

STILL BIRTHS IN SOUTH ORISSA

(A Two Year Clinical Study in MKCG Medical College Hospital)

by

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Perinatal mortality in India is about 60-65 (Parikh and Mehtaji, 1975) compared to only 18 in England (Dewhurst, 1976) and 27.8 in U.S.A. (Rao, 1978). This basic health problem of the country seems to have received very little attention in the past. Recently a nationwide study of the problem has been taken up at various centres which include the Obstetrics and Gynaecology department of the M.K.C.G. Medical College Hospital, Berrampur. This hospital renders specialist care to the population of South Orissa which could be considered less developed compared to many other parts of the country. Stillbirths constitute the major part of the perinatal deaths in this hospital. This report is based on the clinical study of 197 consecutive stillbirths that took place between 16-8-78 and 15-8-80.

Material and Methods

A fetus weighing 750 gms or more and showing no sign of life at birth has been recorded as a stillbirth. Detailed data on patient characteristics, obstetrical background, antenatal supervision, prenatal maternal problems, labor and delivery, fetus and newborn characteristics were collected in respect of every stillbirth and the two live births that followed it. The

live births constituted the control group. The data was analysed to find out the incidence of stillbirths and some of its etiologic factors.

Results

The total number of deliveries during this 2 years period was 2106 which included 197 stillbirths and 78 neonatal deaths. The perinatal mortality rate was 130.5 and stillbirth rate was 93.5 per 1000.

Among the stillborn babies, 56.8% were males compared to 53.5% in the control group.

Prematurity (<2000 gm) among stillbirths was 51.2% and in the control group it formed 11.4%. Births before 34 weeks of gestation had less difference in the incidence of prematurity in the study and control groups but in more advanced gestational groups prematurity rate was much higher among stillbirths (Fig. 1).

In the stillbirth group, 30.0% had antenatal care compared to 60.1% in the control group.

More patients in the stillbirth group belonged to low socioeconomic status having an income of Rs. 200 or less per month (42.1% vs. 23.0%).

Distribution of patients in different age groups is more or less similar in both study and control groups (Table I). Patients above 30 were in slightly higher number (25.3%) in the stillbirth group as compared with the control group

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TABLE I
Stillbirth and Maternal Age

Age in years	Stillbirth N = 197		Control N = 394		General N = 2106		Corrected SB rate	
	No.	%	No.	%	No.	%	No.	%
19 or less	25	12.7	69	17.5	326	15.5		7.6
20-24	68	34.5	156	39.6	774	36.8		8.8
25-29	54	27.4	104	26.4	578	27.4		9.3
30-34	29	14.7	44	11.2	283	13.4		10.2
35-39	15	7.6	19	4.8	116	5.5		12.9
40 or more	6	3.1	2	0.5	29	1.4		20.7

(16.4%). On an agewise split up of all cases it was found that patients above 30 had greater incidence of stillbirths.

Table II shows the distribution of parity. In the study group, parity I occurred in highest number (26.3%) and parity 6 in lowest. Among all cases delivered during the period the risk of stillbirth was found to be significantly higher in patients of parity 4 and above. The risk was highest in parity 6 (21.1%) and lowest in parity 3 (5.6%).

Of the antenatal complications A.P.H. was found to be far more commonly associated with stillbirths (21.3%) than with control cases (3.2%). Pre-eclamptic toxæmia and anemia cases were also more common in the stillbirth group

18.2% vs. 11.9% and 39.5% vs. 26.9% respectively (Table III).

There were 58 (29.4%) cases of abnormal presentations at delivery in the stillbirth group as against 26 (6.6%) in the control group. These included breech (11.6% vs 5.3%) shoulder (15.2% vs 0.2%), face (0.5% vs. 1.0%) and compound presentations (1.0% vs. nil). The twins of study group had 7 breech and 8 shoulder presentations and those of the control group had 12 breech but no shoulder presentations.

Forceps delivery rate was lower but caesarean section and breech delivery rates were higher among the stillbirths compared with those of controls (Table IV). In the study group, 14 stillbirths

TABLE II
Stillbirth and Parity

Parity	Stillbirth N = 197		Control N = 394		General N = 2106		Corrected SB rate	
	No.	%	No.	%	No.	%	No.	%
I	52	26.4	146	37.1	697	33.1		7.4
II	36	18.3	77	19.5	444	21.1		8.1
III	20	10.2	72	18.3	359	17.1		5.6
IV	27	13.7	34	8.6	231	10.9		11.7
V	21	10.6	26	6.6	171	8.1		12.3
VI	18	9.1	19	4.8	85	4.0		21.1
VII & above	23	11.7	20	5.1	119	5.7		19.3

TABLE III
Stillbirth and Antenatal Complications

Complications	Stillbirths (N = 197)				Control (N = 394)			
	Prema- ture <2000G	Mature >2000G	Total	%	Prema- ture <2000G	Mature >2000G	Total	%
A.P.H.	26	16	42	21.3	5	8	13	3.2
PET & Eclampsia	17	19	36	18.2	11	36	47	11.9
Anemia	45	33	78	39.5	17	89	106	26.9
Hydramnios	4	3	7	3.5	2		2	0.5
Hypertension of other origin	1	2	3	1.5	1	6	7	1.7
Heart disease					1	1	2	0.5

occurred in 12 cases of twin delivered vaginally. Two cases of twin have been delivered by section, each having one stillbirth. The incidence of twin deliveries in the control group is about one third (2.3% vs. 7.2%) of that among still-born cases. Thirty-three cases (16.7%) in the still birth group were delivered by destructive operations.

TABLE IV
Stillbirth and Mode of Delivery

Type of delivery	Still- birth N = 197		Control N = 394	
	No.	%	No.	%
Forceps	5	2.5	43	10.9
Breech	19	9.6	5	1.2
Twin	14	7.2	9	2.3
C.S.	43	21.8	62	15.7

Nineteen cases of congenital anomalies found in stillbirth group included 6 each of anencephaly and hydrocephaly. 2 of harelip and cleft palate and 1 each of sacrococcygeal tumor, fetal ascites, phocomelia, exompholus and abdominal tumor. In the control group there was 1 case each of congenital ichthiosis, spina

bifida occulta with lipoma, congenital nevus face and talepes equinovarus.

Analysing the factors which could have significant contribution to stillbirths in this series, insufficient antenatal attention, and failure of timely admission for which patient is primarily responsible was noted in 90 and 60 cases respectively. Error or delay in delivery, a physician responsibility, was found to be an important factor in 16 cases. In 2 cases inadequate investigational assistance was considered as important factor and in the rest 29 cases the fetal death was considered unavoidable.

Discussion

Perinatal mortality and stillbirth rate in this two years study was very high (130.5 and 93.5 respectively) compared to those of many other reported series from different institutions of India. This is because this institution being a referral hospital for the whole of South Orissa serves a very high risk population.

Preponderance of males among still-born babies was found in the present study as reported by Sainaba *et al* (1972) and Taylor and Shah (1969). The dis-

tribution of sex among the stillborn and the control groups was more or less similar.

Prematurity as a major contributing factor to the perinatal deaths is well documented. Ross (1964) found it in 60% of his series of 279 perinatal deaths. Its distribution in Sainaba *et al's* (1972) series of stillbirths was 44.1%. In the present study the overall incidence of prematurity among stillbirths (51.2%) was significantly different from that (11.4%) in the control group. The study group had significantly higher incidence of prematurity than control cases in all gestational age groups as shown in Fig. 1.

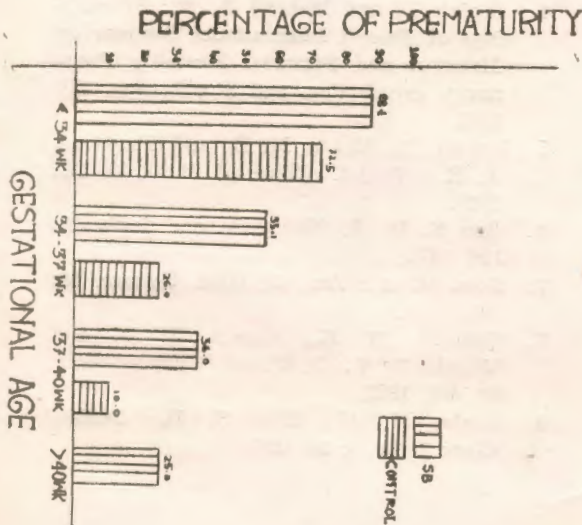


Fig. 1

The number of patients in the study group who had antenatal care once or more either in this institution or elsewhere were about half of those in the control group (30.0% vs. 60.1%). This difference is significant showing its great importance. Ninety-five patients (23.6%) of Isaac *et al's* (1975) 401 stillbirth cases and 29.1% of Sainaba *et al's* (1972) 474 cases had received antenatal care.

Contrary to the observations of others like Sainaba *et al* (1972) the young patients (< 19 years) in this study were not at greater risk for stillbirths. But the consistent increase in the rate of stillbirths with advancing age is comparable to the findings of others. Considering all the patients who delivered during this period of two years the distribution of patients below and above 30 did not show any significant difference in the stillbirths and livebirths.

This study has shown that the risk of stillbirth is low upto parity III and from parity IV onwards the risk is higher. The high incidence of stillbirths in the first delivery as found by other workers has not been observed in this series.

Lal (1975) in his study on perinatal mortality found antepartum hemorrhage and toxemia of pregnancy to be responsible for 20.5% (24/117) and 3.4% (4/117) of stillbirths. Corresponding figures in Sainaba *et al's* (1972) series of stillbirths was 20.5% and 11.4%. In this series, 47 cases of APH were found responsible for 47 stillbirths (24.0%). Toxemia of pregnancy was responsible for 8.7%.

Malpresentations during labour (twins excluded) was noted in 20% of cases of stillbirths of which breech formed 8%, and shoulders 11%.

In one case of obstructed labour a huge sacrococcygeal tumor was found obstructing delivery. This was ultimately delivered by C.S. resulting in a stillbirth. Patel *et al* (1969) found 2 cases of congenital anomalies in their series of 55 stillbirths (3.6%). The incidence of congenital anomalies in this series was 9.6% (19/197) and 8.1% of stillbirths was considered to be due to these, all of which were major anomalies.

The incidence of rupture of uterus in

