



A Comparative Study on Immediate Versus Delayed Induction in Term Premature Rupture of Membranes

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ABSTRACT

The aim of our study was to compare the maternal and neonatal outcome between immediate and delayed induction with PGE2 gel in women with term PROM. This was a comparative study involving women admitted in Government RSRM Lying in Hospital for a period of one year from June 2015 to May 2016. A total number of 200 cases of age 18-36 years was selected for the study. Exclusion criteria was PROM > 12 hours, gestational age <37 weeks & >41 weeks, evidence of fetal distress/ sepsis, maternal complications, women in active labour. Both study groups were comparable with regard to age, parity, booking status and gestational age. Delayed induction after a waiting period of 12 hours stands as reasonable option as it decreases the number of operative deliveries without compromising maternal and neonatal outcome.

KEYWORDS

INTRODUCTION:

Premature rupture of membranes (PROM) is defined as the spontaneous rupture of amniotic membrane with the release of amniotic fluid before the onset of labour. If the membranes rupture after 37 weeks, it is called Term Premature rupture of membranes. If the membranes rupture before 37 weeks, it is called Preterm premature rupture of membranes (PPROM),

PROM has an incidence of about 10% of all pregnancies and its significant because it can cause maternal complications, increased operative procedures, neonatal morbidity and mortality. Its management is still controversial. The management of PROM at term with immediate induction leads to increased cesarean section. It decreases duration of hospital stay and decreases the occurrence of neonatal and maternal infection. On the other hand, there is significant increase in infection rate if delivery occurs after 24 hours of PROM.

The purpose of this study was to compare the neonatal and maternal outcomes between immediate and delayed induction with PGE2 gel in women with Term PROM.

MATERIALS & METHOD:

A hospital based comparative study involving women admitted in Department of Obstetrics and Gynaecology in Government RSRM Lying in Hospital for a period of one year from June 2015 to May 2016. A total number of 200 cases of age 18-36 years between gestational age 37-41 weeks was selected for the study. Exclusion criteria was PROM>12 hours, gestational age <37 weeks & >41 weeks, evidence of fetal distress/ sepsis, maternal complications, women in active labour.

All the 200 cases who presented with term PROM, were admitted in labour room and a detailed history was elicited regarding age, menstrual and obstetric history with emphasis on exact time of rupture of membranes, duration and amount of leaking. It is followed by general, systemic and detailed obstetric examination. A sterile speculum examination was done. PROM was confirmed by visualization of the amniotic fluid from cervical os or its presence in the posterior fornix. A High Vaginal swab was taken and sent for culture. Then, per vagi-

nal examination was done and assessed by Modified Bishop's Score.

Depending on their time of admission, cases satisfying the inclusion criteria fall into two groups- Early induction group (PROM-admission interval < 6 hours) and Delayed induction group (PROM-admission interval 6-12 hours). Early group induced with PGE2 gel immediately after admission and delayed group induced with PGE2 12 hours after PROM. All women were monitored with NST, prophylactic antibiotics, BP/PTR chart. Total count, high vaginal swab were taken for all patients. If Bishops score is unfavourable after 6 hours, 2nd dose of PGE2 gel was repeated. If cervix is favourable augmentation is done by Oxytocin. All babies delivered were examined by pediatrician.

The following outcomes were compared between the two study groups – PROM to delivery interval, number of PGE2 doses, mode of delivery, maternal and neonatal outcome and duration of hospital stay.

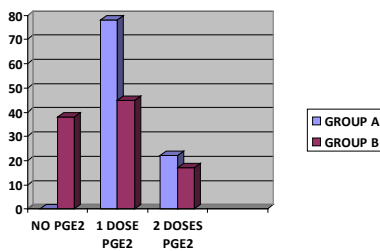
RESULTS:

The two study groups were similar in age distribution (18 – 36 years) and booking status. 70 Primigravida and 30 multigravida were included in each group with mean gestational age of 38 weeks in both groups. Slight variation occurred with number of PGE2 gel doses. 22 patients in immediate induction group needed 2 doses of PGE2 gel whereas only 17 in delayed induction group needed 2 doses. 38 cases in delayed induction group entered active labour during waiting period and they did not require induction.

TABLE 1: ANALYSIS OF NUMBER OF PGE2 DOSES

NO OF PGE2 DOSES	GROUP A (n = 100)	GROUP B (n = 100)
0	0	38
1	78	45
2	22	17

CHART 1: ANALYSIS OF NUMBER OF PGE2 DOSES



More number of patients (78%) in the early induction group delivered within 14 hours of PROM. The PROM – delivery interval was significantly more in delayed induction group. There were more number of caesarean section in early induction group(31) when compared to delayed induction group(21). The caesarean section done for failed induction was more in the immediate induction group. The percentage of operative vaginal deliveries was almost the same in both groups. There was no significant increase in infective morbidity in the delayed induction group. The mean duration of hospital stay and maternal and neonatal outcome were almost similar in both groups.

TABLE 2: PROM - DELIVERY INTERVAL

PROM-DELIVERY INTERVAL	GROUP A(100)	GROUP B (100)
8-14 HOURS	49	19
14-20 HOURS	46	50
>20 HOURS	5	31

CHART 2: PROM - DELIVERY INTERVAL

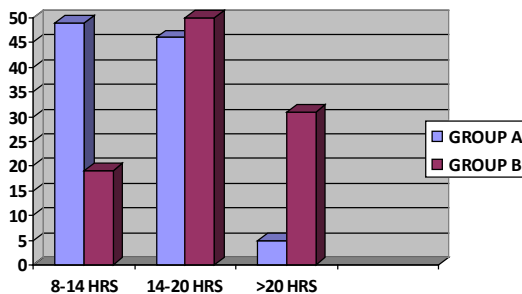
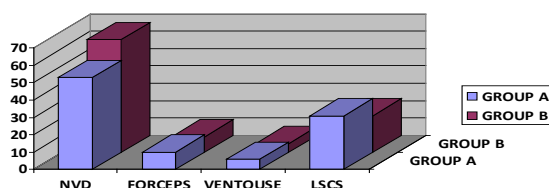


TABLE 3: MODE OF DELIVERY

	GROUP A (100)	GROUP B (100)
NVD	53	65
FORCEPS	10	9
VENTOUSE	6	5
LSCS	31	21

CHART 3: MODE OF DELIVERY



SUMMARY:

Immediate induction was compared with that of delayed in-

duction after 12 hours of PROM in term cases. Both study groups were comparable with regard to age, parity, booking status and gestational age. During the waiting period of 12 hours, 38% of cases entered active labour in the delayed induction group. So significantly lesser number of patients in the delayed induction group required induction compared to early induction group. Significantly higher doses of PGE2 were required in the early induction group. The PROM delivery interval was significantly shorter in the early induction group. LSCS were more in the early induction group. Failed induction and labour abnormalities were more in the early induction group. There was no difference in maternal and neonatal infectious morbidity between the two groups. This may be due to the use of prophylactic antibiotics. Neonatal outcome was equally good in both the groups. The mean duration of hospital stay was almost similar between the two study groups.

CONCLUSION:

Delayed induction after a waiting period of 12 hours stands as reasonable option as it decreases the number of operative deliveries without compromising maternal and neonatal outcome.

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