

Induction of Labor and the Relationship to Cesarean Section among Primigravida > 41 Wks

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I. Introduction

Labor induction implies stimulation of contractions before the spontaneous onset of labor, with or without ruptured membranes. Induction is indicated when the benefits to either mother or fetus outweigh those of continuing the pregnancy. Immediate indications include premature rupture of membranes with chorioamnionitis or severe preeclampsia. Common indications include premature rupture of membranes, gestational hypertension, non reassuring fetal heart rate, postdated pregnancy and various medical conditions such as chronic hypertension and diabetes.

Elective labor induction refers to those done with no clear medical reason. Medically indicated induction is when there is clear medical benefit to either mother or fetus from terminating the pregnancy rather than continuing it. Medical indications for induction of labour are premature rupture of membrane, pregnancy induced hypertension or preeclampsia, chorioamnionitis, maternal medical problems such as diabetes mellitus with pregnancy at term .

Objectives

To study indications and methods of induction in primigravida with pastdates. To study the risk of operative delivery in induced labor in primigravida with pastdates.

II. Materials and Methods

Method of study : Prospective study

Study settings : Government Maternity Hospital, SVMC Tirupathi.

Study subjects : conducted on women admitted at Government Maternity Hospital, Tirupathi.

Method of collection of data :

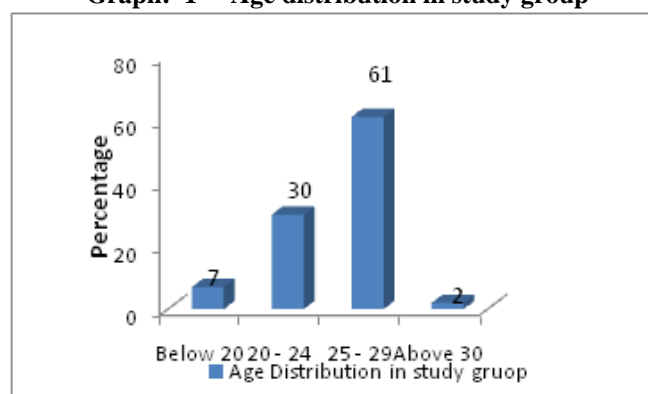
Nulliparous women between > 41 weeks of gestation with live singleton fetus in cephalic presentation in whom labor was induced were included in the study group after considering the inclusion and exclusion criteria.

Informed consent was obtained. All the patients were evaluated for gestational age, clinical pelvimetry done. Preinduction Bishop's score, method of induction, course of labor, delivery and outcome were analysed and compared with women who went into labor spontaneously. The indications for induction were chartered out. The rate of cesarean delivery in both groups was compared.

Labour was induced with intracervical application of dianoprost gel (PGE₂) oxytocin with or without artificial rupture of membranes and misoprostol 25ug.

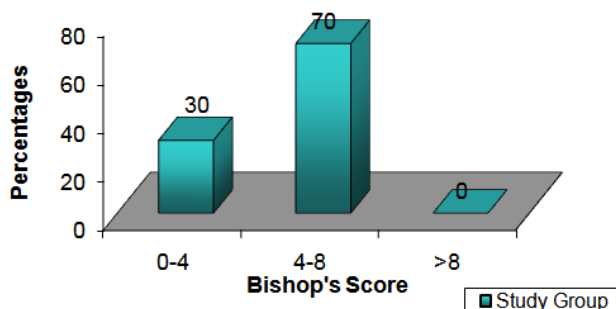
III. Results

Graph: 1 Age distribution in study group



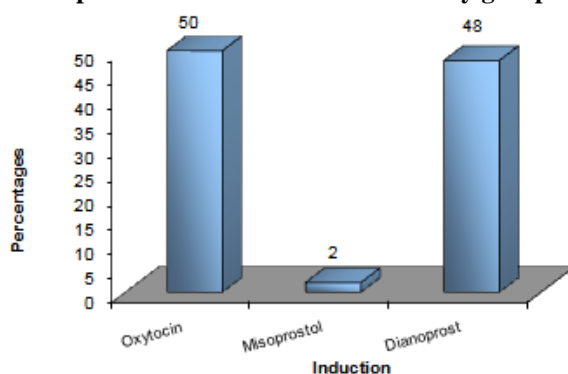
Majority of women in the study group were between age group of 22-24

Graph 2: Bishop Score at Induction
Bishop's Score at Induction for Study Group



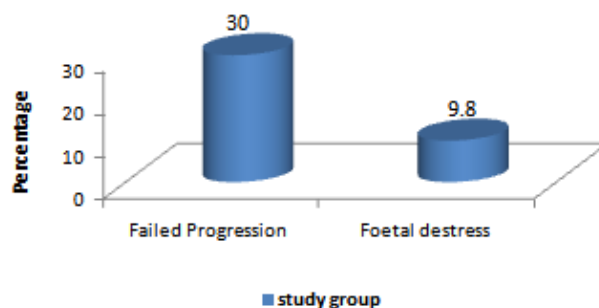
Majority of the women who were induced were with Bishop score of 4-8

Graph: 3 Method of Induction in study group



Majority of the women in the study group were induced with Oxytocin (50%) followed by dianoprost (48%)

Graph: 4 Indication for cesarean section in the study group
Indication for cesarean section



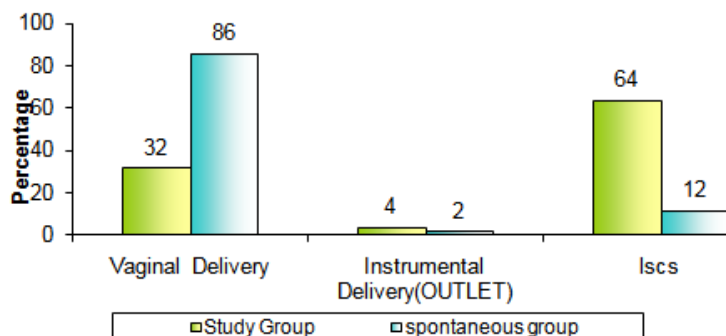
Failed progression was seen in 55% followed by Foetal distress 9% in the study group

Table: 1 Complications in study group

complications	Study group
Prolonged labor	30%
PPH	5%

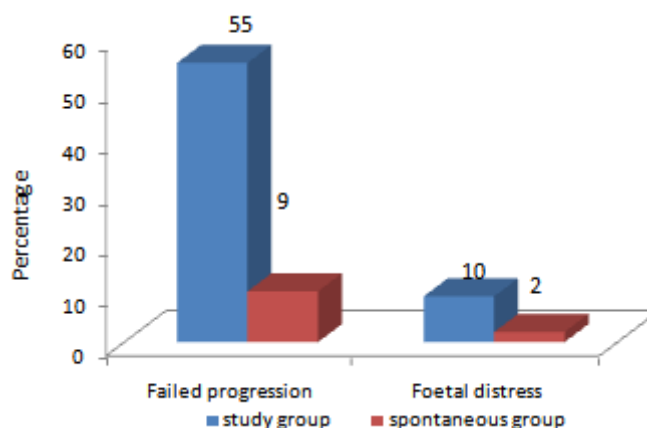
There were 30% cases of prolonged labor and 5% cases of PPH .

Graph : 5 Delivery Outcome
Delivery Outcome



The rate of LSCS in induced group is 64% where as it was 12% in spontaneous group. The risk of LSCS is significantly higher in study group than in spontaneous group and is statically significant $p < .001$

Graph : 6 Indications for caesarean section



Failed progression was seen in 55 and foetal distress in 10. where as in spontaneous group failed progression was 9% and foetal distress 2%.

Table: 2 Duration of Hospital Stay

Group	N	Mean	Std. Deviation
Study group	549	4.78	3.161
Spontaneous group	549	2.7	1.567

Duration of hospital stay is found to be more in study group with mean value 4.78 days and in spontaneous group it was 2.7days.

IV. Discussion

The present study included 100 primiparous women with pastdates admitted at Govt. Maternity Hospital Tirupati. In whom labor was induced.

In the present study there were 16% women in the study group with bishop score <5. In our study group, indication for induction were, Postdated pregnancy. In the present study, method of induction was by using Dianoprost gel, Misoprostol, Oxytocin with or without artificial rupture of membranes out of 100 cases 64% had LSCS and 4% had outlet forceps and 32% had vaginal delivery and whereas out of 100 controls 12% had LSCS and 2% had outlet forceps and 86% had vaginal delivery. The risk of LSCS is significantly higher in cases than in controls as $p < 0.001$. In our study indications for cesarean section were mostly failed progression 30% and foetal distress 9.8% and where as it was 4% and 2.1% respectively in the primigravida who delivered spontaneously. The mean duration of hospital stay in the induced group was 4.78 days and was 2.7 days in the spontaneous group.

V. Conclusion

In primigravida with induction of labor is associated with significantly increased risk of cesarean delivery maternal morbidity and neonatal morbidity. The decision to undertake induction of labor needs to be clear and clinically justified.

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