CAESAREAN SECTION IN ECLAMPSIA : STILL A DILEMMA (AN ANALYSIS OF 314 CASES)

P. K. BHATTACHARYYA • S. PURKAYASTHA
MRS. M. BASU • ROBINSANATH MONDAL

SUMMARY

A total number of 314 cases of eclampsia over a period of five years from 1986 to 1990 at Chittaranjan Seba Sadan, Calcutta with maternal and perinatal mortality has been analysed. Out of these cases caesarean section (C.S.) was performed in 62 cases and the remaining 252 cases were delivered vaginally. In the former group the gross maternal and parinatal mortality was 8.06% and 12.9% respectively. In the latter group, the corresponding figures were 15.48% and 33.7% respectively. Thus caesarean section may now be offered as a means to improve maternal and foetal salvage.

INTRODUCTION

Eclampsia is essentially a disease of the poor and of the primigravida; a product of ignorance and neglect. Ideally it is a preventable disease or almost so. But unfortunately its incidence is still uncomfortably high in any hospital accepting unbooked cases. Menon et al (1989) quoted an incidence of 0.83% to 1.6% from leading centres of India. Faced with this reality a plan of management has to be evolved. Though the exact pathophysiology leading to the occurrence of fits is still not fully understood, one thing has been proved beyond doubt that termination of pregnancy, removes the basic cause of the disease. Keeping this in view an attempt has been made in the present study to ascertain if caesarean section has any distinct advantage over vaginal delivery in lowering maternal and perinatal deaths.

MATERIALS AND METHODS

A retrospective analysis of 314 cases of eclampsia at Chittaranjan Seba Sadan, Calcutta has been made. Each case record was analysed in details. 62 cases delivered by caesarean section comprised the study group and the remaining 252 cases delivered vaginally formed the control

Dept. of Obstetrics & Gynec. Chittaranjan Seva Sadan, Calcutta - 26.

Accepted for Publication on 4/10/91

group.

OBSERVATIONS

Incidence :

There were 44,826 deliveries at Chittaranjan Seba Sadan, Calcutta from 1986 to 1990 with 314 cases of eclampsia. Thus the incidence of eclampsia in this hospital was 0.7%

Age & Parity :

The mean age of the patients was 19.6 years with standard deviation 5.70 190 patients were between 15 to 20 years, 68 patients between 21 to 26 years, 46 patients between 27 to 32 years and only 10 patients were 33 years or above. 284(90.45%) patients were primigravidae and only 30(9.55%) patients were multigravidae.

Antenatal Care :

274 (87.3%) patients had no antenatal check up. Only 40 patients (12.7%) were booked. Of these only 4 patients had moer than three check ups. None of the patients had any check up during one month prior to admission.

Duration of Pregnancy :

44 cases were 29 to 32 weeks, 158 cases 33 to 35 weeks and 60 cases were 36 to 41 weeks. In 52 cases gestational age could only be guessed as the menstrual history was not available.

Blood Pressure :

The mean systolic and diastolic blood pressures were 152.9 & 98.6 mm Hg respectively. The range was 140 to 270mm of Hg (systolic) and 90 to 160 mm of Hg (diastolic).

Therapy :

As this hospital lacked the facility of monitoring serum level of magnesium - the routine practice has been to treat every patient on adimmission with 10 mg I.V. diazepam followed by 40 mg of diazepam in 500 ml of 10% Dextrose in I.V. drip, the rate being adjusted according to response.

Along with Diazepam Inj. Pethidine 100 to 200 mg I.M. was used in 68 cases with established labour pains.

Injection Frusemide 20 - 60 mg was used I.V. in 84 cases with pulmonary oedema and or heart failure.

Injection Ampicillin 500 mg I.M. 12 hourly was used as prophylactic antibiotic.

Appropriate management during fits was instituted in all cases. An indwelling catheter was introduced and an intake output chart was maintained in all cases.

OBSTETRIC MANAGEMENT

An attempt was made in each case after control of fits to find out if the patient was in labour and if in labour - how far advanced; if not in labour whether the cervix was favourable for low amniotomy. At the same time the general condition of the patient was assessed with a view to weighing the risks in case abdominal delivery became necessary. Any grossly neglected case in seerely compromised state was not selected for abdominal delivery.

CAESAREAN SECTION

Caesarean Section was performed in 62 cases (19.7%). Purely obstetric indications comprised 6 cases of demonstrable cephalo-pelvic disproportion, 8 cases of foetal distress, 6 cases of breech and one case of post C.S. pregnancy. In the remaining 41 cases C.S. was a deliberate decision with the sole purpose of shortening the exposure to pregnancy. These include cases in whom B.P. and convulsion could not be satisfactorily controlled despite conventional therapy and in cases where vaginal delivery was unlikely to be effected soon due to unfavourable cervix or failure of progress in labour. Table I depicts the yearwise distribution of maternal and perinatal mortality.

Maternal and perinatal mortality in relation to number of convulsions and convulsion delivery interval has been shown in Table II & III respectively.

Table IV & V show maternal and perinatal

mortality in relation to control of blood pressure and control of convulsions respectively.

MATERIAL AND PERINATAL DEATHS

In the study group there were 5 maternal deaths (8.06%) compared to 39 maternal deaths (15.48%) in the control group. Heart failure and pulmonary oedema were the leading causes of maternal deaths in both groups.

TABLE I

Year wise distribution of maternal and perinatal mortality.

Year	Control group			Study group		
	No. of cases	Maternal mortality	Perinatal mortality	No. of cases	Maternal mortality	Perinatal mortality
1986	55	9 (16.4)	20 (36.3)	9	1 (11.1)	2 (22.2)
1987	59	8 (13.6)	22 (37.4)	6	Nil	1 (16.6)
1988	40	6 (15)	13 (32.5)	17	1 (5.9)	2 (11.8)
1989	51	9 (17.6)	15 (29.4)	12	1 (8.3)	1 (8.3)
1990	47	7 (14.9)	15 (31.5)	18	2 (11.1)	2 (11.1)
Total	252	39(15.48)	85 (33.7)	62	5 (8.06)	8 (12.9)

The figures in parenthesis indicate percentage values.

TABLE II

Maternal and Perinatal mortality in relation to number of convulsions.

No. of convulsions	Control group			Study group		
	No. of cases	Maternal mortality	Perinatal mortality	No. of cases	Maternal mortality	Perinatal mortality
1 to 5	159	19	39	20	1	2
6 to 10	72	10	36	37	2	3
11 to 15	15	6	7	4	2	2
More than 15	6	4	3	1	Nil	1

TABLE III

Maternal and Perinatal mortality in relation to number of convulsions - delivery interval.

Convulsions delivery interval	Control group			Study group		
	No. of cases	Maternal mortality	Perinatal mortality	No. of cases	Maternal mortality	Perinatal mortality
Less than 6 hours	102	10	16	28	2	2
6 to 12 hrs.	68	6	18	21	1	2
13 to 18 hrs.	42	8	24	10	2	3
19 to 24 hrs.	28	7	19	2	Nil	Nil
More than 24 hrs.	12	8	8	1	Nil	1

TABLE IV

Maternal and Perinatal mortality in relation to control of blood pressure.

	Control group			Study group		
Control of blood pressure	No. of cases	Maternal mortality	Perinatal mortality	No. of cases	Maternal mortality	Perinatal mortality
Within 6 hrs.	32	3	4	49	2	5
6 to 12 hrs.	108	12	26	6	1	1
13 to 18 hrs.	104	21	49	4	1	Nil
19 to 24 hrs.	6	2	4	2	Nil	1
More than 24 hrs.	2	1	2	1	1	1

TABLE V

Maternal and Perinatal mortality in relation to control of convulsion.

	Control group			Study group		
Control of convulsion	No. of cases	Maternal mortality	Perinatal mortality	No. of cases	Maternal mortality	Perinatal mortality
Within 6 hrs.	18	1	3	34	1	4
6 to 12 hrs.	148	20	35	18	2	3
13 to 18 hrs.	52	6	26	6	1	Nil
19 to 24 hrs.	16	4	7	2	Nil	Nil
More than 24 hrs.	18	8	14	2	1	1

There were 8 perinatal deaths (12.9%) in the study group compared to 85 perinatal deaths (33.7%) in the control group. Prematurity and birth asphyxia accounted for most of the perintal deaths.

DISCUSSION

This study brings into focus a few interesting points. Firstly the number of cases admitted each year remained almost the same. In otherwise the prevention of eclampsia is still a far cry.

Secondly, in the group where caesarean section was performed, a definite improvement could be noticed both in terms of maternal mortality (8.06% compared to 15.48% in control group) and in perinatal mortality (12.9%) compared to 33.7% in control group).

The incidence of Caesarean Section in the present study is 19.7% Lean et al (1968) reported incidence of caesarean section as high as 63% with 3.3% maternal mortality and 11.1% perinatal mortality. Sibai et al (1981) reported 49% C.S. in eclampsia with no maternal mortality and 8.6% perinatal mortality. Goswami et al (1981) found an incidence of 48.9% C.S. in eclampsia with 4.34% maternal mortality and 26.87% perinatal mortality.

Now, the moot point is if C.S. gives so much better results, why was it not practised on a wider scale ? Answer to this question is not simple. In the first place, the patients usually young primigravidae, are admitted in a compromised state after a number of fits occuring at home. Before undertaking any major surgery, patient's condition has to be stabilised. This

obligatory interval in many cases is accompanied with rapid progress of labour making C.S. unnecessary.

In the second place, the socioeconomic background of the patient is important. These patients are usually very poor and uneducated, many are illiterate. Major abdominal surgery adds to their misery in terms of prolonged convalescence. As it is, infant mortality is very high in these communities and performing C.S. only on foetal indication is probably not correct. With drugs now available and close monitoring, blood pressure and convulsions can be controlled satisfactorily in majority of cases and they should be allowed to deliver vaginally provided this can be acccomplished speedily and without difficulty.

Those patients who do not respond to these line of treatment and in whom there is no prospect of early vaginal delivery - C.S. offers the best chance of survival both from maternal and foetal point of view.

Thus in the final analysis, mode of delivery has to be individualised in each case.

ACKNOWLEDGEMENT

We are thankful to principal superintendent of Chittaranjan Seba Sadan Hospital, Calcutta for allowing us to publish the hospital records.

REFERENCES

1. *Goswami B, Dawn C.S.: J. Obstet, Gynec. India. 31 : 599, 1981.*
2. *Lean TH, Ratnam SS, Siva Samboo R : J. Obstet, Gynec. Brit. Cwlth, 68:417, 1968.*
3. *Menon MKK, Devi P K, Rao K B : Postgraduate Obstetrics and Gynaecology, 4th edn, 1989, P -52, Orient Longman, Madras.*
4. *Sibai BM, Mc Cubin JH, Anderson GD, Lipshitz AJ, Dilts PV : Obster, Gynec. 58:609, 1981.*