

A Study of Perinatal Mortality in Head Quarters Hospital Bellary

S.S. Gaddi, Shantha Seetharam

Department of Obstetrics and Gynaecology, Annamangar Institute of Medical Sciences, Bellary

Summary

All the deliveries between 1st June 1997 to 31st May 1998 in labour ward of H.Q.H. Bellary were analysed in order to find out the perinatal mortality and the factors associated with it. It was noted that there were 60 perinatal deaths and that the perinatal mortality rate was 106.80/1000 births. The main causes of perinatal mortality were antepartum hemorrhage, severe birth asphyxia, obstructed labour and multiple pregnancy. The socio-economic status, obstetric and neonatal determinants were discussed.

Introduction

Perinatal mortality is a sensitive indicator of maternal and child health care. It is subject to regional variability. This hospital based data is not truly representative of the community as it often deals with highly selective high risk pregnant population from which they have been referred to referral centers. The present study is made to analyse the state of affairs in Head Quarters Hospital, Bellary.

Material and Methods

2718 consecutive new born delivered in the labour ward in H.Q.H. Bellary over a period of one year between (1st June '97 to 31st May '98) were analysed. The information regarding maternal age, parity, socio-economic status, antenatal registration, intrapartum care, previous obstetric history, mode of delivery, indication for operative intervention, and any intrapartum complication were noted. The birth weight, APGAR Score at 1' & 5', neonatal problems and mortalities were also recorded. The results were

analysed by simple statistical procedures and test of significance were applied wherever necessary using chi square method.

Results and Discussion

The data in Table I shows that overall perinatal mortality was 106.8/1000 births. High perinatal mortality of 60/120/1000 deliveries is generally unacceptable when compared to 10-20/1000 births in most of the developed nations of the world. Smith (1980)

Table I
Perinatal outcome in H.Q.H. Bellary

Total deliveries	2718
Live Births	2418
Still births	30
Early neonatal deaths	97
Perinatal deaths	60
Perinatal Mortality rate	106.8/1000 births

The data in Table II shows that the maternal

educational level, height, predelivery weight, parity and haemoglobin level showed inverse relationship to perinatal mortality. Maternal age of >35 yrs age was

shown to be associated with adverse perinatal outcome. Similar observations were also made by other reported studies (Mehta and Jayant 1983, Bhatia et al 1984).

Table II
Determinants of Perinatal Mortality rate (Odds Ratio = 106.8/100)

		PMR/1000 Births	P-Value
Biosocial Factors:			
1. Education of Mother	Illiterate	111.1	P < 0.05
	Literate	100.2	
2. Maternal Age	< 35 yrs	105.7	P < 0.05
	≥ 35 yrs	132.6	
3. Parity	< 4	103.2	P < 0.05
	≥ 4	148	
4. Weight in kgs	≤ 40	122.2	P < 0.05
	> 40	108	
5. Maternal height in cms	≥ 140	104.9	P < 0.05
	< 140	106.7	
6. Hb% in gms	< 8	114.3	P < 0.05
	≥ 8	105	
Previous Obstetric History :			
1. Previous history of still births and neonatal deaths.		111.6	P < 0.05
2. No previous history of still births neonatal deaths.		106.9	
Antenatal Registration :			
1. Booked < 3 visits		51.7	P < 0.05
2. Unbooked < 3 visits		130.04	
Labour Characteristics			
1. Type of labour			P < 0.05
- Spontaneous		100.4	
- Induced		278.0	
2. Nature of delivery			P < 0.05
- Vaginal		92.8	
- LSCS		95.6	
- Forceps		129.6	
3. Duration of labour			P < 0.05
< 12 hrs		99.8	
> 12 hrs		373.3	
Neonatal Characteristics :			
1. Birth Weight			P < 0.05
- < 2000 gms		463.1	
- 2000 - 2500 gms		94.8	
> 2500 gms		50.8	

P. Value < 0.05 is significant

Higher perinatal mortality was also noted in patients with previous history of still birth and neonatal deaths in unbooked cases, induced labour, instrumental deliveries, prolonged labours and low birth weight babies. These observations were also made by other reports (Bernard and Sastra Wintata 1985, Venkatesh A., 1988, Swain et al 1993). Prematurity, severe birth asphyxia, neonatal sepsis, congenital anomalies and feeding problems were the major causes of early neonatal deaths as evident from Table III.

Table III
Early Neonatal Deaths :

Causes	Nos (Percentage)
1. Prematurity	59 (60.9)
2. Severe birth asphyxia	22 (22.6)
3. Septicaemia	10 (10.3)
4. H.G.K.	4 (4.1)
5. Congenital anomalies	2 (2.1)

Conclusion : Analysis of perinatal deaths helps the clinician to assign the cardinal causes responsible for the train of events leading to perinatal death. From table IV it is evident that eclampsia-PH, APH, obstructed labour and rupture uterus accounted for more than half (52.8%) of the perinatal deaths which could perhaps be preventable. From table II it is seen that most of perinatal deaths in our hospital occurred amongst unbooked cases (72%) - poor utilization of maternal and child health

care services, induced labours, prolonged labour and low birth weight babies. Maternal illiteracy, ill health and poor nutritional status also contributed to the unacceptable high perinatal mortality rate. The high rate of delivery being reflection of the community served by the hospital, late referrals of complicated cases who had no prior antenatal care also contributed to the high PMR among hospital delivery. However, improvement of antenatal care, early detection of Obstetric problems and timely referral to appropriate level of health care and in medical and effective attention to such high risk cases - a referral centers would certainly help in reducing the perinatal mortality.

References

1. Bernard RP and Sastrawintata S. in: Lassar U., Senault R., Viehues H. (Eds) Primary Health Care in the making - Springer Berlin, Heidelberg, New York, Tokyo, : P 335, 1985.
2. Bhatia BD, Mathur NB, Handa P, Dubey M, Trivedi M.: Indian J. Pediatr. 51, 465, 1984.
3. Mehta AC and Javani K.: J. Obst. Gyn. India, vol. 31, 1983.
4. Singh M.: Indian Pediatrics, 23, 579, 1986.
5. Swain S., Prakash A., Bhargava V., Agarwal A., Ojha K.N., Bhatia B.D., J. of Obst and Gyn of India, Vol. 43, 743, 1993.
6. Venkatesh A., Indian Pediatrics, 25, 497, 1988.

Table IV
Primary causes for perinatal deaths in relation to obstetric factors.

Factors	Still birth	Early Neonatal Deaths	Perinatal deaths No. (Percentage)
1. Eclampsia - PH	49	30	79 (27.3)
2. APH	39	7	46 (15.9)
2. Obstructed Labour - rupture Uterus	21	7	28 (9.6)
4. Malpresentation	25	1	26 (9.0)
5. Fetal distress	10	14	24 (8.2)
6. Congenital anomalies	14	2	16 (5.5)
7. Multiple Pregnancy	10	6	16 (5.5)
8. Miscellaneous	20	10	30 (10.4)
9. Not known including MSB	25		25 (8.6)