAT) 12 IU/L, Alanine amino transaminase (ALAT) 12 IU/L and Alkaline phosphatase 27 IU/L. There were no features of haemolysis on blood film microscopy and the clotting profiles were normal. Abdominal ultrasound revealed a live singleton fetus at gestational age of 19 weeks and normal sized kidneys with good corticomedullary differentiation.

Magnesium sulphate was administered using Pritchard regimen and she was admitted to the ward for further management. Her condition was stable on admission. There was no history of headache, visual disturbances, epigastric pains or repeat convulsions. Daily urinalysis was negative for protein and there was no excessive weight gain. The blood pressure remained normal and serial renal and liver function tests, absolute platelet count, full blood counts and abdominal ultrasound for fetal wellbeing were normal. She spent 2 weeks on admission. She was registered for antenatal care while on admission. The plan was to keep her until delivery but she insisted on discharge. She was discharged home but advised to return to the hospital if she develops any symptom, and keep to weekly antenatal booking clinic visit.

She had eight antenatal follow-up visits, and on 2 occasions- at 30 and 31 weeks, her blood pressure was 130/90 mmHg and 110/90 mmHg respectively. There were no symptoms although repeat investigations were requested. On two occasions, she complained of headaches which were similar to the one she had before the seizures. She was then given tablets of Phenobarbitone 30mg three times a day.

She relocated to a neighbouring state during the heat of Boko Haram crisis in Borno state where she had vaginal delivery of a live female neonate at 38 weeks gestation, in a General hospital. The labour was said to have lasted for 9 hours without intrapartum or immediate postpartum complications. She returned to our hospital for postnatal clinic follow up at 8 weeks postpartum. She had no complaint and her blood pressure was 110/60 mmHg. The baby weighed 4.3 kg. She was counselled on exclusive breastfeeding, baby's immunization and contraception for child spacing.

At present she is carrying her fifth pregnancy.

3. Discussion

A search of the literature revealed very few published case reports of pre-eclampsia and eclampsia before 20 weeks of gestation [3, 5-9]. Eclampsia occurring before 20 weeks of gestation has usually been reported with molar or hydropic degeneration of the placenta, with or without a coexistent fetus [3]. The case presented was not only rare but unique in that no known aetiological or predisposing factor could be identified despite clinical evaluation and limited investigations.

Pre-eclampsia which infrequently leads to eclampsia, is a multi-system disorder and the organ system which is predominantly affected cannot be predicted beforehand [4]. Our patient developed eclampsia without preceding hypertension or proteinuria. In a series of 399 women with eclampsia studied by Sibai [1] substantial proteinuria ($\geq 3+$ on dipstick) was present in only 48% of the cases, whereas proteinuria was absent in 14% of the cases. Similarly hypertension has been found to be absent in 16% of cases of eclampsia [1]. This atypical "non-hypertensive, non-proteinuric" eclampsia seen in our patient has brought to the fore the argument that the term 'pre-eclampsia' is misleading [10]. In classic cases, the disease usually involves the arteries and kidneys first, manifesting as hypertension and proteinuria before other organ systems are involved. In atypical cases, however, the organ involvement may start with other systems, such as cerebral involvement, which presents initially as eclampsia [10], as seen in the patient presented who had preceding headache followed by seizure.

Several differential diagnoses were considered in the patient presented particularly because of absence of hypertension and proteinuria. These diagnoses included cerebrovascular accidents, hypertensive encephalopathy, seizure disorders, metabolic diseases and previously undiagnosed brain tumour. Although there were limitations in carrying out some of the imaging procedures because of financial constraints from the patients, the absence of prolonged coma, focal neurologic deficits, abnormal renal and liver function tests together with absence of previous or family history of hypertension, seizure disorders or connective tissue disorders helped in ruling out some of these differential diagnoses. With 69% of people living in abject poverty in North-eastern Nigeria [11] where the case was reported, reliance on clinical features and minimum useful and cost-effective investigations to arrive at diagnosis of common clinical conditions is the norm, more so that eclampsia is the commonest cause of maternal mortality in Maiduguri [12].

The management of eclampsia involves resuscitation, prevention of recurrent seizures, control of blood pressure and delivery of the fetus [1]. Because of the relative rarity of atypical eclampsia, its management poses daunting clinical challenges [13]. Such patients with atypical eclampsia are also said to have less morbidity and mortality [4]. Our patient was managed expectantly with good outcome. Magnesium sulphate was given to prevent further seizure and after discharge from admission on request, she was seen at follow up clinic more frequently. Regular screening through history-taking, blood pressure monitoring, urinary protein estimation, renal and liver function tests and fetal surveillance was intensified so as to intervene early in case of any complications.

A case of atypical eclampsia at 16 weeks of gestation was reported by Hazra, *et al.* [14] who managed the patient expectantly but had to terminate the pregnancy at 17 weeks because of maternal deteriorating condition. Our case was carried to term because she suffered no complications that would warrant termination of the pregnancy.

If the patient had returned to our facility for delivery, gross and histopathological examination of the placenta would have been undertaken. Pathological features that would have strengthened the diagnosis of eclampsia include placental infarcts, calcification, villous lesions such as cytotrophoblastic cell proliferation, thickening of villous basement membrane and paucity of vasculosyncytial membranes [15].

In conclusion, patients with atypical eclampsia, even remote from term, if properly selected and carefully monitored may have satisfactory outcome.

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