

PERINATAL MORTALITY IN ECLAMPSIA

By

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SUMMARY

Among 375 cases of eclampsia studied, total number of perinatal deaths were 120 (22 per cent), there were 88 still births and 32 first week deaths. Death rate was high among the primigravida (87.5 per cent). In gestational age group of 24 to 36 weeks perinatal death rate was 47 per cent whereas among the matured babies it was 23.8 per cent. Where birth weight was 900 gm. to 2450 gm. death rate was 68.1 per cent. Perinatal mortality increased with increase in fit-treatment interval and admission-delivery interval. So far as blood pressure is concerned systolic blood pressure of 200 mm. of Hg. or more was associated with 12 per cent of perinatal death.

Introduction

While managing a case of eclampsia the first thing comes to mind is how to control fit and to save the mother. So foetal wellbeing cannot draw adequate attention of the attending staff. Whatever methods are applied to stabilise the the mother and to hasten delivery of the child are aimed at controlling fit. Even recently Worley (1984) suggested a more conservative line of management stressing more on the stabilization of the mother first. As a result perinatal mortality is still alarmingly high. Reported data from different parts of India show how colossal is the loss. Devi *et al* (1976) reported perinatal death of 38.7 per cent and Agarwal *et al* (1983) reported 43.1 per cent. Gun *et al* (1982)

found 31.74 per cent perinatal loss in eclampsia. Still birth rate (of total perinatal death) ranged from 57 to 82.7 per cent. Here an attempt is made to assess the perinatal outcome in eclampsia and to find out the factors responsible for this gloomy picture.

Material and Methods

Perinatal outcome was studied in 375 cases of eclampsia. Cases of post partum eclampsia were not included in the study. On admission detailed history was taken from attendant. Morphine sulphate $\frac{1}{4}$ th gm or Pethidine hydrochloride 100 mg was injected intramuscularly on admission. After initial sedation a thorough clinical examination was carried out; while doing vaginal examination artificial rupture of membranes was done wherever possible. Then the cases were managed with lytic

From: Department of Obstetrics and Gynaecology, Gauhati Medical College, Gauhati, Assam. Accepted for publication on 3-10-87.

cocktail or diazepam in intravenous drip. Frusemide 40 mg was injected intravenously only when pulmonary congestion was detected. Antibiotics were used routinely. Doses of sedation were adjusted according to occurrence of fit and degree of blood pressure. Urine output was measured carefully and urine analysis for proteinuria was done periodically.

Second stage of labour was cut short with obstetric forceps; in 5 cases craniotomy was done and in 10 cases caesarean section was performed mainly due to other obstetric indications.

After delivery babies were put under paediatric care and day to day observations were noted. Analysis of different factors both maternal and foetal were carried out carefully in respect of perinatal outcome.

Results and Observations

Perinatal death: Among 375 cases of eclampsia studied total number of perinatal death was 120, the rate being 32 per cent. Out of 120 deaths 88 were intrauterine (73.3 per cent) and 32 were in the first week (26.7 per cent). On admission F.H.S. were absent in 69 cases (57.5%).

Perinatal death in relation to maternal age

Rate of perinatal death was maximum in the age group of 20-25 years (45%) and next to it was in the age group upto 19 years (39.16%).

Perinatal death in relation to gestational age

Out of 375 cases in 132 (35.2%) duration of gestation ranged from 24 weeks to

TABLE I
Showing Perinatal Death in Relation to Maternal Age

Age Group	Total No. of cases	No. of Death	Percentage
Upto 19 yrs.	168	47	39.16
20-25 yrs.	162	54	45.0
26-30 yrs.	33	14	11.67
31-35 yrs.	12	5	4.17
	375	120	100

Perinatal death in relation to parity

Maximum babies died among the primigravida cases (37.5%).

TABLE II
Showing Perinatal Death in Relation to Maternal Parity

Parity	No. of cases	No. of Death	Percentage
P0	302	105	87.5
P1	23	4	3.3
P2	27	1	0.8
P3	19	9	7.5
P5	4	1	0.8
	375	120	100

38 weeks, rest 243 were in term pregnancy. Number of perinatal death was 62 (47%) in the first group and 58 (23.8%) in the second group. So the death rate was almost double in the pre-term babies.

Perinatal death in relation to birth weight

Number of babies with birth weight from 900 gm to 2400 gms was 116 and number of death among those was 79 (68.1%) whereas babies with birth

TABLE III
Showing Perinatal Mortality in Relation to Birth Weight

Birth Weight (in Gms)	No. of Babies	Still Birth	1st week Death	Total No. of Death	Perce- tage of total
1000	7	6	1	7	100
1000-1500	26	17	5	22	84.6
1600-2000	38	16	7	23	62.1
2100-2450	45	16	11	27	60
2500-3000	259	33	8	41	16
	375	88	32	120	

weight 2500 gms or more were 259 in number and 41 among those died, the percentage being 16 per cent.

Perinatal death in relation to fit-treatment interval

It is seen from Table IV that perinatal death rate increases corresponding to in-

crease in interval between onset of fit and institution of treatment.

Perinatal death in relation to admission-delivery interval

Table V shows that perinatal mortality increases when admission-delivery interval increases.

TABLE IV
Showing Perinatal Mortality in Relation to Interval Between Fit and Treatment

Fit—Treatment interval	No. of cases	No. of Death	Percentage
0-6 hrs	152	43	28.29
6-12 hrs	125	36	28.8
13-18 hrs	50	18	36.0
19-24 hrs	43	20	46.5
above 24 hrs	5	3	60.0

TABLE V
Showing Perinatal Death in Relation to Admission Delivery Interval

Admission Delivery Interval	Total cases	Perinatal Death	Percentage
0-1 hrs	26	4	15.4
2-6 hrs	95	23	24.2
7-12 hrs	160	41	25.6
13-24 hrs	67	34	50.9
above 24 hrs	27	18	66.6

TABLE VI
Showing Perinatal Mortality in Relation to Degree of Blood Pressure

Blood Pressure (mm of Hg.)	Total cases	No. of Death	Percentage
<i>Systolic</i>			
130-160	129	29	22.4
160-200	203	61	30.0
above 200	43	30	72.0
	375	120	
<i>Diastolic</i>			
90-110	121	30	24.7
110-120	215	74	34.4
above 120	39	16	41.0
	375	120	

Perinatal mortality in relation to degree of blood pressure

Perinatal mortality was significantly high when systolic blood pressure was more than 200 mm of Hg and diastolic pressure was above 110 mm of Hg.

Type of eclampsia

There were 226 (60.2%) cases of antepartum type and 149 (39.8%) intrapartum eclampsia. Cases with positive F.H.S. on admission were 35 and 16 respectively.

Mode of delivery

Of the 120 cases of perinatal death 35 had spontaneous delivery, in 70 cases second stage of labour was cut short with obstetric forceps and in 5 cases craniotomy was done. Only in 10 cases Caesarean section was performed indications being other obstetric causes.

Apgar scoring

Out of 120 perinatal deaths 88 were still born, in 20 cases Apgar score after

one minute was 6 and in 12 it was 7 to 10.

There were 51 (42.5%) male babies and 69 (57.5%) female.

Causes of first week death

Out of 32 live born babies 23 died of prematurity alone (72%), 5 died of asphyxia neonatorum and 3 died of bronchopneumonia. There was only one death due to congenital abnormality.

Discussion

Chesley (1978) wrote that with reduction in maternal mortality in eclampsia foetal salvage could be taken as a criterion for the efficacy of management. But unfortunately in India no appreciable change is noted in perinatal outcome during the last three decades. Menon (1961) reported a perinatal mortality of 30 per cent, Devi *et al* (1978) reported 34 per cent perinatal death rate and in the present study the death rate is 32 per cent. In this series 69 cases (57.5%) were admitted with intrauterine foetal death. Of the remaining cases prematurity and asphyxia neonatorum were the main causes of increased perinatal death. Prompt Caesarean section is advocated by some obstetricians. But there is no general agreement as to the mode of delivery in eclampsia. Menon did not advocate routine caesarean section Gant and Worley (1980) and Worley (1984) performed Caesarean section only for usual obstetric indications. More recently Worley (1984) stressed on 'suitable stabilization' of the mother before induction of labour and his first choice was for vaginal delivery. On the other hand Pritchard and Pritchard (1975) and Chesley (1978) did not follow a more conservative line and performed Caesarean section in a good number of cases.

Another factor for increased perinatal loss is sedation to the mother (Menon, 1961; Chesley, 1978). Sedative drugs cross the placenta and depress the foetus who is already in jeopardy.

Reports from different hospitals in India show a high still birth rate (Devi *et al*, 1976; Agarwal *et al*, 1981; Gun *et al*, 1982).

In the present study there were 69 cases (57.5%) admitted with intrauterine foetal death. Situation in India is different from that in developed countries. Here most of the cases are unbooked. They only come after onset of convulsion, a long way from home to hospital. By the time they reach hospital already several hours pass off, mother's condition gradually deteriorates and the foetus dies in utero.

Acknowledgement

The author is grateful to Prof. M. P. Gogoi, F.R.C.O.G., Prof. and Head of the Department of Obstetrics and Gynaeco-

logy, Gauhati Medical College for his kind advice and guidance. He is also thankful to the Superintendent, Gauhati Medical College Hospital for his kind permission to publish the hospital data.

References

1. Agarwal, S., Dhall, K. and Bhatia, K.: J. Obstet. Gynec. India, 33: 83, 1983.
2. Chesley, L. C.: Hypertensive disorders in pregnancy. Appleton Century Crofts, New York, 1978.
3. Devi, K. K., Sultana, S. and Santpur, S. R.: J. Obstet. Gynec. India, 26: 53, 1976.
4. Gant, N. F. and Worley, R. J.: Hypertension in pregnancy, concept and management, Appleton Century Crofts, New York, 1980.
5. Gun, K. M., Banerjee, B. and Nandi, A. K.: J. Obstet. Gynec. India, 32: 199, 1982.
6. Menon, M. K. K.: J. Obstet. Gynec. Brit. C'wth. 68: 417, 1961.
7. Pritchard, J. A. and Mac Donald, P. C.: Williams Obstetrics, 16th Edition. Appleton Century Crofts, New York, 1980.
8. Worley, R. J.: Progress in Obstetrics and Gynaecology, Vol. 4, Churchill Livingstone, London, 1984.