PRETERM DELIVERY : A COMMON OBSTETRIC PROBLEM

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SUMMARY

Premature labour is an age old entity which poses a problem to the obstetrician as well as to the neonatologist. The obstetrician has to decide whether to try and conserve the pregnancy a little longer so as to improve the chances of healthful survival of the baby or to resign to the inevitability of premature delivery. The neonatologist on the other hand has to look after the preterm neonate and to see it through the turbulent period when the baby tries to attain maturity. Five hundred ten preterm deliveries were studied and the perinatal mortality rate was found to be 366/1000 live births.

INTRODUCTION

Premature labour is an age old entity which poses a problem to the obstetrician as well as to the neonatologist. The obstetrician has to decide whether to try and conserve the pregnancy a litter longer so as to improve the chances of health survival of the baby or to resign to the inevitability of premature delivery. If the second option is chosen, the obstetrician has to take care to ensure a trauma free delivery. The neonatologist on the other hand has to look after the preterm neonate and to see it through the turbulent period when the baby tries to attain maturity.

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MATERIAL & METHOD

The present study includes an analysis of all Preterm (PT) deliveries that occured in our unit during a three and a half year period, at the New Civil Hospital, Ahmedabad. The factors taken into consideration were whether the patients were registered or emergency, the parity, past history of abortion or preterm delivery, the modalities of treatment, the response to each treatment, the perinatal outcome

and the causes of perinatal mortality and morbidity.

RESULTS AND DISCUSSION

The total number of deliveries was 3500 and the total number of PT deliveries was 510, which makes the incidence of PT to be 14.57%. 278 patients (54.5%) were emergency and 232 (45.5%) were registered.

More of the emergency patients presented with PT labour because of the lack of antenatal care. The risk factors or predisposing factors are not identified in such patients and therefore not treated.

TABLE I
PARITY & PRETERM BIRTH

Gravida	No.	%
Primi	151	29.63
G2	115	22.70
G3	93	18.29
G4	67	13.25
G5	63	12.37
>G6	21	4.10

(Table I) On analysing the parity, it was found that more than 50% of patients were either primi gravida (151 or 529.63%) or second gravida (115 or 22.70%). The number of patients with gravida 6 or more was only 21 (4.1%), probably because most of our patients donot reach the stage of grand multiparity.

On evaluating the obstetric history it was found that 113 (22.6%) patients had prior history of one or more abortion and 61 (12.2%) had history of one or more preterm delivery. A history of prior pregnancy wastage should be considered as a pointer towards the likelihood of recurrence in the current pregnancy.

On the basis of the clinical findings, 182 patients were treated for prevention of PT labour. In the remaining 328, either the labour was too far advanced, or maternal condition did not permit tocolysis or congenital anomaly was detected on USG and therefore in these patients no preventive treatment was instituted.

MODALITIES OF TREATMENT

132 patients (25.88%) were treated with tocolytic agents and 50 (9.8%) were treated with cervical cerclage operation.

TABLE II
RESPONSE TO TOCOLYSIS

Prolongation in weeks	No.	%
< 1	36	27.27
1-2	5	3.78
2-3	7	5.30
> 3	84	63.63

(TableII) 36 patients (27.27%) delivered within 1 week of treatment, 5 (3.78%) delivered within 1 - 2 weeks and 7 (5.3%) delivered within 2 - 3 weeks. In 84 (63.63%) patients, the pregnancy could be prolonged by more than three weeks.

(TableIII) In patients where the pregnancy could not be extended beyond 1 week, 34 patients delivered live babies prematurely, and 2 babies were PT still born. 24 of the live borns survived and 10 died

TABLE III
OUTCOME AFTER TOCOLYSIS

Weeks	Preterm			Fullterm		
	Alive	NND	SB	Alive	NND	SB
< 1	24	10	2	-	-	-
1-2	5	-	-	-	-	-
2-3	2	-	-	5	-	-
> 3	16	3	5	60	-	-

TABLE IV
WEEKS OF GESTATION AT WHICH CERCLAGE WAS DONE AND THE OUTCOME

Weeks	No.	P.T.			F.T.		
		Alive	NND	SB	Alive	NND	SB
14-20	23	6	3	-	14	-	-
21-24	20	3	-	3	14	-	-
25-28	7	3	-	-	4	-	-
	50						

TABLE V
MATURITY & PERINATAL OUTCOME

Weeks	Total	Alive	NND	SB
< 30	138	16 (18.18%)	72 (81.81%)	50
31-24	151	95 (72.52%)	36 (27.48%)	20
35-37	134	124 (97.63%)	3 (2.37%)	7
> 37	87	87 (100		

during the neonatal period.

In patients where the pregnancy was prolonged by 1 - 2 weeks, 5 babies delivered PT and all 5 survived. With extension of pregnancy by 2 - 3 weeks, 2 babies were PT both surviving and 5 were full term.

Where pregnancy was prolonged by more than three weeks, 19 babies were PT live births, 16 survived and 3 died, 5 babies were PT still born. 60 babies were full

term and healthy.

It is evident that if pregnancy can be prolonged by 2 - 3 weeks or more, the outcome of the neonate improves considerably.

50 patients who presented before 28 weeks of gestation underwent cervical cerclage operation with pre and post-operative tocolysis. 23 patients had pregnancy between 14-20 weeks, 20 patients and pregnancy between 21-24 weeks and 7 patients had 25-28 weeks pregnancy. With cerclage opeation 32 patients (64%) could be carried to term. (Table IV)

(Table V) 138 babies were born at 30 weeks geatation, 50 of these were still born and 88 were live births. 16 of the live born babies (18.18%) survived and 72 (81.81%) died during the neonatal period. 151 babies had maturity between 31-34 weeks - 20 were still born and 131 were live born, 95 survived (72.51%) and 36 died (27.49%). 134 babies were born at 35-37 weeks maturity. The survival rate was 97.63% in this group and 87 babies born at more than 37 weeks maturity had 100% survival.

Out of the total 510 PT babies 187 died during the perinatal period, the PMR being 366/1000 live births. The PMR for PT babies is much higher than the overall PMR which ranges between 50 and 100/1000 live births.

(Table VI) On analysing the causes of NND, the major contributor was found to be extreme prematurity which claimed 42 babies (38.18%). Septicemia was the cause of NND in 33 babies (30%). The other causes were birth asphyxia (11.8%), congenital deformities (11.8%) and respiratory distress syndrome, jaundice and aspiration of feeds claiming 10 babies each (9.09%).

TABLE VI
CAUSES OF NEONATAL DEATHS

Cause	No.	%
Extreme PT	42	38.18
Septicemia	33	30.0
Birth Asphyxia	13	11.8
Congenital Anomaly	13	11.8
R.D.S.	10	9.09
Jaundice	10	9.09
Aspiration of feeds	10	9.09

TABLE VII
MORBITY IN PRETERM

Cause	No.	%
Jaundice	72	14.11
Septicemia	46	9.01
Feeding Problems	39	7.64
Gastroenteritis	3	0.58

(Table VII) Jaundice was the most common morbidity in PT babies affecting 72 (14.11%) babies, Septicemia occured in 47 (9.01%) feeding problems in 39 (7.64%) and gastroenteritis occured in 3 (0.59%).

CONCLUSION

PT labour is a common obstetric problem affecting 14.57% of deliveries in our institution. More patients were emergency rather than registered and more than 50% of the patients were either primi gravida or gravida 2. A past history of abortion or PT delivery is significant and should

be considered in evaluating all antenatal patients.

With preventive treatment if the pregnancy can be prolonged by 2-3 weeks, the neonatal outcome improves considerably. Cerivical cerclage operation is a good option for patients presenting before 28 weeks gestation.

The perinatal mortality rate in this study was 366/1000 live births which is much higher than the overall PMR. Extreme prematurity and septicemia were major contributors to the neonatal mortality and jaundice was the most common morbidity.