ANALYSIS OF STILL BIRTHS IN A REFERRAL HOSPITAL

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SUMMARY

Five hundred and fifty two still births over a period of three years in a referral hospital were analysed to identify the causes and suggest methods for improvement. The still birth rate (SBR) was 43/1000 births. The SBR for unbooked and booked cases were 68.1 and 18.6/1000 respectively. The cause could be identified in 64.3% of still births. Preventable causes like pregnancy induced hypertension, eclampsia, obstructed labour and rupture uterus accounted for 32.6% of cases. Congenital malformations were noted in 10.3% of still births and neural tube defect was the commonest malformation. Adequate antenatal care with appropriate management of high risk cases will reduce the incidence of still births.

INTRODUCTION

Despite the tremendous advances in the field of modern obstetrics, the perinatal mortality is still high in developing countries. Early neonatal deaths and still births together constitute the perinatal mortality which is one of the sensitive indicator of the care given to the antenatal mother and her neonate. Death of a fetus is a traumatic experience for the mother, family and the physician. Almost 60% of the perinatal mortality is due to the still births (Kameshwaran et al, 1993). It is sad to note that many of the still births are preventable. We analysed the still births occurring over a period of three years in our referral hospital in an attempt to find out the causes and suggest possible preventive measures.

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Accepted for Publication on Nov' 96

MATERIAL AND METHODS

All the still births which occurred in the JIPMER hospital from January 1992 to December 1994 were included in the study. The maternal details including the age, parity, medical illnesses, presence of antepartum hemorrhage (APH), pregnancy induced hypertension (PIH), eclampsia and other significant illnesses were noted. Those patients who had attended the antenatal clinic at least thrice before delivery were considered as booked cases. The mode of delivery, sex and birth weight of fetuses were recorded. The gestational age was assessed from the last menstrual period of the mother and clinical examination of the baby. All the fetuses were examined for congenital malformations. Autopsy was performed whenever consent could be obtained from the parents.

RESULTS

There were a total of 12,835 deliveries during the study period of which 552 were still births, with a still birth rate (SBR) of 43/1000 births. Majority of the still born babies were low birth weight (74.6%) and 48.4% were preterms. Babies weighing less than 1000 gms accounted for 14.5% of still births and 5.6% of them were less than 28 weeks of gestation (Table I). The still birth rate among unbooked mothers was almost four times higher than that for booked mothers (68.1/1000 Vs 18.6/1000). Pregnancy induced hypertension (PIH) and

Table I
BIRTH WEIGHT AND GESTATIONAL AGE DISTRIBUTION OF STILL BIRTHS

Gestational age in weeks	Birth weight (in grams) <1000	1000 to 1499	1500 to 1999	2000 to 2499	2500 to 3499	>3500	Total
< 28	25	6	..	..	..	..	31
29-30	26	32	5	1	..	..	64
31-32	11	34	13	1	..	..	59
33-34	11	28	16	6	..	..	61
35-36	3	13	25	11	..	..	52
37-42	4	21	36	83	131	8	283
> 42	..	..	..	1	1	..	2
Total	80	134	95	103	132	8	552

Table II
CAUSES OF STILL BIRTHS

Caused	Booked	Unbooked	Total	Percentage
1. Pregnancy induced-Hypertension	12	52	64	11.6
2. Eclampsia (Booked outside)	5	35	40	7.3
3. Antepartum Haemorrhage				
Abruptio placenta	8	46	54	9.8
Placenta previa	5	17	22	4.0
4. Rupture uterus	3	54	57	10.3
5. Congenital malformations	9	48	57	10.3
6. Cord prolapse (3 booked outside)	5	19	24	4.3
7. Chorioamnionitis	..	9	9	1.6
8. Obstructed labour	..	19	19	3.5
9. Others :	..	9	9	1.6
Uterine malformation	..	2		
Diabetes mellitus	..	2		
Syphilis	..	1		
Epilepsy	..	1		
Typhoid fever	..	1		
Hepatic encephalopathy	..	1		
Blunt injury abdomen	..	1		
10. Unknown causes	76	121	197	35.7
	123	429	552	

eclampsia together accounted for 18.9% of still births followed by antepartum hemorrhage (APH) and rupture uterus (Table II).

There were 77 still births among 3299 caesarean deliveries during the study period. Majority of them were unbooked (84.4%) and caesarean section was performed either to save the mother or the baby (Table III). Congenital malformations were noted in 10.3% of still births, neural tube defects being the commonest (Table IV). One hundred and sixty one

Table III
INDICATIONS FOR CAESAREAN SECTIONS

Indication	Booked	Unbooked	Total
Obstructed labour	..	17	17
Fetal distress	1	16	17
Placenta previa	3	11	14
Cord prolapse	1	10	11
Eclampsia	..	7	7
P I H	..	3	3
Abruptio placenta	2	1	3
P I H + Diabetes	1	..	1
Previous LSCS + CPD	2	..	2
Scar rupture	1	..	1
UV prolapse, IUD	1	..	1
	12	65	77

Table IV
CONGENITAL MALFORMATIONS OBSERVED AMONG THE STILL BIRTHS

Malformation		Number
1. Neural tube defects :		38
Hydrocephalus	21	
Anencephaly	13	
Meningomyelocele	3	
Encephalocele	1	
2. Multiple anomalies		6
3. Hydrops fetalis		5
4. Conjoined twins		2
5. S R P - I		1
6. Phocomelia		1
7. Omphalocele		1
8. Ambiguous genitalia		1
9. Potter syndrome		1
10. Cleft lip & palate		1
Total		57

fetuses (29%) were macerated. Only 48 babies could be autopsied. In 64.3% of cases one or more causes responsible for the still birth could be identified.

DISCUSSION

Fetal demise is a traumatic experience for both the mother and the physician. Despite the advances in the field of perinatal medicine significant number of still births continue to occur. The SBR in the present study was 43/1000 births which is comparable to the SBR of 42.2/1000 in Madras (Githa et al, 1992). This appears high compared to 23.4 and 23.6/1000 reported from Bombay (Nayak et al, 1993) and Vellore (Jadhav et al. 1986) respectively, although we included all still births above 500 gms in our study.

One or more antenatal or intranatal factors which caused the death of the fetus could be identified in two third of cases. It is sad to note that a good majority of these are preventable like PIH, eclampsia, obstructed labour and rupture uterus. PIH and eclampsia contribute significantly to the perinatal as well as maternal morbidity and mortality. Githa et al (1992) have observed that the SBR in preeclampsia was 93.5/1000 and that for eclampsia 215/1000. Others have reported that as much as 40% of fetuses were already dead when the diagnosis of eclampsia was made and the treatment initiated (Indu et al, 1993). In the present study PIH and ecalmpsia together accounted for 18.9% of total still births. Another 10.3% of still births were caused by rupture uterus and 3.5% by obstructed labour. The incidence of rupture uterus in the present study was one in 227 deliveries. In India, the incidence or rupture uterus ranges from one in 100 to one in 500 (Rao, 1992), whereas the incidence in developed countries is one in 1650 to 3000 deliveries (Rodriguez et al, 1989). Both eclampsia and the rupture uterus are preventable if the predisposing conditions are diagnosed early and managed properly. In our study, majority of these patients were unbooked and came in a critical stage. Appropriate antenatal care at the peripheral level and prompt and early referral of these patients would have salvaged many of these babies.

Antepartum hemorrhage accounted for 13.8% of still births. Dutta et al (1980) reported it to be responsible for 26.9% of still births. In our study once again most of them were unbooked. Probably there is little scope for prevention of fetal deaths in them since many a time patients are received in critical condition when saving mother's life is more of a concern.

The caesarean section rate has been increasing over a period of time as a practical and safe alternative mode of delivery (Dalvi A et al. 1994). This progressive increase in caesarean section rate is accompanied by decline in PMR over the same period (Bhide A, 1993). Caesarean section when performed after careful planning carries little risk for the newborn. However, this does not apply for emergency sections, which are carried out most of the time as an alternative to dangerous and difficult vaginal deliveries (Pal SK, 1992). It has been observed that increase in caesarean section rate alone without improvement in quality of obstetric services will not improve the outcome (Desai P et al. 1995) and the emergency caesarean section and operative vaginal

deliveries have poor obstetric outcome (Sali A et al 1990, Kumari S et al. 1990). In our study 77 stillborns were delivered by caesarean sections, accounting for 14% of total still births. Obstructed labour, fetal distress, placenta previa and cord prolapse were the common indications. Similar observations have been made by other workers also (Sambarey P et al. 1996). Most of these patients either came or referred very late ending up in emergency caesarean section in an attempt to save the baby/ mother or both. The SBR in caesarean section deliveries in our series was 23/1000 sections, which is less than 28/1000 reported by Sambarey et al (1996) and 45/1000 reported by Pal (1992).

Fifty seven still borns had congenital malformations accounting for 10.3% of still births and could be considered unsalvageable. A comparable figure of 13% was reported by others (Christopher L.G. et al. 1986). In 35.7% of our cases no specific cause could be identified. Nayak et al (1993) observed that in 22% of antenatal still births and 11% of intrapartum still births no contributory cause could be found.

CONCLUSION

In conclusion, it may be said that a significant proportion of still births are preventable. The target population should be made aware of the importance of antenatal care. The importance of porper antenatal care, identification of high risk patients and their prompt and early referral to a center where they can be managed appropriately needs to be emphasized among the medical and paramedical personnel who are the first point of contact with the patient. These would go a long way in reducing the incidence of still births.

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