A CLINICAL STUDY OF PERINATAL MORTALITY

by

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Introduction

The term perinatal mortality designates fetal and neonatal deaths influenced by prenatal conditions and circumstances sorrounding delivery. It is a sensitive indicator of maternal and child services of an area. In the present study an attempt has been made to correlate perinatal mortality with age, parity, obstetric complications, antenatal care, multiple births and clinical causes leading to neonatal deaths.

Material and Methods

Five hundred and forty still births and 507 neonatal deaths during first week of life constituted the total perinatal loss of 1047 among 8251 deliveries conducted at the State Zenana Hospital, Jaipur in a period of one year from January 1979 to December, 1979 giving a perinatal mortality rate (PNMR) of 113.56/1000 births. A record of clinical causes of deaths among newborns is made and the various causes are discussed. Postmortem examination could not be done mostly because of parental refusal.

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Observations

See Tables I, II and III.

Discussion

The perinatal mortality rate in this institution is 113.56 per 1000 deliveries in comparison to the incidences reported by various other authors as shown in the Table below:

Authors	*PNMR*
Mehdi *et al* 1961	79.8
Mukherjee 1962	71.2
Ghosh *et al* 1971	62.9
Kher *et al* 1972	41.5
Kasturi lal *et al* 1974	121.88
Sultana *et al* 1975	86.9
Chaudhary *et al* 1978	74.5
Agarwal *et al* 1978	52.6

PNMR in our series is high leaving aside that reported by Kasturilal *et al* (1969) who report a PNMR of 121.88 per 1000 births. The PNMR was higher in unbooked than in booked cases. Since this hospital drains all complicated cases from and around the city and from the districts, the number of unbooked and emergency cases is very high accounting for a high PNMR. It was also found that preventable factors like antepartum haemorrhage, toxemias of pregnancy, prolonged and obstructed labour and severe

anemia in mother accounted for a high perinatal loss. These were all because of ignorance, illiteracy, poverty, lack of proper transport facilities in the interior parts of the districts and lack of proper mother and child care services.

Perinatal loss was maximal (269.7/1000) in the age group above 30 years, while it was low between, 21 to 30 years of age. Below 20 years again there was a rise (Table I). So also the loss was highest (346.3/1000) in parity group of 5 or more, while it was low in primiparity (Table I). Multiple pregnancy again showed a three fold rise in perinatal mortality in comparison to single pregnancy (Table I). Similar observations have been reported by Ghosh *et al* (1971), Karan *et al* (1972), Misra *et al* (1973), Chaudhary *et al* (1978) and Agarwal *et al* (1978).

Mortality was 100 per cent in weight group below 1000 gms. and it gradually decreased till it was lowest in the weight group 2001-2500 gms. after which it again showed slight rise (Table II).

Same authors have reported a still birth rate of 65/1000 during the same period as in this study (Sharma *et al* 1981). They also report a high still birth rate in maternal age group below 21 years and above 30 years, in multiple pregnancy, in various malpresentations and in low birth

TABLE I

Perinatal Loss in Relation to Age and Parity of the Mother and to Multiple Births

	Total births	Still-births	Neonatal deaths	Total perinatal loss	PNMR
Age in years					
20 or below	866	72	58	130	150.1
21-25	2634	164	181	345	124.7
26--30	2956	159	143	302	102.1
Above 30	1001	145	125	270	269.7
Parity					
Primi	2248	65	67	132	54.3
2-4	5198	334	303	637	122.5
5 or more	805	141	137	278	346.3
Multiple/Single births:					
Single	8137	522	446	968	118.9
Multiple	228 (114 pairs)	18	61	79	4 346.3

TABLE II

Perinatal Loss in Relation to Weight of the Newborn

Birth weight in gms.	Total births	Still births	Neonatal deaths	Perinatal loss	PNMR
Below 1000	126	18	108	126	1000
1000-1500	242	103	97	200	826.4
1501-2000	821	95	87	182	221.6
2001-2500	3521	107	133	240	68.1
2501-3000	3121	179	71	250	80.4
Above 3000	420	38	11	49	116.6

weight infants. Same findings are encountered in the present study.

The various clinical causes of deaths in newborns have been depicted in Table III. Maximum mortality have been caus-

TABLE III
Clinical Causes of Neonatal Deaths

Clinical cause of deaths	Total No.	Percentage
Neonatal septicemia	88	17.4
Hyaline membrane disease	183	36.1
Extreme prematurity	129	25.4
Birth anoxia	53	10.4
Intracranial injury	21	4.1
Congenital anomalies	3	0.59
Aspiration pneumonia	22	4.19
Bronchopneumonia	2	0.39
Hemorrhagic disease of newborn	5	0.98

ed by hyaline membrane disease (36.1%), extreme prematurity (25.4%) and neonatal septicemia (15.4%). Hyaline membrane disease mostly affected premature neonates hence prematurity carries greatest toll for neonatal deaths. Besides unknown factors, poor antenatal care, maternal malnutrition, medical illnesses in mother and toxemias of pregnancy are responsible for prematurity. Another important cause of early neonatal deaths was neonatal septicemia which reflects poor asepsis in the labour room, in postnatal wards and in the neonatal unit which can be prevented.

Proper antenatal care, adequate nutrition to mothers and family planning advice as regards age of marriage, spacing and number of children would go a long way in reducing prematurity and perinatal loss because of it. Adequate asepsis would help to prevent loss due to infections.

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