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Original Research

Assessment of complications in women undergoing induction of labour versus spontaneous labour

Ruchi Jain

Assistant Professor, Department of Obstetrics and Gynaecology, FH Medical College, India

ABSTRACT:

Background: Induction of labour is one of the most common and important obstetric interventions. The present study was conducted to assess complications in women undergoing induction of labour versus spontaneous labour.

Materials &Methods: 86 females age ranged 18- 50 years of agewere divided into 2 groups of 43 each. Group I were those who had spontaneous labour and group II had induction of labour. Complications were recorded in both groups.

Results: Mode of delivery was vaginal in 28 in group I and 25 in group II, instrumental in 12 and 11 and LSCS in 3 and 7 in group I and II respectively. The difference was significant (P< 0.05). Indication for LSCS was foetal distressin 1 in each group and 3 and meconium-stained amniotic fluid in 0 and 2 in group I and II respectively, non- progression of labour in 2 and 3 and cord prolapse in 0 and 1 in group I and II respectively. Maternal complications found to be post-partum haemorrhage seen in 2 and 4 and sepsis in 2 and 6. Neonatal complications were respiratory distress in 1 and 3, meconium aspiration in 2 and 4 in group I and II respectively. A significant difference was observed (P< 0.05).

Conclusion: Induction should not be considered as a routine elective procedure. Induction of labour had more complications.

Key words: amniotic fluid, spontaneous labour, Induction of labour

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Corresponding author: Ruchi Jain, Assistant Professor, Department of Obstetrics and Gynaecology, FH Medical College, India

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INTRODUCTION

Induction of labour is one of the most common and important obstetric interventions. It is usually indicated when the benefits of delivery of the fetus outweighs the risk of continuing the pregnancy. The incidence varies between and within countries and regions. It is higher in developed countries than in the developing countries due to increasing rate of elective induction.[1] The indications for induction of labour must be established before this intervention is instituted. These indications have been classified as obstetric indications, medical indications and elective or social indications.[2] Obstetric indications include prolonged pregnancy, hypertensive disease in pregnancy, intrauterine growth restriction (IUGR), Rhesus iso-immunization and intrauterine foetal death (IUD). Medical indications include chronic hypertension, diabetes mellitus, haemoglobinopathies, chronic renal diseases and liver diseases co-existing with pregnancy. Elective induction is also referred to as social induction performed at patient's or doctor's convenience.[3]

There are many accepted absolute and relative medical and obstetric indications for labor induction.[4] Indications for induction of labor have included preeclampsia/ eclampsia and other hypertensive disorders, maternal diabetes mellitus, premature rupture of membranes, chorioamnionitis, intrauterine fetal growth restriction, oligohydramnios, isoimmunization, fetal demise, and post-term pregnancy.[5] Elective induction of labor refers to the initiation of labor for the convenience of patient and physician, in an individual with a term pregnancy who is free of medical or obstetric indications.[6]The present study was conducted to assess complications in women undergoing induction of labour versus spontaneous labour.

MATERIALS & METHODS

The present study consisted of 86females age ranged 18- 50 years of age. All gave their written consent for participation in the study.

Demographic data such as name, age etc. was recorded. Patients were divided into 2 groups of 43 each. Group I were those who had spontaneous labour and group II had induction of labour. Ultrasonography in the first trimester of pregnancy was done. Intrauterine foetal heart rate, uterine activity and maternal vital signs were regularly monitored. Induction was done using PGE2 intracervical gel 0.5 mg within 24 hours of admission but not before 40 weeks+0 days. Complications were recorded in both groups. Results were analysed statistically. P value less than 0.05 was considered significant.

RESULTS

Table I: Mode of delivery

Mode of delivery	Group I	Group II	P value
Vaginal	28	25	0.05
Instrumental	12	11	
LSCS	3	7	

Table I shows that mode of delivery was vaginalin 28 in group I and 25 in group II, instrumental in 12 and 11 and LSCS in 3 and 7 in group I and II respectively. The difference was significant (P< 0.05).

Table II: Indication for LSCS

Indication for LSCS	Group I	Group II	P value
Foetal distress	1	1	0.04
Meconium-stained amniotic fluid	0	2	
Non- progression of labour	2	3	
Cord prolapse	0	1	

Table II, graph I shows that indication for LSCS was foetal distress in 1 in each group and 3 and meconium-stained amniotic fluidin 0 and 2 in group I and II respectively, non- progression of labour in 2 and 3 and cord prolapse in 0 and 1in group I and II respectively.

Graph I: Indication for LSCS

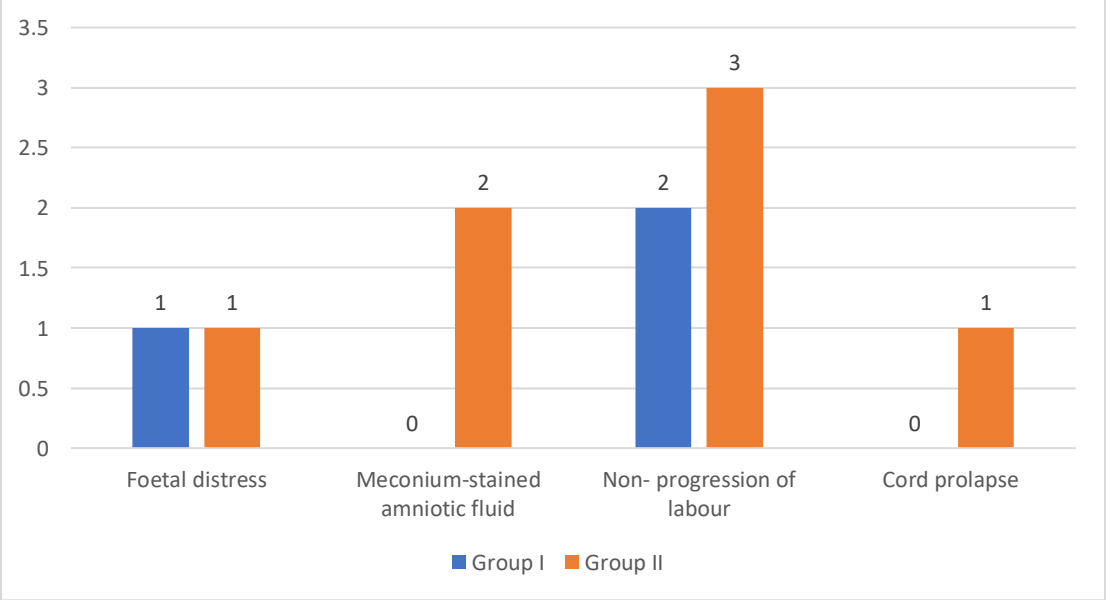

Table III: Assessment of complications

Complications	Variables	Group I	Group II	P value
Maternal	Post-partum haemorrhage	2	4	0.05
	Sepsis	2	6	
Neonatal	Respiratory distress	1	3	0.92
	Meconium aspiration	2	4	

Table III shows that maternal complications found to be post-partum haemorrhage seen in 2 and 4 and sepsis in 2 and 6. Neonatal complications were respiratory distress in 1 and 3, meconium aspiration in 2 and 4 in group I and II respectively. A significant difference was observed (P< 0.05).

DISCUSSION

Induction of labour is one of the most common and important obstetric interventions.[7] It is usually indicated when the benefits of delivery of the fetus outweighs the risk of continuing the pregnancy. The incidence varies between and within countries and regions.[8] It is higher in developed countries than in the developing countries due to increasing rate of elective induction. The effect of induction of labour on the duration of labour, feto-maternal outcomes and complications of labour has been equivocal.[9] While some studies suggest that induction of labour increases the risk of complications such as postpartum haemorrhage (PPH) due to uterine over-activity or atony post-partum from uterine fatigue, others have observed increased caesarean section rate on account of foetal distress.[10,11]The present study was conducted to assess complications in women undergoing induction of labour versus spontaneous labour.

We observed that mode of delivery was vaginal in 28 in group I and 25 in group II, instrumental in 12 and 11 and LSCS in 3 and 7 in group I and II respectively. Begum et al[12]found that the cesarean delivery rate was 51% in expectant and 46.8% in elective induction group. Women who were electively induced spent more time in labor delivery unit (14 hours, 21 minutes vs 12 hours, 45 minutes, $p < 0.01$), had labor longer than 12 hours (50 vs 36.5%, $p = 0.05$), received more frequently oxytocin (63.5 vs 47.9%, $p = 0.03$), and were more likely to deliver during daytime between 6.00 am and 6.00 pm (64.5 vs 52%, $p = 0.07$) compared with expectant group. There was no difference with regard to obstetric events and maternal neonatal outcomes

We observed that indication for LSCS was foetal distress in 1 in each group and 3 and meconium-stained amniotic fluid in 0 and 2 in group I and II respectively, non- progression of labour in 2 and 3 and cord prolapse in 0 and 1 in group I and II respectively. Abisowo et al[13] assessed the feto-maternal outcome of induced labour compared to spontaneous onset labour. A total of 1540 deliveries occurred during the study period, out of which 257 had induction of labour. Successful induction rate was 16.47%. Vaginal delivery was 67.6% in the study group compared to 83.4% in the control group. Postdated pregnancy and hypertensive diseases accounted for 56.8% and 28% of the indications for induced labour, respectively. Induced labour was associated with a significantly higher caesarean section rate. Cephalo-pelvic disproportion was the most common indication for caesarean section. Maternal complications include primary postpartum haemorrhage, perineal lacerations and endometritis. The study group had longer duration of hospital stay compared to the control.

Ezechi et al[14] listed cephalo-pelvic disproportion, fetal distress, prolonged labour and antepartum haemorrhage as causes of their failed induction. In these circumstances, caesarean section became the inevitable option emphasizing the need for proper and adequate counseling prior to the commencement of induction of labour.

CONCLUSION

Authors suggested that induction should not be considered as a routine elective procedure. Induction of labour had more complications.

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