

MATERNAL AND PERINATAL MORTALITY DUE TO ECLAMPSIA

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ABSTRACT

Forty-four mothers with eclampsia and their newborns managed during the year 1988 at the University Hospital of Banaras Hindu University, Varanasi were analyzed. The incidence of eclampsia was 2.2% of all hospital deliveries. Eclampsia was more common in women (below 20 years) and at gestation of 36 weeks and below, and amongst the mothers deprived of antenatal care. The maternal mortality amongst cases of eclampsia was 31.8% and perinatal loss was 38.6%. A relatively high incidence of eclampsia and maternal and perinatal loss was considered to be related to lack of antenatal care and late referral to the hospital. Our findings suggest that more frequent use of properly timed cesarean section can improve the maternal outcome.

Key words: Maternal mortality, Eclampsia, Perinatal mortality.

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Poor maternity services in the developing countries are responsible for the unacceptably high maternal mortality and morbidity rates. Although efficiently organized antenatal care and proper management of pre-eclampsia has reduced eclampsia almost to the point of extinction in the developed countries, it continues to be a major killer of pregnant women in the third world. All cases of eclampsia admitted to the University Hospital during the year 1988 were analyzed for the causes of maternal and perinatal mortality in eclampsia, so that effective steps can be undertaken to reduce the maternal and perinatal loss.

Material and Methods

All cases of eclampsia admitted to the University Hospital Institute of Medical Sciences, Banaras Hindu University, between January and December, 1988 were analysed in relation to various factors including age, parity, antenatal care, number of convulsions outside the hospital, time lag from onset of first fit to delivery interval, mode of delivery (vaginal or abdominal), period of hospital stay and the maternal and perinatal mortality.

Results

The incidence of eclampsia was 2.2% amongst hospital admissions (44 out of 2051 deliveries). Thirty-seven (84%) cases with eclampsia had antepartum eclampsia and 7 (16%) postpartum eclampsia; 37 (84%) were primigravidae and 7 were multigravidae. Eclampsia was common in relatively young patients (<20 years—5.2%, 21-30 years—1.5%, >30 years—1.6% of all deliveries in that maternal age group, $\chi^2=17.36$, $p<0.001$). Except one mother, none received antenatal care. With the increase in gestational age the incidence of eclampsia decreased significantly (<29

weeks 10%, 30-33 weeks 7.3%, 34-36 weeks 5.5% >37 weeks 1.5%, $\chi^2=31.55$, $p<0.001$).

Out of total 45 maternal deaths during the study period, 13 were due to eclampsia (28.9%). The case mortality rate of eclampsia was 29.5% (13 out of 44 patients). The mortality was higher in patients delivered vaginally (39.1%) compared to those delivered by LSCS (15.0%). One mother died undelivered. It was observed that maternal deaths were directly proportional to the number of fits ($\chi^2=8.4$, $p<0.001$). The increase in maternal mortality with increasing first fit to delivery interval was statistically not significant.

Ten babies were born with Apgar score of 7/10 or more. Twenty-three babies suffered severe birth anoxia (Apgar <3/10 at 1 min) out of which 6 died during first seven days of life. Eleven were intrauterine deaths (including 2 intrapartum deaths). The total perinatal mortality was 17 out of 44 (386 per 1000).

Discussion

The incidence of eclampsia (22 per thousand deliveries) was alarmingly high

compared to 1 in 1150 deliveries in developed countries(1).

Better organization and delivery of the antenatal and intranatal care during pregnancy reduces the risk of eclampsia and the maternal and perinatal mortality. The incidence of eclampsia varies from 0.18 to 4.6% in our country(2,3). Moreover, the incidence of eclampsia has remained unchanged over the decade in our hospital (2.0% in 1978-79) suggesting failure of existing MCH services in this regard. The case mortality in this series was high (29.5%); this could be attributed to poor MCH services in the region and late referral of cases. In the present study, a significant relationship was observed between maternal mortality and the number of convulsions (more than 60% mothers died if number of convulsions exceeded 15 before intervention) rather than the interval between first fit to delivery of baby as has been reported(4-6) emphasizing the need for better control of fits(6). Low maternal mortality in LSCS emphasizes the importance of less conservative obstetrical management in eclampsia(7). The high perinatal loss 386/1000 (of which two-thirds

TABLE I—Maternal Mortality in Relation to Convulsions

	No. of cases	Deaths		χ^2
		n	%	
Interval between first fit and delivery (h)				
<10	16	4	25.0	NS
11-20	23	7	30.4	
>20	5	2	40.0	
Number of convulsions				
<5	10	-	-	8.37*** $p<0.001$
6-15	23	6	26.1	
>15	11	7	63.6	

was due to intrauterine deaths) reflects the problems of delayed referral. The perinatal mortality rate in eclampsia reported by various Indian authors ranges from 14.6%(4) to 47.4%(8).

Thus, eclampsia continues to remain major killer of mother and neonates in this country. Improved antenatal care, monitoring of maternal blood pressure, timely referral to reduce the first fit to delivery interval and control of fits by more effective means will bring the desired fall in maternal and perinatal loss. There is urgent need for perinatologists to concentrate on operational research to find superior and effective means of MCH care in the country.

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