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RESEARCH ARTICLE

A COMPARATIVE STUDY OF THE EFFECT OF MISOPROSTOL AND DINOPROST ON CARDIOTOCOGRAPH AND ITS MATERNAL AND FETAL OUTCOME

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ABSTRACT

In pregnant women, Labour is induced when continuing pregnancy is harmful for both mother and foetus. Induction of labour is to induce artificial uterine contractions resulting in gradual dilatation and effacement of cervix culminating in foetal delivery before spontaneous onset of labour. There are now two prostaglandin analogues for cervical ripening:PGE1- Misoprostol, PGE2-Dinoprostone .The first synthetic prostaglandin analogue permitted for the treatment of stomach ulcers is misoprostol . It has been demonstrated to be helpful in cervical preparation for labour. It is affordable, has little adverse effects on the body& kept at room temperature [6,7], For Induction of labour misoprostol is used at a low Dosage of 25-50 micrograms orally or per vaginally. ***Aim and Objective:*** This study, which compares the effect of the two cervical ripening drugs (misoprostol and dinoprostone) on recordings of cardiotocography and the maternal and foetal outcome , was conducted to address this important problem. ***Materials and Methods:*** A Hospital based comparative study was conducted among 100 Pregnant women fulfilling inclusion and exclusion criteria. Written informed consent was obtained from the pregnant women participating in the study and were randomised into Group D consisting of 50 women induced with-Dinoprostone intracervically and Group M consisting of 50 women induced with- misoprostol in the posterior fornix and they were monitored with CTG tracings. ***Conclusion:*** Compared to Dinoprostone ,Misoprostol was linked to greater frequency of abnormal CTG. Misoprostol caused higher need for NICU admission, resuscitation due to low APGAR score's at 1 minute, even though APGAR score's at 5 minute's were good in both groups. Although the induction delivery time was decreased with misoprostol and fewer doses were needed to achieve a successful delivery.

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INTRODUCTION

In pregnant women, Labour is induced when continuing pregnancy is harmful for both mother and foetus. Induction of labour is to induce artificial uterine contractions resulting in gradual dilatation and effacement of cervix culminating in foetal delivery before spontaneous onset of labour[1]. Prostaglandin analogues have been created for use in induction of labour[2]. Prostaglandins ripen the extracellular ground substance of the cervix, alter it, and enhance collagenase activity. Moreover, they permit the myometrial muscle to contract as a result of an increase in intracellular calcium levels[3,4]. An unfavourable cervix may cause labour induction to last longer, which could lead to induction failure[5]. Cervical ripening is therefore necessary before labour is induced for a better result. FDA revised the labelling on misoprostol as "contraindicated in pregnancy for the treatment and prevention of NSAID-induced ulcers[4]. There are now two prostaglandin analogues for cervical ripening: PGE1-Misoprostol, PGE2-Dinoprostone. The first synthetic prostaglandin analogue permitted for the treatment of stomach ulcers is misoprostol. It has been demonstrated to be helpful in cervical preparation for labour. It is affordable, has little adverse effects on the body & kept at room temperature [6,7], For Induction of labour misoprostol is used at a low Dosage of 25-50 micrograms orally or per vaginally. To induce labour, artificial prostaglandin E2 or Dinoprostone gel, can be used vaginally, however it is expensive and unstable at room temperature. A minimum of six hours must have been elapsed after ingestion before continuing treatment[8]. Numerous studies have demonstrated the efficacy and safety of misoprostol as a labour induction drug. Hyperstimulation of uterus and foetal distress are significant side effects of misoprostol use in

obstetrics, but they typically happen at larger doses of the drug[9]. Despite extensive literature describing the effectiveness of Misoprostol and Dinoprostone for ripening of cervix/Induction. Few researchers have extensively tried to address the frequency of abnormalities of cardiotocography related to ripening of cervix /induction by misoprostol and dinoprostone. This study, which compares the effect of the two cervical ripening drugs (misoprostol and dinoprostone) on recordings of cardiotocography and the maternal and foetal outcome, was conducted to address this important problem

MATERIAL AND METHODS

Study design: Hospital based comparative study conducted on 100 pregnant women attending the department of obstetrics and gynaecology, Narayana medical college and hospital, Nellore over a period of one year.

Setting: Department of Obstetrics & Gynaecology, Narayana medical college and hospital, Nellore.

Inclusion criteria: Indications for induction of labour, Singleton foetus. Cephalic presentation. Gestational age of 37weeks or more, No evidence of foetal distress on Preinduction cardiotocographic monitoring, No progressive painful contractions being present.

Exclusion criteria: Previous caesarean section or any previous surgery on the uterus, Multiparity, Multiple pregnancies, Breech presentation, Intrauterine death, Foetal anomaly, Contraindication for induction of labour.

Sampling technique: 100 Pregnant women meeting the inclusion and exclusion criteria were Randomly recruited in to two groups,50 subjects received Misoprostol and 50 subjects received Dinoprost.

METHODOLOGY

A Hospital based comparative study was conducted among 100 Pregnant women fulfilling inclusion and exclusion criteria. Written informed consent was obtained from the pregnant women participating in the study and were randomised into Group D consisting of 50 women induced with-Dinoprostone intracervically and Group M consisting of 50 women induced with- misoprostol in the posterior fornix and they were monitored with CTG tracings. Data from Pregnant women was collected using structured questionnaire consisting

Detailed history: Basic demographic details like age, socioeconomic status, residential area, education, parity, age of marriage was obtained using a standard questionnaire. Menstrual and obstetric history and history of any previous surgery were noted.

Examination details: General examination, systemic examination, obstetric examination, per vaginal examination were done.

Routine laboratory investigations CTG: Fetal monitoring with CTG is explained to the woman and a consent was obtained. Woman was placed in lateral recumbent position with a pillow under one ofher hips to displace the weight of the uterus away from inferior vena cava.The cardiotocographic machine of BPL- model FM 9853 was used.

RESULTS

Table 1. Comparison of age group of study subjects among the groups

		Group			p-value#
		Misoprostol	Dinoprostone	Total	
Age (in years)	Mean	24.98	24.92	24.95	0.943
	SD	4.02	4.31	4.15	
	Median	24.00	24.00	24.00	
	Minimum	18.00	18.00	18.00	
	Maximum	34.00	34.00	34.00	

 # Independent t-Test: In current study, the overall mean age of the subjects was 24.95 ± 4.15 years. On comparison, the mean age of the subjects in Misoprostol group was 24.98 ± 4.02 years which is almost closer to the mean age of 24.92 ± 4.31 years in Dinoprostone group. Thus, the study found no significant difference between the groups, thereby eliminating the selection bias

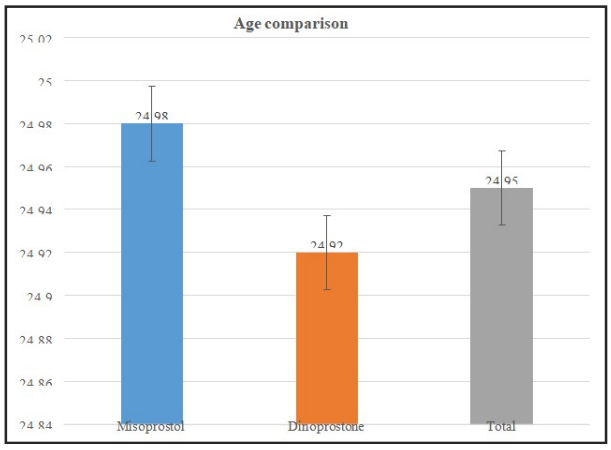


Figure 14. Bar diagram showing comparison of mean age of the study subjects between the groups

*** Statistically significant**

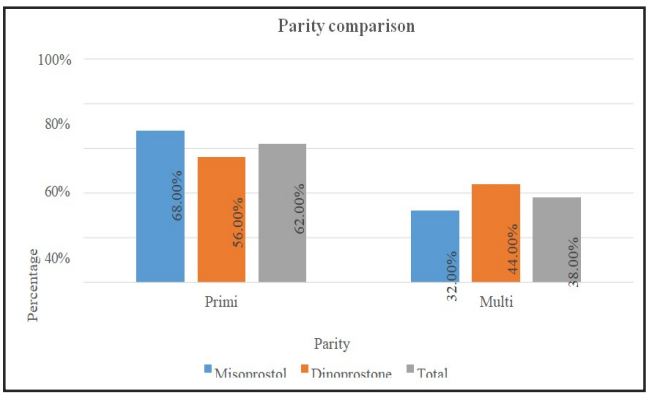
- Patients enrolled in the study had an indication for induction, some had more than one indication.PIH and post dated were the most frequent indication for induction seen in both the groups.
- In the study, induction was required due to PROM in 20.0% cases of Misoprostol group and none in Dinoprostone group. The study found statistically significant difference between the groups with respect to PROM as an indication for induction.
- In the study, induction was required due to oligohydramnios in 12.0% cases of Misoprostol group and 18.0% cases of Dinoprostone group.
- Induction was required due to post-dated pregnancy in 20.0% cases of Misoprostol group and 28.0% cases of Dinoprostone group.
- Induction was required due to Rh negative status in 6.0% cases of Misoprostol group and 14.0% cases of Dinoprostone group.

- Induction was required due to reduced movement of fetus in 6.0% cases of Misoprostol group and 8.0% cases of Dinoprostone group.
- Induction was required due to term gestation in 14.0% cases of Misoprostol group and 18.0% cases of Dinoprostone group.
- No statistical difference between two groups with regard to other indictaions for induction.

Table 3. Comparison of parity of the study subjects among the groups

		Group						p-value#
		Misoprostol		Dinoprostone		Total		
		N	%	N	%	N	%	
Parity	Primigravida	34	68.0%	28	56.0%	62	62.0%	0.216
	Multigravida	16	32.0%	22	44.0%	38	38.0%	

In the study, overall majority of the subjects was primigravida (62.0%). On comparison, majority were primigravida in both Misoprostol group (68.0%) and Dinoprostone group (56.0%). Thus, the study found no statistically significant difference in parity among the groups.



In the study, the total mean Bishop score at first encounter was 4.27 ±0.97. On comparison, the mean Bishop score of the subjects in Misoprostol group was 4.27 ± 1.04 which is almost closer to the mean Bishop score of 4.28 ± 0.90 in Dinoprostone group. Thus the study found no statistical difference between two groups, thereby suggesting that all the subjects were almost in same phase at the beginning, irrespective of groups. Majority of pregnant women in two groups had bishop score - (3-6)at the time of entry into the study.

However, the study found no statistical difference between two groups, thereby suggesting that both the interventions are performing equally. The study showed statistically significant difference with respect to each group and overall, in terms of Bishop score, thereby proving that both the interventions were successful in progressing the labour. In the study, overall majority of the subjects was full term (37.0%). The next common proportion was early term (26.0%), followed by late term (24.0%), and the remaining was preterm (13.0%). On comparison of gestational age, majority were full term in both Misoprostol group (40.0%) and Dinoprostone group (34.0%). Thus the study found no statistical significant difference between two groups in gestational age. In the study, When compared between two groups majority required second dose(37.0%). The next common was single dose (34.0%), followed by third dose (29.0%). On comparison of induction dose, majority in Misoprostol group (44.0%) required just single dose, whereas in Dinoprostone group (42.0%), majority required second dose. However, the study found no statistical significant difference among two groups regarding induction dose. In the study, majority of the cases (88.0%) showed reassuring on CTG at 6 hours. Even in both the groups i.e., Misoprostol (76.0%) and Dinoprostone group (100.0%), reassuring was observed in majority. But the prevalence of non reassuring FHR was higher in Group M than Group D in first 6hrs of induction. On considering other findings, Tachysystole (12.0%) was seen more frequently followed by loss of BTB variation (6.0%), and hyperstimulation (6.0%) in misoprostol group. On the other hand, Dinoprostone group showed no other findings. Thus there exists statistically significant difference between the groups.

After 12 hours, 45 patients entered into second monitoring in Group D, out of which 9 of them have non reassuring CTG of which Tachycardia is most common(10%). 37 pregnant women entered into this second monitoring in Group M, of which 14 had non reassuring CTG, of which Hypertonus(6%) and variable decelerations(6%) are most common, there is statistical significant difference among the groups.

After 18 hours, 17 pregnant women in Group M who were undelivered entered into third phase monitoring, of which 14 showed non reassuring CTG of which Tachycardia(6%) and variable deceleration (6%) are most common. 25 pregnant women who were undelivered in Group D entered into third phase monitoring of which 9 had non reassuring CTG in which late deceleration(6%) is most common. However, the study found no statistical significant difference among the groups. On comparing the 6-18hrs CTG tracing in two groups it was noticed that Group M had more CTG abnormalities than Group D.

In the study, the total mean duration between induction and delivery of the child was 17.54 ± 9.74 hours. On comparison, the mean duration between induction and delivery of the child in Misoprostol group was 13.45 ± 6.70 hours which is shorter than the mean duration of 21.63 ± 10.61 hours in Dinoprostone group, showing statistically significant difference among the groups, thereby suggesting that misoprostol was effective in

In the study, the overall most common delivery mode is normal vaginal - delivery (60.0%). The next common modes were caesarean (25.0%), followed by vacuum (9.0%), and the remaining required forceps (6.0%) for delivery of the child. In Misoprostol group, the most common mode of delivery is normal vaginal- delivery (64.0%). The next common modes were caesarean (20.0%), followed by vacuum (10.0%), and the remaining required forceps (6.0%) for delivery of the child. In Dinoprostone group, most common delivery mode is normal vaginal-delivery (56.0%). The next common modes were caesarean (30.0%), followed by vacuum (8.0%), and the remaining required forceps (6.0%) for delivery the child. Caesarean deliveries were more seen in Group D(30%) compared to Group M(20%). On comparison, the study found no significant difference among the groups with respect to mode of delivery. In the study, intervention was required due to failed induction in none in Misoprostol group and 6.0% cases of Dinoprostone group. The study found no significant difference among the groups with respect to failed induction as an indication for intervention. In the study, intervention was required due to fetal distress in 10.0% cases of Misoprostol group and 10.0% cases of Dinoprostone group. The study found no significant difference among the groups with respect

to fetal distress as an indication for intervention. In the study, intervention was required due to meconium stained liquor in 14.0% cases of Misoprostol group and 2.0% cases of Dinoprostone group. Current study is showing significant difference among the groups with respect to meconium stained liquor as an indication for intervention. In the study, intervention was required due to non-reactive CTG in 10.0% cases of Misoprostol group and 14.0% cases of Dinoprostone group. Current study doesn't show any significant difference among the groups with respect to non-reactive CTG as an indication for intervention. In the study, intervention was required due to non-progression in 6.0% cases of Misoprostol group and 18.0% cases of Dinoprostone group. Current study doesn't show any significant difference among the groups with respect to non-progression as an indication for intervention. In the study, intervention was required due to poor effort 12.0% cases of Misoprostol group and 12.0% cases in Dinoprostone group. No statistically significant difference among the groups with respect to poor effort as an indication for intervention. Meconium stained liquor was most common indication for intervention in Group M(7%), where as failed progression is the most common indication for intervention in Group D(9%).

In the study, the total mean APGAR score of children at 1 minute was 7.16 ±0.87. On comparison, the mean APGAR score of children in Misoprostol group was 6.98 ± 0.94 which is almost lower than the mean APGAR score of 7.34 ± 0.77 in Dinoprostone group. Thus no statistically significant difference exists among the groups, thereby suggesting that dinoprostone was safer comparatively.

At 5 minutes, the total mean APGAR score of children was 8.32 ± 0.80. This implies the improvement in the condition of the children. On comparison, the mean APGAR score of children in Misoprostol group was 8.42 ± 0.78 which is higher than the mean APGAR score of 8.22 ± 0.82 in Dinoprostone group. No significant difference exists among the groups,The study showed statistically significant difference with respect to each group and overall, in terms of APGAR score, thereby proving that both the interventions were successful in improving the condition of the child.

In the study, the overall most common intra-partum finding was normal (57.0%). The next common findings were meconium stained liquor (26.0%), followed by cord around the neck (9.0%). Among the remaining, 4.0% each was reduced liquor and deflexed head. In Misoprostol group, the overall most common intra-partum finding was normal (52.0%). The next common findings were meconium stained liquor (36.0%), followed by cord around the neck (8.0%), and the remaining was deflexed head (4.0%). In Dinoprostone group, the overall most common intra-partum finding was normal (62.0%). The next common findings were meconium stained liquor (16.0%), followed by cord around the neck (10.0%). And the remaining was reduced liquor (8.0%) and deflexed head (4.0%). Meconium stained liquor was significantly seen more in Group M. On comparison, the study found no statistical significant difference among the groups with respect to intra-partum findings. In the study, majority of the children did not develop any complications irrespective of the groups. Among those children who developed complications, the overall common fetal- complication was meconium stained liquor (17.0%). The next common complication was grunting (10.0%), followed by tachypnea (9.0%).

In Misoprostol group, the overall common fetal- complication was meconium stained liquor (22.0%). The next common complication was grunting (12.0%), followed by tachypnea (10.0%). In Dinoprostone group, the overall common fetal-complication was meconium stained liquor (12.0%). The next common complication was grunting (8.0%), followed by tachypnea (8.0%). But incidence of meconium stained liquor is more in Group M. On comparison, the study found no statistical significant difference among the groups with respect to fetal complications. In the study, resuscitation was required in 43.0% cases overall. In Misoprostol group, the resuscitation was required in 46.0% cases, which is higher than 40.0% cases in Dinoprostone group. However, the study found no statistical significant' difference among the groups with respect to requirement of resuscitation.

In the study, the total mean duration of NICU stay among 40 children was 1.60 ± 0.50 days. Remaining 60 children were not requiring NICU care. On comparison, the mean duration of NICU stay among 19 children in Misoprostol group was 1.63 ± 0.50 days which is longer than the mean duration of NICU stay of 1.57 ± 0.51 days among 21 children in Dinoprostone group. However, the study found no statistical significant' difference among the groups, thereby suggesting that both the interventions have no effect over the morbidity of the child.

DISCUSSION

Induction of labour remains a challenge when it comes to unfavourable cervix. Prostaglandins are highly efficacious agents for this purpose, resulting in effective cervical ripening. Use of prostaglandins shortens induction-delivery time and improves the probability of a successful vaginal delivery. Hence a Hospital based comparative present study was conducted among 100 Pregnant women fulfilling inclusion and exclusion criteria at Department of Obstetrics and Gynaecology, Narayana medical college and hospital, Nellore. The present study was done for a period of 1 year. Written informed consent was obtained from the pregnant women participating in the present study and were randomised into Group D consisting of 50 women induced -with Dinoprostone intracervically and Group M consisting of 50 women induced -with miso-prostol in the posterior fornix and they were monitored with CTG tracings. Present study was conducted with the objectives to compare the effect of Misoprostol vs Dinoprostone as labour induction agents on cardiotocographic tracings.

General Profile: Mean age of the subjects in Misoprostol group was 24.98 ± 4.02 years which is almost closer to the mean age of 24.92 ± 4.31 years in Dinoprostone group. Majority were Primi in both Misoprostol group (68.0%) and Dinoprostone group (56.0%). There was no significant difference in age distribution and Parity status between two groups.

Indication for induction: In misoprostol group was IUGR in 12%, PIH in 20%, Oligohydramnios in 12%, Post- dated in 20%, Rh Negative in 6%, PROM in 20%, Reduced Movements in 6% and term gestation in 14%. In Dinoprostone group, Indication for induction was IUGR in 6%, PIH in 28%, Oligohydramnios in 18%, Post-dated in 28%, Rh Negative in 14%, PROM in 0%, Reduced Movements in 8% and term gestation in 18%.

Patients enrolled in the study had an indication for induction, some had more than one indication. PIH and post dated were the most frequent indication for induction seen in both the groups. The study found statistically significant difference between the groups with respect to PROM as an indication for induction. No statistical difference between two groups with regard to other indictaions for induction. Term gestation alone is not an indication for induction, it is carried out when it is associated with other conditions like PIH, oligohydramnios, Reduced fetal movements.

Gestational Age: Majority of subjects were at full term in both Misoprostol group (40.0%) and Dinoprostone group (34.0%). No difference in Gestational age between two groups.

At 0 hrs the mean Bishop score of the subjects in Misoprostol group was 4.27 ± 1.04 and 4.28 ± 0.90 in Dinoprostone group. After 6 hours, mean Bishop score in Misoprostol group was 6.17 ± 1.84 which is higher than the mean Bishop score of 6.02 ± 1.25 in Dinoprostone group. After 12 hours, mean Bishop score of the subjects in Misoprostol group was 7.22 ± 0.95 which is lower than the mean Bishop score of 7.30 ± 1.06 in Dinoprostone group. However, the present study found no significant difference between the groups, thereby suggesting that both the interventions are performing equally.

Induction Dose: Majority in Misoprostol group (44.0%) required just 1 dose, whereas in Dinoprostone group (42.0%), majority required 2 doses. No significant difference between the groups with respect to induction dose.CTG Comparison between the groups:

In the present study at 6 hrs in both the groups i.e., Misoprostol (76.0%) and Dinoprostone group (100.0%), reassuring was observed in majority. On considering other findings, Misoprostol group showed tachysystole (12.0%), loss of BTB variation (6.0%), and hyperstimulation (6.0%). On the contrary, Dinoprostone group showed no other findings. There was significant difference in CTG findings between two groups.

So prevalence of Non reassuring CTG was higher in Group M than Group D in first 6hrs. After 12 hours, in both the groups i.e., Misoprostol (46.0%) and Dinoprostone group (72.0%), reassuring was observed in majority. On considering other findings, Misoprostol group showed 6.0% each of variable deceleration and hypertonus, 4.0% each of hyperstimulation, tachysystole and early deceleration, and 2.0% each of tachycardia and late deceleration. On the contrary, Dinoprostone group showed tachycardia (10.0%), loss of BTB variation (4.0%), hyperstimulation (2.0%) and early deceleration (2.0%).

14 pregnant women had Non reassuring CTG in Group M compared to Group D in which 9 of them have Non reassuring CTG. There was significant difference in CTG findings at 12 hrs between the groups. After 18 hours, there was no significant difference in CTG findings between the groups.

Duration between induction and delivery: In the present study, the mean duration between induction and delivery of the child in Misoprostol group was 13.45 ± 6.70 hours which is shorter than the mean duration of 21.63 ± 10.61 hours in Dinoprostone group. There was significant difference in induction and delivery duration between 2 groups.

Mode of delivery: In Misoprostol group, common delivery mode was vaginal-normal delivery (64.0%). In Dinoprostone group, common delivery mode was vaginal-normal delivery (56.0%). There was no significant' difference among the groups with respect to mode of delivery. But caesarean deliveries were seen more in Group D(30%) than Group M(20%).

Indications for intervention: Indications for intervention In Misoprostol group was Fetal distress in 10%, Meconium stained liquor in 14%, Non-reactive CTG in 10%, Non-progression in 6% and poor effort in 12%. In Dinoprostone group was Failed Induction in 6%, Fetal distress in 10%, Meconium stained liquor in 2%, Non-reactive CTG in 14%, Non progression in 18% and poor effort in 12%. There was significant difference in Meconium stained liquor as indication for intervention between two groups. Meconium stained liquor was most common indication for intervention in Group M when compared to Group D in which Non progression is most common for intervention.

Intra-Partum findings: In current study, Intra-partum finding's were normal in most of the cases (52.0%). The next common findings in Group M vs Group D include:

Meconium stained liquor- Most common intrapartum finding in both the groups, in Group M(36%), Group D(16%) followed by cord around the neck-Group M (8.0%),Group D(10%) and the remaining was deflexed head in Group M (4.0%) Group D(4%). Reduced liquor as intrapartum finding was seen in Group D (8.0%) On comparison, the present study found no significant difference between the groups with respect to intra-partum findings.

APGAR score: Mean' APGAR- score of children at 1Min in Misoprostol group was 6.98 ± 0.94 which was lower than mean' APGAR- score of 7.34 ± 0.77 in Dinoprostone group. There was statistically significant difference between the groups in APGAR at 1 Min, thereby suggesting that Dinoprostone was safer comparatively. At 5 Min, Mean APGAR score of children in Misoprostol group was 8.42 ± 0.78 which is higher than the mean APGAR score of 8.22 ± 0.82 in Dinoprostone group. There was no significant difference between the groups.

Foetal Complications: In both groups most common fetal complication was meconium stained liquor, but incidence is high in Group M (22%) than Group D(12%) followed by Grunting in Group M(12%), Group D(8%), Tachypnea in Group M(10%), Group D (8%). There was no significant difference between the groups with respect to complications.

Resuscitation: In Misoprostol group, the resuscitation was required in 46.0% cases, which is higher than 40.0% cases in Dinoprostone group. There was no significant difference between the groups with respect to requirement of resuscitation.

Stay in NICU: In the present study 38% of neonates required NICU stay in Misoprostol group and 42% in Dinoprostone group. Mean duration of NICU stay among 19 children in Misoprostol group was 1.63 ± 0.50 days which is longer than the mean duration of NICU stay of 1.57 ± 0.51 days among 21 children in Dinoprostone group. There was no significant difference for Stay in NICU between the groups.

Limitations:

- The major drawback of current study was its study design. It was a Hospital based comparative study. Ideally RCT should been used to determine the efficacy of two drugs. This leads to potential biases such Selection bias, observer bias and others. Hence the results cannot be generalised and future studies should be done by using RCT study designs.
- Experience of treating obstetricians were not considered. It could be a potential factor in deciding the timing of intervention.
- Due to shortcomings in the study's design and scheduling logistics, certain other parameters—such as excessive bleeding, puerperal problems, infection, the cost-effectiveness of induction and monitoring of foetus, neonate for long-term complications—were not assessed.

CONCLUSION

From the study it was concluded that Dinoprostone is more effective than Misoprostol in labour due to it's lower prevalence of abnormal- CTG at 6 hrs and 12 hrs. Also, Dinoprostone group had better APGAR score compared to Misoprostol group. Compared to Dinoprostone, Misoprostol was linked to greater frequency of abnormal CTG. Misoprostol caused higher need for NICU admission, resuscitation due to low APGAR score's at 1 minute, even though APGAR score's at 5 minute's were good in both groups. This demonstrates that abnormalities of CTG while the patient is undergoing labour induction have a relationship to the foetus's outcome. The foetus will benefit from timely and appropriate resuscitation in order to recover from the temporary effects of labour induction and labour itself. Misoprostol should be administered cautiously in a context with ongoing foetal heart -rate and toco- dynamic monitoring because of the high incidence of abnormalities of CTG. Hence Dinoprostone is a better alternative to misoprostol in labour induction.

Although the induction delivery time was decreased with misoprostol and fewer doses were needed to achieve a successful delivery, It is extremely concerning that misoprostol has a considerably higher incidence of abnormal foetal heart rate tracings than Dinoprostone when they need to be repeated. With misoprostol, there is a potential for an increase in the rate of tachy-systole, hyper-tonus, hyper- stimulation syndrome. Misoprostol should therefore used with caution.

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