

# Study of Prolonged Pregnancy between 40-42 weeks

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## Abstract:-

**Introduction:** Prolongation of pregnancy complicates up to 10% of all pregnancy and increases the risk to mother and fetus. Post term pregnancy along with its dreaded complications causes significant anxiety for mother as well as obstetrician. **Aim & objectives:** To study the maternal and foetal outcome in prolonged pregnancy who delivered between 40-42 weeks. **Material and method:** The study was carried out in the Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and hospital, Aurangabad from March 2019-March 2020. Total 237 antenatal women were included in the study who presented to MGM OPD and labor room during 40-42 weeks of gestational age. **Results:** There was no difference in percentage of spontaneous onset of labour in both the groups. The proportion was more in direct LSCS in 41-42 weeks but it is not statistically significant. There is no significant difference in bishop score of two groups. Response to induction was significantly good in 41-42 weeks in spite of no significant difference in the bishop score. Unfavourable foetal outcome was slightly more in 41-42 weeks. Atonic PPH was the most common maternal complication in 41-42 weeks and the reason for ICU admission was haemorrhagic shock. **Conclusion:** Spontaneous onset of labour was same in both the groups so waiting beyond 41 weeks may not necessarily improve the chances of spontaneous onset. After induction the occurrence of vaginal delivery was more in 41-42 weeks, but maternal and foetal complications also increased in this group. We should individualise each case to go beyond 41 weeks and more efforts should be made on the ripening of cervix to decrease the chances of LSCS.

**Keywords:-** Prolonged Pregnancy, Post Dated Pregnancy, Post Term Pregnancy, Induction Of Labour, Maternal And Fetal Outcome.

## I. INTRODUCTION

Fernando Arias defines prolonged pregnancy as those pregnancies beyond the expected date of delivery.<sup>[1]</sup> Post-dated pregnancy is defined as pregnancy beyond 40 weeks of gestation and post-term is beyond 42 weeks of gestational age. Prolongation of pregnancy complicates up to 10% of all pregnancies and carries increased risk to mother and fetus.<sup>[2]</sup> The maternal complications are labour dystocia, operative vaginal delivery, increased incidence of LSCS, increased incidence of PPH. The foetal complications are increased incidence of macrosomia, polycythemia, foetal distress, meconium aspiration, dysmaturity, infant death in the first

year of life, increase in NICU admission and still birth<sup>[3,4]</sup>. The placenta ceases to grow causing placental insufficiency. The baby continues to grow but the placental growth stops<sup>[5,6]</sup>. Post term pregnancy along with its dreaded complications, is also cause of significant anxiety for mother as well as the obstetrician. With improved antenatal care like dating scan and other antenatal diagnostic capabilities there is early recognition of condition and thereby leading to increased incidence of medical and surgical intervention before 42 weeks. As a result pregnancy rarely goes beyond 42 weeks. Post term pregnancy is a proved risk factor for maternal and foetal complications but postdated pregnancy is less studied. So, 40-42 weeks is a grey zone and hence, here is the attempt made to study the maternal and foetal outcome of prolonged pregnancy who delivered between 40-42 weeks.

## Aim and Objectives:

1. To study the maternal outcome in prolonged pregnancy.
2. To study the foetal outcome in prolonged pregnancy.

## II. MATERIAL AND METHODS

Study period: March 2019-March 2020

Study Design: Cross sectional study.

Study place- Department of Obstetrics and Gynaecology, Mahatma Gandhi Medical College and Hospital, Aurangabad.

Sample size-237

Data included the demographic information, information on reproductive history, clinical presentation, mode of delivery and complications that occurred during the pregnancy, delivery and neonatal period.

**Inclusion Criteria:** All antenatal women who presented to MGM OPD and labor room during 40-42 weeks of gestational age were included in the study.

**Exclusion Criteria:** None

## Observation and Results:

Total number of deliveries from March 2019 – March 2020 = 3105

Total patients in the study (40-42 weeks): 237

Incidence of prolonged pregnancy in my study is: 7.6%

Divided into 2 groups

Group A (40-40.6 weeks) - 211

Group B (41-42 weeks) – 26

**Table no: 1 - Spontaneous onset of labour**

GROUP	Yes	No	Total
40-40.6 weeks	76 (36%)	135 (64%)	211 (100%)
41-41.6 weeks	9 (34.61%)	17 (65.38%)	26 (100%)
<b>Total</b>	85 (35.86%)	152(64.14%)	237(100%)

Chi square: 0.1 P- value: 0.88

In both the groups, there was no difference in percentage of spontaneous onset of labour

**Table no 2: Patients with no spontaneous onset of labour (N=152)**

	INDUCED	DIRECT LSCS	TOTAL
40-40.6 weeks	91(67.40%)	44(32.60%)	135(100%)
41-42 weeks	9(52.94%)	8(47.06%)	17(100%)
<b>Total</b>	100(65.785)	52(34.21%)	152(100%)

Chi square: 1.40 P value = 0.236

The proportion was more in direct LSCS in 41-42 weeks but it was not statistically significant.

**Table no 3: Bishop score (N=100)**

	Unfavourable	Favourable	Total
40-40.6 weeks	20(21.97%)	71(78.02%)	91(100%)
41-42 weeks	2 (22.2%)	7 (77.7%)	9(100%)
<b>Total</b>	22(22%)	78(78%)	100(100%)

Chi square: 0.54

Probability: 0.941

No significant difference in the Bishop score of two groups.

**Table no 4: Induction of labour (N=100)**

GROUP	VAGINAL	LSCS	TOTAL
40-40.6 weeks	60 (65.93%)	31 (34%)	91 (100%)
41-42 weeks	9 (100%)	0	9(100%)
<b>TOTAL</b>	69(69%)	31(31%)	100(100%)

Chi square: 4.41

Probability 0.035

Response to induction was significantly good in group B in spite of no significant difference in the Bishop score.

Note 1: Induction of labour was done using Dinoprost gel. Misoprostol was not used for induction as per institutional protocol.

Note 2: Two patients required oxytocin for augmentation of delivery in each group.

**Table no 5: Direct LSCS (N=52)**

	Maternal causes	Foetal causes	Total
40-40.6 weeks	28(63.63%)	16(36.36%)	44 (100%)
41-42 weeks	6 (75%)	2 (25%)	8(100%)
<b>Total</b>	34(65.38%)	18(34.61%)	52(100%)

Chi square: 0.790602

Probability: 0.929

Out of the maternal causes for direct LSCS in group A, and group B the most common maternal cause was previous LSCS who are not induced according to the department protocol. In group A, the most common foetal cause was foetal distress. In group B most common foetal cause was severe oligohydramnios.

**Table no 6: Foetal outcome**

	Favourable	Unfavourable	Total
40-40.6 weeks	195 (92.42%)	16 (7.58%)	211 (100%)
41-42 weeks	23 (88.46%)	3 (11.54%)	26 (100%)
<b>Total</b>	219(92.4%)	18(7.59%)	237(100%)

Chi square: 0.1

Probability: 0.885

Unfavourable foetal outcome was slightly more in group B

**Table no 7: Maternal Complications**

	Atonic PPH	ICU	DEATH
40-40.6 WEEKS	0	1	0
41-42 WEEKS	2	1	0
<b>TOTAL</b>	2	2	0

The reason for ICU admission in group A was not related to pregnancy. The reason for ICU admission in group B was haemorrhagic shock.

### III. DISCUSSION

In my study, in both the group there was no difference in percentage of spontaneous onset of labour. In my study 35% went into spontaneous onset of labour. In a study conducted by Shetal Prajapati et.al only 26% went into spontaneous onset of labour.<sup>[7]</sup>

In my study, no significant difference in the bishop score of the two groups. This result was supported by a study conducted by Daniella Nave et.al that bishop score is not a good predictor for success of labour induction.<sup>[8]</sup> In a similar study Kolkman et.al bishop score is poor predictor for outcome of induced labour.<sup>[9]</sup>

In my study, response to induction of labour was significantly good in the 41-42 weeks in spite of no significant difference in the bishop score. A study done by Ahmad Akram et.al it was observed that induction of labour, the chances of vaginal delivery was more.<sup>[10]</sup> In a study by Nikhil Anand et.al it concluded that after induction of labour occurrence of vaginal deliveries was more.<sup>[11]</sup>

	<b>Induction of labour increases occurrence of vaginal deliveries</b>
<b>My study</b>	Significant
<b>Ahmad Akram et.al</b>	Significant
<b>Nikhil Anand et.al</b>	Significant

In my study, unfavourable foetal outcome was slightly more in group B. In a study conducted by Cheng et.al. also revealed that the risk of adverse perinatal outcome increases gradually after 41 weeks.<sup>[12]</sup>

In my study, the reason for ICU admission in 40-40.6 weeks and not related to pregnancy. The reason for ICU admission in the group 41-42 weeks was haemorrhagic shock due to PPH. In a study Galal et. all the rate of PPH increased by the weeks of gestation.<sup>[13]</sup>

#### IV. CONCLUSION

Spontaneous onset of labour was same in both the groups so waiting beyond 41 weeks may not necessarily improve the chances of spontaneous onset. After induction the occurrence of vaginal delivery was more in 41-42 weeks, but maternal and foetal complications also increased in this group. We should individualise each case to go beyond 41 weeks and more efforts should be made on the ripening of cervix to decrease the chances of LSCS.

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