

ORIGINAL ARTICLE

Maternal and fetal outcome of anaesthesia for caesarean delivery in preeclampsia/eclampsia in Enugu, Nigeria: a retrospective observational study

U. V. Okafor, O. Okezie

Departments of Anaesthesia and Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu, Nigeria

Background: Maternal mortality, for which preeclampsia is a major cause, is a problem in Nigeria. Accurate data are available for caesarean sections in the University of Nigeria Teaching Hospital, Enugu. We therefore studied the outcome of caesarean section among these high-risk patients.

Method: We conducted a retrospective survey of hospital records of patients with preeclampsia/eclampsia who had caesarean delivery in this unit over a four-year span from July 1998 to June 2002.

Results: There were 3926 deliveries and 4036 births (3611 live births), with 898 women (23%) delivered by caesarean section. Of these, 125 (14%) had preeclampsia/eclampsia, 103 (82.4%) presenting for emergency caesarean delivery and 22 (17.6%) elective. General anaesthesia was used in 116 patients (92.8%) and spinal in nine. The major indications for surgery were severe preeclampsia/eclampsia in patients with unfavourable cervix (68%), fetal distress/intrauterine growth restriction (7.2%) and previous caesarean section (6.4%). There were six maternal deaths, all with general anaesthesia, giving a case fatality rate of 5.2% of general anaesthetics or 4.8% of caesarean deliveries. The cause of death was anaesthetic in three patients, cerebrovascular accident and pulmonary oedema in two and intraoperative haemorrhage in one. There were 13 stillbirths and 10 neonatal deaths.

Conclusion: Maternal and fetal mortality were high. Poverty, late presentation, lack of equipment and inexperienced management were major contributory factors. Use of spinal anaesthesia should be encouraged in view of recent favourable reviews and cheaper cost.

© 2004 Elsevier Ltd. All rights reserved.

Keywords: Preeclampsia; Eclampsia; Caesarean section; Mortality; Nigeria

INTRODUCTION

Preeclampsia is defined as proteinuric hypertension developing after the 20th week of pregnancy and regressing after delivery.¹ Preeclampsia is a disorder unique to human pregnancy and may involve the maternal cardiovascular, renal, coagulation and hepatic systems and is associated with increased fetal mortality and morbidity. It occurs in 5–10% of all pregnancies.² Both severe preeclampsia and eclampsia can seriously endanger the life

of both mother and fetus and may account for up to 80% of maternal deaths in some parts of the developing world.³ The leading causes of maternal mortality in Nigeria depend on cultural and socio-demographic patterns, and as there is no national database on maternal mortality, estimates are not precise.

In parts of southern Nigeria the main causes of maternal mortality are obstetric haemorrhage, sepsis, obstructed labour and eclampsia^{4–6} and in the North they are eclampsia, obstetric haemorrhage and anaemia.^{7,8} Nigeria, with 37 000 maternal deaths per year, has the second highest number in the world after India (160 000/year).⁹ Maternal mortality rates vary from 497 per 100 000 live births in Anambra state in Southern Nigeria⁵ to 2420 per 100 000 live births in Kano state in Northern Nigeria.⁷ A review of maternal deaths in University of Nigeria Teaching Hospital (UNTH), Enugu, (1991–2000) gave a maternal mortality of 1046 per

Accepted October 2004

U.V. Okafor, Department of Anaesthesia; O. Okezie, Department of Obstetrics and Gynaecology, University of Nigeria Teaching Hospital, Enugu, Nigeria.

Correspondence to: DR U.V. Okafor, P.O. Box 1521, Enugu, Enugu State, Nigeria. Tel.: +23442253532, +2348036765372. E-mail: uvkafor@yahoo.com.

100 000 with sepsis the predominant cause of mortality.⁴ Sepsis is often due to septic abortions which take their toll on our nation's women.¹⁰

The delivery suite of our centre is attended by two consultant anaesthetists in addition to one senior medical officer, seven senior registrars and ten registrars, ten consultant obstetricians with eleven senior registrars, sixteen registrars and one senior house officer, and thirteen consultant paediatricians, fourteen senior registrars and fifteen registrars. These are rostered in units to cover the delivery suite. A senior registrar should have had at least 24 months of postgraduate training including a pass in the part one fellowship examination of a postgraduate college (Nigerian or West African postgraduate medical colleges or equivalent). They are also supposed to be well-versed in the management of preeclampsia/eclampsia. There are seventeen trained midwives (one chief nursing officer, one senior matron, six senior nursing officers and three nursing officers) covering the delivery suite in rotation.

Antenatal care in UNTH, Enugu for normal parturients involves four-weekly visits up to the 28th week, then fortnightly visits till the 36th week and weekly visits from the 37th week till delivery. Preeclamptic patients are seen one- to two-weekly, depending on the disease severity, by the consultant until delivery. Severe preeclampsia is considered an obstetric emergency and if the patient is not in established labour, she is admitted to the antenatal ward.

During each antenatal visit, haemoglobin measurement, urinalysis and a physical examination including blood pressure measurement are carried out. In severe preeclampsia, the following investigations are also performed: bedside clotting time, hourly urine output, full blood count (including platelets), blood urea, electrolytes and creatinine, uric acid, transaminases, plasma protein (albumin), calcium, magnesium, 24-h urine for protein, creatinine, calcium and an electrocardiogram.

Urgent delivery is indicated regardless of the gestational age if any of the following are present: severe hypertension persisting after 24 h of treatment, liver dysfunction, signs of impending eclampsia or evidence that the fetus is in jeopardy. The most expedient mode of delivery is often required in these patients, because the delivery of the fetoplacental unit is believed to stem the progress of the disease.

PATIENTS AND METHODS

The hospital records (case notes, labour ward and theatre records) of patients with preeclampsia/eclampsia who had caesarean delivery under anaesthesia at the UNTH, Enugu, Nigeria, from July 1998 to June 2002, a 4-year span, were retrospectively reviewed. Data collected in-

cluded the patients' demographics, obstetric records, including maternal and fetal mortality, and the anaesthetic techniques used.

In our centre, a parturient has mild preeclampsia when she presents with the following; a blood pressure of 140/90 mmHg on two occasions 6 h or more apart, or a rise of 30 mmHg systolic or 15 mmHg diastolic from mid-trimester values; proteinuria above (+) on two consecutive urine specimens and significant non-dependent oedema. The senior registrar should be informed. For severe preeclampsia, the blood pressure is persistently above 160/110 mmHg and proteinuria above 5 g/24 h (+++) and symptoms of headache, blurring of vision, epigastric pain and oliguria. Fig. 1 shows the hospital protocol for management of these patients.

Methyldopa is the drug of choice for control of hypertension in these patients. Nifedipine and β -blockers are added on the advice of physicians. Hydralazine is used to manage hypertensive crisis. It is given as 10-mg i.v. bolus injections 6-hourly if the diastolic blood pressure is ≥ 110 mmHg. Sometimes, hydralazine 20 mg is added to 500 mL of 5% dextrose and titrated according to the blood pressure response. The infusion is stopped if the diastolic blood pressure is below 110 mmHg.

There is a protocol for the prophylactic use of magnesium sulphate but because of costs and unavailability, diazepam is commonly used instead. For patients who can afford it, magnesium is given by 6-g bolus i.v. over 15 min or by 3-g/h continuous infusion. This is accompanied by monitoring of patellar reflexes, respiratory rate, pulse, and arterial oxygen saturation. Intravenous diazepam is given as 40 mg in one litre of 5% dextrose at 30–60 drops per minute depending on the sedative effect on the patient. Eclamptic fits are aborted with intravenous diazepam with emphasis on maintenance of a

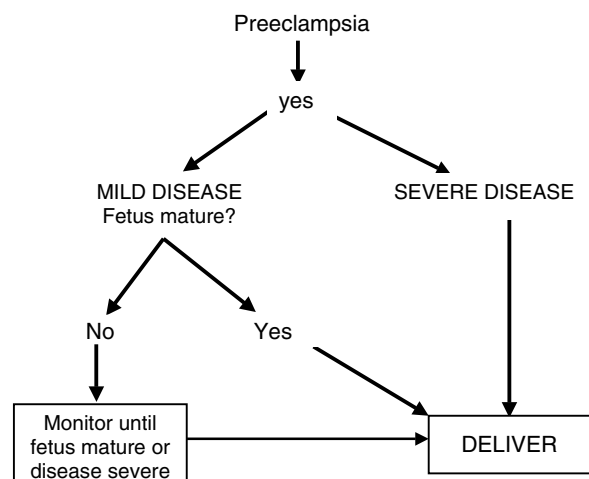


Fig. 1 Management plan for patients with preeclampsia in UNTH, Enugu.

Download English Version:

<https://daneshyari.com/en/article/9933013>

Download Persian Version:

<https://daneshyari.com/article/9933013>

[Daneshyari.com](https://daneshyari.com)