ECLAMPSIA — REVIEW OF 25 CASES

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SYNOPSIS

A review of 25 cases of eclampsia seen in the Department of Obstetrics and Gynaecology, Alexandra Hospital from January 1978 until 1982 showed a marked drop in the incidence of eclampsia. The corrected perinatal mortality was found to be 8 percent and there were no maternal deaths in this series. Improved health care of the patients with better antenatal care offered by the Maternal and Child Health Clinics attributed to the low perinatal and maternal mortality and morbidity. Sixty-four percent of cases in this series were delivered by Caesarean section, 28% had normal vaginal deliveries and 8% had assisted deliveries.

INTRODUCTION

Inspite of the recent advances made in Obstetrics during the last decade, eclampsia still continues to be a problem in modern obstetric practice. In England there were 13 deaths associated with eclamptic fits during 1976-78 compared with 21 in 1973-75 and 29 in 1970-72 (1). The present study reviewed the experience in the management of eclampsia from the Department of Obstetrics and Gynaecology, Alexandra Hospital, Singapore.

MATERIALS AND METHODS

From January 1978 until December 1982 there were 25 cases of eclampsia seen at the Department of Obstetrics and Gynaecology, Alexandra Hospital, Singapore. During the same period there were 27,130 deliveries.

All the cases of eclampsia were treated with Benzodiazepines as advocated by Lean (2) in 1968. For sedation 40 mg of Valium was diluted in 500 ml of 5 percent Dextrose and infused at a rate of 30 drops per minute. As and when necessary 10 mg of Valium was given through the intravenous tubing.

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Hypotensive Drugs

Patients with blood pressure over 160 mm Hg systolic and over 100 mm Hg diastolic were given intravenous infusions of Nepresol (1, 4-dihydrazinophthalazine) in addition. One hundred mg of Nepresol diluted in 500 ml of 5 percent Dextrose was given at a rate of 30 drops per minute. Whenever necessary 12.5 mg of Nepresol was given through the infusion tubing.

Diuretics

For patients with gross oedema an immediate intravenous dose of 40 mg of frusemide (Lasix) was given and followed by 20 mg daily or on alternate days thereafter.

Nursing Care

All the patients were nursed in the labour wards. Assessment were made by the medical staff at 5 minute intervals in the first 30 minutes and at 30 minute intervals thereafter or at closer intervals if considered necessary. Observations were made of the patient's general condition, state of consciousness, respiration, pulse, blood-pressure, intake and output.

Obstetric Management

Obstetric assessment including a vaginal examination was carried out after initiation of sedation. In primigravida who wer not in labour or in whom the cervix was less than 5 cm dilated immediate Caesarean section was carried out. Caesarean section was also carried out for other indications such as foetal distress or abrup tio placentae. If the cervix was more than 5 cm dilated, vaginal delivery was awaited after amniotomy. In multigravidae who were not in labour and in whom the cervix was unfavourable for surgical induction Caesarean section was done. If the cervix was favourable or if the patient was in labour a surgical amniotomy was carried put. A Pitocin drip was started at the same time and the patient reviewed after 4 hours. Caesarean section was considered if the progress of labour was considered unsatisfactory. After Caesarean Section in addition to the treatment already described, six hourly doses of 50 mg of pethidine were given in order to reduce the painful reflexes. For Caesarean section general anaesthesia was routinely used.

RESULTS

Incidence

The incidence of eclampsia in the present study was 1 in 1085 deliveries. The previous published reports gave an incidence of 1 in 715 deliveries (2) and 1 in 348 deliveries (3).

Maternal and Social Features

As expected most of the patients were nulliparous (19 patients, 76%). One significant factor in this study was the high incidence of booked patients (20 patients, 80%).

Table 1 classifies the type of eclampsia seen in this study. Antepartum eclampsia still accounted for 48 percent of the cases in this series.

TABLE 1
TYPE OF ECLAMPSIA

	No	%
Antepartum	12	48
Intrapartum	5	20
Postpartum	8	32
Total	25	100

Clinical Features

The details of onset of convulsions are given in Table 2. In 68 percent of the patients, fits occurred before admission to the hospital. There were no maternal deaths in this series. The period of gestation varied from 34 to 41 weeks. There were 3 patients with unknown gestation. Two patients were admitted with absent foetal heart. One of them delivered a fresh still-birth and the other patient had a macerated still-birth.

TABLE 2
CLINICAL FEATURES OF FIRST CONVULSION

Place of first convulsion	No	%
Home	15	60
During journey to Hospital	2	8
In the hospital	8	32
Total	25	100

Sixty-four percent of the patients were delivered by Caesarean Section (Table 3) and their indications are given in Table 4. Normal vaginal delivery was achieved only in 7 cases (28%).

TABLE 3
MODE OF DELIVERY

	No	%
Spontaneous Vaginal delivery	7	28
Forceps	2	8
Caesarean section	16	64
Total	25	100

TABLE 4
INDICATIONS FOR CAESAREAN SECTIONS

	No
Eclampsia, not in labour	2
Slow progress in labour	8
Foetal distress	6
Total	16

Maternal Morbidity and Mortality

There was no maternal death in this series. No major complication except wound sepsis and puerperal pyrexia were encountered in this series. All the patients recovered well and 20 patients (80%) were found to be normotensive and 3 patients (12%) were found to be still hypertensive during the follow up visit 4 weeks after delivery. Two patients defaulted follow up.

Foetal Mortality

There were 4 foetal deaths in this series. The corrected perinatal mortality (excluding those infants weighing less than 1000 gm) was 8 percent. Of the 4 foetal deaths two of them weighed less than 1000 gm. Both of them died of prematurity during the neonatal period.

DISCUSSION

Eclampsia still remains as a common problem in Singapore even though there was no maternal mortality in this series. Ong (4) reported a maternal mortality of 6.3 percent in a review of 48 cases. The aetiology of preeclampsia and eclampsia remains unknown. It is believed the convulsions of eclampsia are due to cerebral anoxia from intracranial vascular spasm, haemorrhage, hypertensive encephalopathy and cerebral oedema. The main pathological changes are in the liver, kidneys, brain, lungs and heart (5).

The incidence of eclampsia depends on various factors such as socio-economic, geographical locality and the availability of antenatal services. The incidence of eclampsia shows a significant drop during the past decade. This could be attributed to the early booking and the availability of antenatal services at the Maternal and Child Health Clinics in Singapore. Even though 68% of patients in this series had their first fit outside the hospital, prompt treatment prevented any maternal death.

The place of Caesarean section in the management of eclampsia is disputed. Even though the routine use of Caesarean section is not recommended, Menon (6) agree that it should be used judicially. A high foetal loss is accepted in eclampsia due to prematurity and the toxaemic process itself. The perinatal mortality rate varied from 11.1% (2) to 8% in the current study. The beneficial effects of early Caesarean section in reducing maternal and perinatal mortality was shown by Lean (2) and also in this study.

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