

MANAGEMENT OF ECLAMPSIA

by

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Eclampsia is still a major cause of maternal death in our country. Though it appears that obstetric service in the country has improved during the last two decades, it has been confined mainly to the cities. Maternal mortality in the districts is still high and has remained static at about 3 per 1000 births.

Incidence of Eclampsia

If hospital figures are any guide the incidence does not seem to have come down. The majority of the cases of course come from the villages.

In the Medical College Hospitals, Calcutta, the incidence during the years 1974 to 1978 was 1 in 124, with 347 cases out of 42,949 confinements. Maternal death rate from eclampsia was 14.12 per cent. In the District Hospital of Burdwan the incidence was as high as 1 in 38 during the years 1964-68 (Gun, 1970). This is the state of affairs in almost all the district and sub-divisional hospitals of our country. According to Menon (1969) the incidence in India is about 1 in 83. According to Devi, *et al* (1976) and Chowdhury (1977) the incidence of eclampsia

TABLE I
Incidence of Eclampsia in Niratan Sircar Medical College Hospital, Calcutta

Year	Number of eclampsia cases	Number of deliveries	Incidence	Maternal deaths
1975	46	4675	1 in 102	6
1976	38	5024	1 in 132	3
1977	66	4841	1 in 73	8
1978	71	5122	1 in 72	6
1979	72	6308	1 in 89	5
Total:	293	25970	1 in 88	28 (9.55%)

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among hospital admissions in developing countries varies between 0.1 per cent and 3 per cent. Thus practitioners in our country will continue to confront this problem for many more years to come.

Age

TABLE II
Age Incidence

Below 20 years	20-30 years	Above 30 years
186 (63%)	97 (33.10%)	10 (3.41%)

Parity

TABLE III
Parity Incidence

0	1	2	3	4 & above
198 (67.57%)	53 (18.08%)	22 (7.50%)	8 (2.73%)	12 (4.09%)

It is clear from Tables II and III that eclampsia is mainly a disease of teen age primigravidae.

Prognosis of a case of eclampsia often depends on how soon she is admitted in a hospital after onset of fits. This is shown in Table IV.

TABLE IV
Time of Admission After Onset of Fits

	Within 6 hours	6 to 12 hours	After 12 hours
Number of cases	92 (31.40%)	153 (52.21%)	48 (16.40%)
Mortality	Nil	18 (11.76%)	10 (20.83%)

It is found that only 31.4 per cent of cases were admitted within 6 hours of onset of fits. There was no mortality in these cases, whereas, of 48 cases admitted after 12 hours, as many as 10 (20.83 per cent) died. Cases coming late usually come from remote villages, and they will have had large number of fits before admission. This is also exemplified in Table V.

Some of the cases who were admitted more than 12 hours after the onset of fits or where the number of fits were more than 10, had first gone to a rural health centre and had the treatment there. Only

TABLE V
Maternal Mortality in Relation to the Number of Fits Before Admission

No. of fits	No. of cases	Expired	Recovery
5 or less	165	Nil	165
5-10	58	7	51
10-20	49	11	38
Above 20	21	10	11

when the fits were not controlled within a reasonable time the cases were sent to Nilratan Sircar Hospital, sometimes with deep coma or with acute left ventricular failure. This is an important point to note from the prognostic point of view. If the fits are not controlled within an hour of admission in a health centre and delivery is not imminent the patients should be transferred to a specialist unit.

TABLE VI
Time of Onset of Fits in Relation to Labour

	Ante-partum	Intra-partum	Post-partum
Number of cases	79 (27.96%)	149 (50.85%)	65 (22.18%)

Table VI shows the relative incidence of different types of eclampsia in relation to onset of labour. There is a variation in the relative incidence of antepartum and intrapartum eclampsia in the different hospital reports. In the annual report of Medical College Hospital, Calcutta, for the

year 1975, 71.9 per cent of the cases have been recorded as antepartum, whereas in 1973 only 41.6 per cent have been mentioned as antepartum. The history obtained from the relations does not always give a clue as to whether fits preceded or followed the onset of labour.

The authors could not compare the maternal and foetal results of the different regimes because of the small number of cases treated with diazepam alone. A few series from other centres of India treated with diazepam show a very low maternal mortality (Kawathekar, 1976).

TABLE VII
Time Taken to Control Fits and Prognosis

	Number of cases	Recovered	Expired
No. fit after admission	73	66	7 (10.6%)
Controlled within 12 hours	156	145	11 (7.5%)
Controlled after 12 hours	64	54	10 (18.5%)

Table VII shows that if more than 12 hours elapse before control of fits in hospital, the mortality is doubled. It seems anomalous that 7 cases out of 73 who had no fits after admission died. This is because of the fact that these patients were admitted with deep coma or pulmonary oedema from which they did not recover.

Management

Majority of the cases were treated with a combination of chlorpromazine, promethazine and pethidine, i.e., a "lytic cocktail". The dosage and frequency of administration varied from patient to patient. Some cases were treated with a combination of parenteral phenobarbitone and paraldehyde. In 15 cases where treatment was started with lytic cocktail, additional parenteral diazepam was necessary to control fits. Twelve cases were treated with diazepam alone. Choice of sedation is an important factor in the management of eclampsia; but each case must be individualised so far as management is concerned. Though a set regime is necessary for initiation of treatment by the residents, it may have to be changed depending on the response of the patient.

But it must be emphasised that Mitra and Dasgupta (1957), Mitra and Co-workers (1958) and Menon (1961) showed consistently good results with lytic cocktail as well. Diazepam seems to have a better anti-convulsive effect and there is a lower incidence of puerperal psychosis following its use. Previous workers like Mitra and Menon emphasised the importance of individual personal attention to these cases on an "intensive care" basis. The patients should be given antibiotics, 10 per cent intravenous dextrose as well as injections of frusemide to promote diuresis and correct pulmonary oedema. The air passages should be kept clean with intra-tracheal suction. The method of delivery should also be decided upon within a few hours of admission.

Method of Delivery

An obstetric examination is made within half to one hour of administration of a sedation. If the patient is in labour and the cervix 3 centimeter or more dilated, low amniotomy is performed. If progress of labour is satisfactory, one waits for spontaneous delivery; episiotomy with or without low forceps under local anaes-

thesia may be necessary. Caesarean section was formerly being performed for obstetric indications only. But for the last 5 years its scope has been broadened to a certain extent. If it is found that repeated fits are not controlled very soon after admission, or it is felt that the patient is going to have a prolonged labour, caesarean section is performed. The decision regarding caesarean section is made by an experienced obstetrician. The operation itself is also performed by a competent person and anaesthesia administered by a senior anaesthetist. If this practice is not followed, the operation itself will carry a high maternal mortality. Judicious use of caesarean section has also been advocated by other workers (Menon, 1961; Ghosh, 1974). The decision regarding caesarean section should not be delayed too long. It caesarean section is decided as a last resort, the result will be unsatisfactory.

Table VIII shows the different methods of delivery in the cases treated by the authors.

TABLE VIII
Methods of Delivery

Spontaneous	Forceps or Ventouse	Caesarean section	Assisted Breech	Craniotomy
Number of cases 155	108	14	5	4
			Undelivered	
			7	

Indications of caesarean section are shown in Table IX.

TABLE IX
Indications of Caesarean Section

Uncontrolled fits	= 4
Disproportion	= 3
Anticipated delay in labour	= 3
Intercurrent eclampsia	= 2
Post-hysterotomy pregnancy	= 1
Threatened rupture of uterus	= 1

The case with threatened rupture of the uterus was found to have accidental haemorrhage at caesarean section; this patient as well as the baby died. Besides these 14 cases in the series, one of the authors had operated on a case of uncontrolled pulmonary oedema, not in labour, 13 years ago in a district hospital with satisfactory result for the mother. Another case of uncontrolled fits was operated on by the same author in a private clinic with good result for the mother and the baby. In this particular case the fits were completely controlled only 12 hours after operation with diazepam and lytic cocktail combination.

So far as management of intercurrent eclampsia is concerned, it is the practice of the authors to wait till completion of 37-38 weeks in preterm pregnancies, provided the blood pressure has come down to a safe level and proteinuria has almost cleared up. Pregnancy is terminated even in preterm babies by amniotomy or caesarean section depending on the obstetric condition if the blood pressure con-

tinues to be very high. Out of 7 cases of intercurrent eclampsia in the series, 5 had vaginal delivery and 2 required caesarean section.

Maternal Mortality

There were 28 maternal deaths out of 293 cases of eclampsia, a maternal mortality of 9.5 per cent. Causes of maternal deaths are presented in Table X.

TABLE X
Causes of Maternal Deaths

1. Acute left ventricular failure	15
2. Deep Comma	8
3. Renal failure	2
4. Shock	2
5. Post-partum haemorrhage	1

Perinatal mortality

All the 65 babies of the mothers who had post-partum eclampsia were alive and well either in the hospital or at home. Of the remaining 228 cases the results are shown in Table XI.

TABLE XI
Perinatal Mortality in Antepartum and Intra-partum Eclampsia

Total cases	Alive	Stillborn	Neonatal death
293	200	62	31

The perinatal mortality in the whole group was 31.74 per cent.

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Summary and Conclusion

1. Two hundred ninetythree cases of eclampsia were treated in five years from 1975 through 1979. The incidence was 1 in 88.

2. Majority of the cases were treated with "lytic cocktail". It is suggested that

the cases be treated on an intensive care basis. General management is no less important than sedative regime, and each case should be individualised with regard to treatment.

3. Maternal mortality in the present series was 9.5 per cent and perinatal mortality 31.74 per cent. However efficiently we treat these cases, it is doubtful if the maternal mortality can be brought down below 5 per cent.

4. The real solution lies in reducing its incidence through extension of efficient antenatal care to rural areas.

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