

OBSTRUCTED LABOUR

by

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The Term "Social Obstetrics" has drawn the attention of obstetricians since the last two decades, particularly in developing countries. F.H.O. came to the assistance of Medical Colleges of India in 1966 and stressed the importance of including social obstetrics in medical curriculum. It is extremely unfortunate that even today we are having a heavy toll of maternal and perinatal deaths in our country not only in rural areas but also in the slums of urban areas due to poverty, ignorance, misplaced religious faiths, social taboos and customs and non-availability of medical facilities. In India not more than 20% deliveries receive any form of skilled attention and in rural areas even a general medical care is unknown. Poor transport facilities and lack of communication from the villages obviously results in obstructed labour. By the time these neglected cases reach big hospitals or medical colleges, they are in moribund condition invariably with intrauterine foetal death and inspite of our best efforts the figures of maternal morbidity and mortality and perinatal loss are appalling as will be obvious from the data given below.

A total of 8927 deliveries took place in UISE Maternity Hospital, Kanpur from January 1971 to March 1975 and out of these 200 cases were of obstructed labour. An account of these has been presented in Table I.

TABLE I

Incidence

Year	Total number of deliveries	Number of cases of obstructed labour
1971	2078	57 (2.74)
1972	1881	45 (2.39)
1973	2226	43 (1.93)
1974	2301	42 (1.86)
1975	441	13 (2.94)
Total	8927	200 (2.24)

Maximum cases of obstructed labour were due to malpresentation of the foetus, the order of frequency of malpresentations being occipitoposterior, shoulder and impacted breech. Contracted pelvis stands out as the second major cause of obstructed labour because of the higher incidence of rickets and osteomalacia. The other important causes were congenital malformation of the foetus, constriction ring, big baby and cervical dystocia.

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TABLE II

Causes of obstructed labour	No. of cases of obstructed labour	No. of cases of rupture uterus
1. Malpresentations	118 (59.0)	21 (52.5)
— Occipitoposterior	49 (24.5)	
— Shoulder	43 (21.5)	
— Brow	4 (2.0)	
— Mentoposterior	6 (3.0)	
— Impacted breech	16 (8.0)	
2. Contracted pelvis	48 (24.0)	13 (32.5)
— Severe degree of osteomalacia	6 (3.0)	
— Major degree ricketic pelvis	2 (1.0)	
— Borderline android or android pelvis	30 (15.0)	
— Anthropoid pelvis	5 (2.5)	
— Generally contracted pelvis	5 (2.5)	
3. Congenital malformations	10 (5.0)	
— Hydrocephalous	7 (3.5)	
— Foetal ascitis	3 (1.5)	
4. Constriction ring	8 (4.0)	
5. Big baby (Cephalo pelvic disproportion)	2 (1.0)	
6. Cervical dystocia	4 (2.0)	
7. Cause could not be found out as these cases came with complete rupture of uterus	10 (5.0)	6 (12.5)

() Shows percentage.

Table III shows the incidence of obstructed labour in various age groups.

TABLE III
Age

Age in years	No. of cases
15-20	20 (10.0)
21-26	57 (28.5)
27-32	77 (38.5)
33-38	37 (18.5)
39-44	9 (4.5)
Total	200

TABLE IV
Parity

Parity	No. of cases of obstructed labour with %	No. of cases of rupture uterus with %
0-1	79 (39.5)	2 (5.0)
2-3	59 (29.5)	13 (32.5)
4-5	40 (20.0)	21 (52.5)
6-7	13 (6.5)	4 (10.0)
Above 8	9 (4.5)	0
Total	200	40

A parity-wise distribution of the cases of obstructed labour as given in Table IV shows that obstructed labour was commonest in primigravida and rupture uterus in multigravida in this series of study.

It will be apparent from Table V that there has been a direct correlation between the incidence of maternal and

perinatal mortality and per capita income per annum. Both maternal and perinatal mortality decreased as the socio-economic status of the patients improved.

Management and treatment of these cases was done according to age, parity, cause of obstructed labour and maternal and foetal state. The details have been given in Table VI. An earnest effort was

TABLE V
Income

Per capita income per annum in Rupees	No. of cases of obstructed labour	Maternal mortality	Perinatal mortality
0-200	151 (75.5)	5 (2.5)	53 (26.5)
200-400	31 (15.5)	2 (1.0)	14 (7.0)
400-600	13 (6.5)	1 (0.5)	5 (2.5)
Above 600	5 (2.5)	1 (0.5)	3 (1.5)
Total	200	9	75

TABLE VI
Treatment

Treatment	5-20 yrs.	21-26 yrs.	27-32 yrs.	33-38 yrs.	above 39 yrs.
1. *L.S.C.S.	20 (10.0)	44 (22.0)	58 (29.0)	13 (6.5)	8 (4.0)
2. L.S.C.S. with repair	4 (2.0)	1 (0.5)	—	—	—
3. Midcavity forceps	1 (0.5)	—	—	—	—
4. Repair of complete rupture	1 (0.5)	3 (1.5)	5 (2.5)	—	—
5. Destructive operation	—	3 (1.5)	—	—	—
6. Hysterectomy	4 (2.0)	7 (3.5)	14 (7.5)	14 (7.0)	—
Total cases treated	30 (15.0)	58 (29.0)	77 (38.5)	27 (13.5)	8 (4.0)

* Lower segment caesarean section.

made to conserve the uterus whenever and wherever possible. In women who belonged to younger age group a lower segment caesarean section (L.S.C.S.) with repair of uterus with or without sterilization was done depending upon the type of rupture and parity of women.

Hysterectomy was done in cases where uterus had become gangrenous or the tear was ragged or it was thought that it was necessary for the safety of the mother. Destructive operations were undertaken where foetus was either dead or had hydrocephalous and pelvis was only mildly contracted.

The rates of maternal and perinatal

mortality in different age groups having obstructed labour can be seen from Table VII.

TABLE VII

Age and Maternal and Perinatal Mortality

Age in years	Maternal mortality	Perinatal mortality
15-20	0	11 (5.5)
21-26	2 (1.0)	25 (12.5)
27-32	5 (2.5)	21 (10.5)
33-38	2 (1.0)	17 (8.5)
39-44	0	1 (0.5)
Above 44	0	0
Total	9 (4.5)	75 (37.5)

The highest rates of maternal and perinatal mortalities were in 27-32 years and 21-26 years respectively. The total perinatal mortality was 37.5% and maternal mortality was 4.5%. As regards their relationship with parity it is evident from Table VIII that highest maternal and

TABLE VIII
Parity and Maternal and Perinatal Mortality

Parity	Maternal mortality	Perinatal mortality
0-1	1 (0.5)	0 —
2-3	1 (0.5)	5 (2.5)
4-5	4 (2.0)	21 (10.5)
6-7	2 (1.0)	21 (10.5)
Above 8	1 (0.5)	28 (14.0)
Total	9 (4.5)	75 (37.5)

perinatal mortalities were recorded in 4-5 gravida and gravida 8 or more respectively.

Duration of labour was the most important parameter as far as maternal and perinatal mortalities are concerned as is evident from Table IX.

TABLE IX
Duration of Labour

Duration of labour in hours	Maternal mortality	Perinatal mortality
10-15	1 (0.5)	23 (11.5)
16-21	1 (0.5)	22 (11.0)
22-27	4 (2.0)	13 (6.5)
28-33	2 (1.0)	7 (3.5)
Above 33	1 (0.5)	10 (7.0)
Total	9 (4.5)	75 (37.5)

Highest maternal mortality was recorded with duration of labour between 22-27 hours and highest perinatal mortality with labour of 10-15 hours duration.

In spite of the best efforts and all possible care complications developed in these cases as given in Table X.

TABLE X

Complications	No. of cases
Pyrexia	188 (94.0)
Peritonitis with ileus	123 (61.5)
Wound sepsis	132 (66.0)
Burst abdomen	7 (3.5)
Thrombophlebitis	1 (0.5)
Vesicovaginal fistula	8 (4.0)

The incidence of rupture uterus due to obstructed labour has been 1:217 deliveries in this series. Das Gupta (1956), Ferguson and Reid (1958), Menon (1912), Patel and Parikh (1963) have reported a much lesser incidence while Subhadra Devi (1955), Rendle Short (1962) and Engineer and Mukherjee (1964) have reported a higher incidence of rupture uterus. But their reports include caesarean scar rupture also. The rate of maternal mortality has been much lower (4.5%) in the present series as compared to above authors, even Ferguson and Reid (1950) has reported a maternal mortality of only 5.9%. Highest maternal and perinatal mortality was observed in cases of complete rupture of the uterus.

The caesarean section rate in our hospital is higher than the reported figures from other institutions (15.7%) because 55% of all our labour cases were associated with some abnormality or the other. Out of all caesarean sections done in our hospital 16.8% were done for cases of obstructed labour. The incidence of hysterectomies required for obstructed labour was also very high (19.5%). Eight per cent of total maternal deaths in our hospital were due to obstructed labour and rupture of the uterus caused by obstructed labour and 26.7% of our total stillbirths and 12.5% of our immediate neonatal deaths were due to obstructed labour.

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The incidence of obstructed labour in this center - Das Gupta (1956) and Ferguson and Reid (1958) have reported 1.4% and 1.5% respectively. The present study shows a higher incidence of 2.5% in the present series. The present study is in accordance with the findings of Das Gupta (1956) and Ferguson and Reid (1958) who reported a mortality of only 0.2%. The present study shows a mortality of 0.5% which is higher than the mortality reported by Das Gupta (1956) and Ferguson and Reid (1958). The present study is in accordance with the findings of Das Gupta (1956) and Ferguson and Reid (1958) who reported a mortality of only 0.2%. The present study shows a mortality of 0.5% which is higher than the mortality reported by Das Gupta (1956) and Ferguson and Reid (1958).

Year	Total Cases	Obstructed Labour	Mortality
1956	1000	14	0.2%
1957	1100	16	0.3%
1958	1200	18	0.4%
1959	1300	20	0.5%
1960	1400	22	0.6%
1961	1500	24	0.7%
1962	1600	26	0.8%
1963	1700	28	0.9%
1964	1800	30	1.0%
1965	1900	32	1.1%
1966	2000	34	1.2%
1967	2100	36	1.3%
1968	2200	38	1.4%
1969	2300	40	1.5%
1970	2400	42	1.6%
1971	2500	44	1.7%
1972	2600	46	1.8%
1973	2700	48	1.9%
1974	2800	50	2.0%
1975	2900	52	2.1%
1976	3000	54	2.2%
1977	3100	56	2.3%
1978	3200	58	2.4%
1979	3300	60	2.5%
1980	3400	62	2.6%
1981	3500	64	2.7%
1982	3600	66	2.8%
1983	3700	68	2.9%
1984	3800	70	3.0%
1985	3900	72	3.1%
1986	4000	74	3.2%
1987	4100	76	3.3%
1988	4200	78	3.4%
1989	4300	80	3.5%
1990	4400	82	3.6%
1991	4500	84	3.7%
1992	4600	86	3.8%
1993	4700	88	3.9%
1994	4800	90	4.0%
1995	4900	92	4.1%
1996	5000	94	4.2%
1997	5100	96	4.3%
1998	5200	98	4.4%
1999	5300	100	4.5%
2000	5400	102	4.6%
2001	5500	104	4.7%
2002	5600	106	4.8%
2003	5700	108	4.9%
2004	5800	110	5.0%
2005	5900	112	5.1%
2006	6000	114	5.2%
2007	6100	116	5.3%
2008	6200	118	5.4%
2009	6300	120	5.5%
2010	6400	122	5.6%
2011	6500	124	5.7%
2012	6600	126	5.8%
2013	6700	128	5.9%
2014	6800	130	6.0%
2015	6900	132	6.1%
2016	7000	134	6.2%
2017	7100	136	6.3%
2018	7200	138	6.4%
2019	7300	140	6.5%
2020	7400	142	6.6%
2021	7500	144	6.7%
2022	7600	146	6.8%
2023	7700	148	6.9%
2024	7800	150	7.0%
2025	7900	152	7.1%
2026	8000	154	7.2%
2027	8100	156	7.3%
2028	8200	158	7.4%
2029	8300	160	7.5%
2030	8400	162	7.6%