

NEONATAL OUTCOME IN LOW RISK WOMEN ADMITTED IN 2ND STAGE OF LABOUR

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ABSTRACT

Neonatal outcome was determined in 199 women reporting to hospital in 2nd stage of labour and compared with control group where mothers were admitted in early labour. The neonatal morbidity was 19.1% in study group and 4.5% in control group. All 5 neonatal deaths were noted in the study group only. Various maternal reasons for reporting to hospital late in labour are discussed. The study calls for health education of women regarding onset of labour and reporting to delivery place early in labour to prevent neonatal morbidity or mortality.

Introduction

Neonatal morbidity and mortality continue to be high in India and is attributed to various antenatal, natal and post-natal factors. Though MCH services in the form of antenatal care, care during delivery, post-natal care and immunization etc., are being extensively propagated, but the impact on neonatal outcome has been marginal only. However, adequate stress has not been laid on a simple fact that a mother should report for delivery early in labour and find out if this has any impact in neonatal outcome.

In this prospective study, we studied neonatal morbidity and mortality in low risk mothers coming to hospital for delivery in 2nd stage of labour.

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Material and Methods

One hundred and ninety-nine pregnant women who were admitted in the labour room of Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital, New Delhi, in second stage of labour comprised the study group. A matched control group included 199 women admitted in early labour immediately after the study group cases. The study was conducted during a five months period (1st April to 30th August, 1987). The mothers with (1) pre-term labour (2) malpresentation (3) bad obstetric history (4) maternal disease e.g. diabetes, (5) pregnancy complications like APH, PET and intrauterine death, (6) obstructed labour were excluded from this study. Maternal age, parity, reasons for late arrival in hospital along with neonatal morbidity were studied in both groups. χ^2 test was used for statistical analysis.

Results

The present study revealed neonatal morbidity of 19.1% in study group com-

pared to 4.5% in the control group and these differences are highly significant. Five neonatal deaths (2.5%) were recorded in the study group while none occurred in the control group. All neonatal deaths were associated with perinatal asphyxia, 3 babies had severe birth asphyxia and two deaths occurred due to meconium aspiration syndrome. Incidence of neonatal problems is shown in Table I. A total of 11% of babies were born with meconium stained liquor in study group compared to 2.0% in the control group ($p < 0.001$). The birth weight pattern was however comparable in the two groups, 36.2% of babies in study group and 33.8% controls had birth weight < 2500 gm.

Relationship of neonatal morbidity according to maternal age and parity (Tables II and III) revealed higher morbidity in study group than control cases, although maternal age $< 20-30$ years, and primi-

TABLE I
Incidence of Neonatal Problems

Neonatal Problem	Study Group (n=199)		Control Group (n=199)	
	No.	%	No.	%
Perinatal hypoxia	16	8.0	5	2.5
Meconium aspiration syndrome (Resp. distress)	10	5.0	1	0.5
Meconium stained liquor (No. Resp. distress)	12	6.0	3	1.5
Total	38	19.0	9	4.5

$\chi^2 = 16.3, df = 1, p = <.001.$

parity had higher incidence of neonatal morbidity.

Maternal reasoning for hospital confinement are listed in Table IV. Various factors attributed to late reporting of mothers in hospital were late referral by private

TABLE II
Neonatal Outcome in Relation of Age Group of Mothers

Age group (in yrs)	Study Group			Control		
	N	Problem present No.	%	N	Problem present No.	%
<20	21	7	33.3	28	3	10.7*
20 - 29	162	28	17.3	158	5	3.2**
>30	16	3	18.8	13	9	7.7***

* $\chi^2 = 2.52, df = 1, p >.05$

** $\chi^2 = 16.70, df = 1, p <.001.$

*** $\chi^2 = 1.21, df = 1, p >.05.$

TABLE III
Neonatal Outcome in Relation to Parity of Mother

Parity	Study Group			Control		
	N	Problem No.	%	N	Problem No.	%
Primipara	73	25	34.2	58	6	10.3*
Multigravida	126	13	10.3	141	3	2.1**
Total	199	38	19.1	199	9	4.5

* $\chi^2 = 10.22, df = 1, p <.01.$

** $\chi^2 = 4.23, df = 1, p <.05.$

Study group Vs Control group.

doctor or dai (27.6%), presumed false labour (28.6%), Traffic Jams (18.2%) absence of personnel for escorting patient (17.0%) and miscellaneous reasons (8.5%).

TABLE IV
Reasons for Coming to Hospital

	No.	%
1. Prior booking	46	23.2
2. Referred by Private doctor/centre/dai	55	27.3
3. Previous delivery in hospital	34	17.0
4. Advised by Neighbour	7	3.2
5. Non availability of health personnel	37	18.5
6. Mother motivated for sterilization	9	4.4
7. Neonatal problems in previous pregnancy	13	6.4

TABLE V
Reasons for Late Reported to Hospital

Reason	No.	%
1. Delayed referral	55	27.6
2. Presumed false labour	57	28.6
3. Traffic Jams	36	18.7
4. No escorts	34	17.1
5. Miscellaneous	17	8.5
Total	199	100%

Discussion

Many obstetricians consider only the medical aspects of antenatal care and think little about patient education. The fact that labour usually is normal and vaginal delivery can almost always be anticipated for majority of low risk women, does not justify a complacent attitude towards them. Even in urban set up in India, quite a signi-

ficant number of low risk women come to hospital in second stage of labour and suffer an unexpected perinatal loss. Yet, very few have voiced to control this social problem.

A significantly higher incidence ($p < 0.001$) of neonatal morbidity in low risk mothers reporting to hospital in second stage of labour was the high light of our study. We attribute this to a chain of events. Mothers reporting in the second stage of labour are in a state of apprehension and anxiety, which in turn might lead to prolongation of second stage due to subsidence of labour pains leading finally to fetal distress and birth asphyxia. Occasionally, precipitate labour may be the cause (4.52%). On the other hand, a mother coming well in time i.e. in the early stage of labour has a sense of security due to the various medical personnel around which always her anxiety, soothes her mind and labour generally is normal.

Going by risk of maternal age, it was evident both in study and control group that neonatal morbidity rate was highest with lower maternal age (< 20 years), followed by age group of over 30 years (Table II). However, on comparing the neonatal morbidity rate of the study versus control group, statistical difference was most marked in age group of 20-29 years ($p < 0.001$).

In contrast to the control group, both primigravida and multigravida of the study group showed higher incidence of neonatal problems. However, primigravida mothers both in study and control group had significantly higher incidence of problems as compared to multigravida. This could be because primigravida mothers have a relatively high risk pregnancy with higher neonatal morbidity and mortality (Idhanis *et al*, 1979).

It was unfortunate to note that 1/5th of

the mothers (23.1%) reporting in hospital in second stage of labour were booked in our antenatal clinic. More than 1/3rd mothers (35.2%) reported late to the hospital either due to lack of attendants to escort them or due to traffic jams. As exact expected date of delivery is difficult to predict, it is difficult to say how this problem can be solved?

26.6% cases attributed late arrival to hospital to their ignorance about true and false labour pains. These subjects considered their labour pains to be a false symptom. It is evident by this study that a sizable proportion of neonatal morbidity and mortality can be circumvented by educating the mothers, emphasizing and impressing upon them the need for reporting early in labour. The best time and place for such education would be antenatal clinic. No opportunity should be missed

in antenatal clinic to educate mothers about the nature of true and false labour pains, and that they must enter the hospital at once if membranes rupture, or when contractions begin. A major educational objective of antenatal care is to help women to develop necessary to prevent perinatal mortality or morbidity of her child.

Since, the obstetricians are too busy in crowded antenatal clinics, as to give adequate time for health education sessions, the major responsibility of patient education can be delegated to nurse, midwife or trained obstetric nurse. Mothers can be educated well even through the help of mass media.

References

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