RESEARCH PAPER

"A Comparative Study to assess the outcome of Oral Misoprostol versus Injection Oxytocin for Induction of Labor among Pregnant women in SVBP, Hospital, Meerut, U.P."

Miss. Punita Yadav[1*], Prof. Hemalatha.M.[2], Dr. Shakun Singh[3], Prof. Dr. S. Balamani Bose[4*]

[1]M. Sc Nursing Student, College of Nursing, L.L.R.M Medical College, Meerut, Uttar Pradesh, India. Email ID: punitayadavbcm@gmail.com , ORCID id: 0009 -0001-9988-9780

[2] Professor, HOD of Obstetrics and Gynecological Nursing, College of Nursing, L.L.R.M Medical College, Meerut Uttar Pradesh, India. Email ID: diajohn2009@gmail.com , ORCID id: 0009-0003-9900-166X

[3]Professor and Head Department of Obstetrics and Gynecological Department, L.L.RM, Medical, College, Meerut, Uttar Pradesh, India. Email ID: singhshakun77@gmail.com ,ORCID id: 0009-0008-9526-2084

[4]Principal, College of Nursing, L.L.R.M Medical College, Meerut, Uttar Pradesh, India. ORCID id: 0009-0000-2983-1789

Corresponding Author: Prof. Dr. S. Balamani Bose,
mail.id: balabosejeeva@gmail.com

ABSTRACT

Introduction: Induction of labor is a medical intervention that is used to start and speed up labor when it does not begin naturally or progress as expected. This procedure can be performed for various reasons, such as maternal or fetal health concerns, post-term pregnancy, or failed membrane rupture. There are several methods for inducing labor, including membrane sweeping or stripping, Foley bulb catheter, mechanical or manual dilation, rupturing the amniotic membrane, and medications i.e., the use of oxytocin hormone and prostaglandins such as misoprostol and dinoprostone, etc. Induction of labor is a carefully monitored process by healthcare providers to ensure the safety of both the mother and the baby.

Objectives: To Assess the Outcomes of Oral Misoprostol and Injection Oxytocin on induction of labor among pregnant women, to Compare the outcomes of oral misoprostol and injection Oxytocin for inducing labor among pregnant women, to find the association between the outcomes of Oral Misoprostol for induction of labor among pregnant women with their selected demographic Variables, to find the association between the Outcomes of Injection Oxytocin for induction of labor among pregnant women with their selected demographic variables.

Methodology: A comparative study was conducted among 80 pregnant women undergoing induction of labour, with 40 participants receiving Oral Misoprostol and 40 receiving Injection Oxytocin.The study was conducted in SVBP, Hospital, Meerut. Quantitative non-experimental research approach was adopted for this study and Descriptive Comparative Research Design. 80 sample were selected by non-probability consecutive sampling techniques. After getting the initial permission, the investigator got informed consent from the participants and proceed with their data collection in a given period of time. The investigator first assessed demographic clinical characteristics of participants followed by the Assessment of Outcomes of oral misoprostol and Injection Oxytocin on induction of labor among pregnant women, in SVBP Hospital Meerut using self -structured Questionnaire. Descriptive and inferential statistics were used for data analysis.

Results: The findings demonstrated that women in the Oral Misoprostol group achieved better maternal outcomes compared to those in the Injection Oxytocin group. The mean maternal outcome score was 13.4 ± 1.60 in the Oral Misoprostol group and 12.475 ± 1.85 in the Injection Oxytocin group. The observed mean difference of 0.925 was statistically significant (t -value = 2.38, p- value= 0.020). Regarding neonatal outcomes, the mean neonatal outcome score was 5.8 ± 0.4 in the Oral Misoprostol group and 5.65 ± 0.61 in the Injection Oxytocin group. Although the Oral Misoprostol group showed slightly higher neonatal outcome scores, the difference was not statistically significant (t- value = 1.30, p- value = 0.19). Furthermore, a higher proportion of mothers in the Oral Misoprostol group experienced good maternal outcomes (55%) compared to the Injection Oxytocin group (25%). Similarly, good neonatal outcomes were observed in 80% of neonates in the Oral Misoprostol group and 72.5% in the Injection Oxytocin group. Analysis of selected demographic and obstetric variables revealed no consistent significant association with maternal and neonatal outcomes.

Conclusion: The study concluded that both Oral Misoprostol and Injection Oxytocin are effective agents for induction of labour among term pregnant women. However, Oral Misoprostol demonstrated superior maternal outcomes and comparable neonatal outcomes when compared with Injection Oxytocin. The findings suggest that Oral Misoprostol is a safe, effective, economical, and convenient alternative for labour induction. Its ease of administration, favourable maternal outcomes, and satisfactory neonatal safety profile support its wider utilization in obstetric practice, particularly in resource-constrained healthcare settings.

Keywords: Oxytocin, Misoprostol, Maternal and Neonatal outcome, Labor induction, Caesarean section, Vaginal delivery.

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INTRODUCTION

Over the past several decades, the incidence of Labor induction for shortening the duration of pregnancy has continued to rise. In developed countries, the proportion of infants delivered at term following induction of Labor can be as high as one in four deliveries. World Health Organization (WHO) global survey on maternal and perinatal health, which included 373 healthcare facilities

in 24 countries and nearly 3,00,000 deliveries, showed that 9.6% of all the deliveries involved labor induction. In Nepal, a study done at Paropakar Maternity and Women's Hospital, the overall induction rate was found to be 7.2%. Historically, most trials have studied the vaginal route of administration of misoprostol for induction of Labor. However, owing to concerns about the risk of uterine hyperstimulation with vaginal misoprostol, more recent trials have focused on studying lower doses of vaginal misoprostol and the oral route for its administration. Globally, the incidence of IOL has seen a steady rise over the past three decades. In developed nations like the United States, rates have escalated from roughly 10% to over 27% of all births. In India, the incidence typically ranges from **5% to 22%**, although this figure can be as high as **30–40%** in specialized tertiary care centers that manage complex and high-risk referrals. Common indications necessitating this intervention include: **Post-dated Pregnancy:** Pregnancies extending beyond 40–42 weeks where placental efficiency may decline. **Hypertensive Disorders:** Conditions such as pre-eclampsia or pregnancy-induced hypertension (PIH), which pose immediate risks of maternal morbidity. **Prelabor Rupture of Membranes (PROM):** When the amniotic sac ruptures without the onset of labor, increasing the risk of neonatal and maternal infection. **Fetal Complications:** Including intrauterine growth restriction (IUGR), oligohydramnios, or suspected fetal compromise. The choice of induction agent is critical to the procedure's success. **Oxytocin**, a synthetic version of the naturally occurring hormone, has long been the gold standard for induction and augmentation. However, its effectiveness is often hindered by an "unfavorable" cervix (low Bishop score), necessitating a ripening phase. Furthermore, oxytocin requires precise intravenous titration, continuous electronic fetal monitoring (EFM), and refrigeration, making it logistically demanding in resource-constrained or extremely busy labor rooms.

OBJECTIVES OF THE STUDY WERE:

1.To Assess the Outcomes of Oral Misoprostol and Injection Oxytocin on induction of labor among pregnant women.

2.To Compare the outcomes of Oral Misoprostol and Injection Oxytocin for inducing labor among pregnant women**.**

3. To Find the association between the outcomes of Oral Misoprostol for induction of labor among pregnant women with their selected demographic Variables.

4. To Find the association between the Outcomes of Injection Oxytocin for induction of labor among pregnant women with their selected demographic variables.

TABLE 1. Description of Demographic and Clinical Characteristics of pregnant women. **(N=80)**

Sr.no.	Demographics characteristics	Oral Misoprostol Group (n-40)		Injection Oxytocin Group (n-40)	
1.	**Age in years**	Frequency	Percentage	Frequency	Percentage
	<20 yrs	0	0.0%	0	0.0%
	20-25 yrs	19	47.5 %	17	42.5%
	26-30 yrs	14	35.0%	11	27.5%
	31-35 yrs	7	17.5%	12	30.0%
	>35 yrs	0	0.0%	0	0.0%
2.	**Occupation**				

METHODOLOGY

- The study was conducted in SVBP, Hospital, Meerut. Quantitative non-experimental research approach was adopted for this study and Descriptive Comparative Research Design. 80 samples 40 in Oral Misoprostol and 40 in Injection Oxytocin were selected by non-probability consecutive sampling Techniques. The **Inclusion criteria:** Pregnant women who were undergoing for induction of labor under Oral Misoprostol and Injection Oxytocin, Women who were willing to participate and provide informed consent, Women whose clinical records contain complete information required for the study outcomes. **Exclusion criteria:** Pregnant women who received induction agents other than oral misoprostol or intravenous oxytocin, Women who received both oral misoprostol and intravenous oxytocin as the primary induction method, Women who withdraw consent, Women whose pregnancies ended in Stillbirth or who delivered baby with congenital anomalies.

  The Comparison Variable: Method of induction of labor (Oral Misoprostol and Injection Oxytocin).

  Outcome Variables:

  1.Induction-to-delivery interval
  2. Duration of labor.
  3.Mode of delivery.
  4. Maternal outcomes.
  5.Neonatal outcomes

  After getting the initial permission, the investigator got informed consent from the participants and proceed with their data collection in a given period of time the investigator first assessed demographic clinical characteristics of participants followed by the Assessment of Outcomes of Oral Misoprostol and Injection Oxytocin on induction of labor among pregnant women, in SVBP Hospital Meerut using self -structured Questionnaire. Data analysis was done by descriptive and inferential statistics.

RESULTS:

The finding of study are presented according to the objectives of the study. The data is prepared under the subsequent sections.

	Homemaker	26	65.0%	23	57.5%
	Private job	5	12.5%	5	12.5%
	Government Job	1	2.5%	1	2.5%
	Self employed	5	12.5%	8	20.0%
	Others	3	7.5%	3	7.5%
3.	**Family Monthly income**				
	Less than 10,000	4	10.0%	6	15.0%
	10,001- 20,000	8	20.0%	10	25.0%
	20,001-30,000	20	50.0%	10	25.0%
	More than 30,000	8	20.0%	14	35.0%
4.	**Type of Family**				
	Nuclear	28	70.0%	14	35.0%
	Joint	12	30.0%	26	65.0%
	Extended Family	0	0.0%	0	0.0%
5.	**Residence**				
	Urban	5	12.5%	7	17.5%
	Town	8	20.0%	10	25.0%
	Rural	22	55.0%	19	47.5%
	City	5	12.5%	4	10.0%
6.	**Gravida**				
	1	9	22.5%	12	30.0%
	2	17	42.5%	16	40.0%
	3	10	25.0%	12	30.0%
	More than 3	4	10.0%	0	0.0%
7.	**Parity**				
	1	16	40.0%	17	42.5%
	2	17	42.5%	18	45.0%
	3	7	17.5%	5	12.5%
	More than 3	0	0.0%	0	0.0%
8.	**Gestational age at induction**				
	36- 38 weeks	10	25.0%	9	22.5%
	39-40 weeks	30	75.0%	31	77.5%
	> 40 weeks	0	0.0%	0	0.0%
9.	**BMI**				
	Under weight (<18.5kg/m2)	16	40.0%	11	27.5%
	Normal Weight (18.5-24.9kg/m2)	15	37.5%	14	35.0%
	Over weight (25.0-29.0kg/m2)	9	22.5%	15	37.5%
	Obese (30.0kg/m2 or higher)	0	0.0%	0	0.0%
10.	**Bishop Score**				
	≤ 3 unfavorable	0	0.0%	0	0.0%
	4-7 intermediate	23	57.5%	26	65.0%
	≥ 8 Favorable	17	42.5%	14	35.0%
11.	**Previous History of Induction of labor**				
	Yes	8	20.0%	6	15.0%
	No	32	80.0%	34	85.0%
12.	**History of Medical Illness**				
	Yes	11	27.5%	11	27.5%
	No	29	72.5%	29	72.5%
13.	**History of Obstetric complication**				
	Yes	10	25.0%	13	32.5%
	No	30	75.0%	27	67.5%
14. a.	**Inj. Oxytocin group Maximum dose reached**				
	10 mU/min			7	17.5%
	20mU/min			15	37.5%
	30mU/min			13	32.5%
	40mU/min			5	12.5%
14.b.	**Oral Misoprostol group according to the dose**				
	25mcg	40	100%		
	50mcg	0	0.0%		
14.c.	**Time of each dose**				
	Every 3-4 hrs	23	57.5%		
	5-6 hrs	17	42.5%		
14.d.	**Total Misoprostol Dose**				
	50 mcg	13	32.5%		
	100mcg	12	30.0%		
	150mcg	10	25.0%		
	200mcg	5	12.5%		
15.	**Any complications developed for mother due to induction of labor.**				
	Yes	0	0.0%	0	0.0%
	No	40	100%	40	100%
16.	**Any complications developed for fetal due to induction of labor.**				
	Yes	0	0.0%	0	0.0%
	No	40	100%	40	100%

Table.2.1: Frequency and Percentage Distribution of Maternal outcomes among Injection. Oxytocin and misoprostol.

	Oral Misoprostol		Injection Oxytocin	
Maternal Outcomes	**Frequency (f)**	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
Poor Maternal Outcome	1	2.50%	4	10.00%
Moderate Maternal Outcome	17	42.50%	26	65.00%
Good Maternal Outcome	22	55.00%	10	25.00%

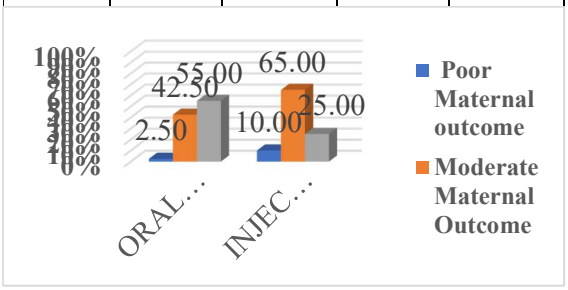

Figure.2.1. Percentage Distribution of Maternal Outcome among Injection Oxytocin and Oral Misoprostol.

Table.2.2: Frequency and Percentage Distribution of Neonatal Outcome among Injection Oxytocin and Oral Misoprostol.

	Oral Misoprostol		Injection Oxytocin	
Neonatal outcomes	**Frequency (f)**	**Percentage (%)**	**Frequency (f)**	**Percentage (%)**
Poor Neonatal outcome	o	0.00%	0	0.00%
Moderate Neonatal outcome	8	20.00%	11	27.50%
Good Neonatal outcome	32	80.00%	29	72.50%

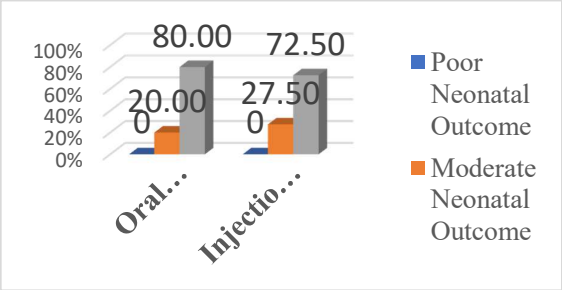

Figure.2.2. Percentage Distribution of Neonatal Outcome among Injection Oxytocin and Oral Misoprostol.

Table.3.1: Comparison between Maternal outcome among Injection Oxytocin and Oral Misoprostol among Participant.

(N=80)

Groups	mean	SD	Mean difference	t-value	df	p value	Inference
Injection Oxytocin Group	12.475	1.85	0.925	2.38	78	0.020	Significant
Oral Misoprostol Group	13.4	1.60					

(p<0.05 significant level)

Table.3.2: Comparison between Neonatal outcome among Injection Oxytocin and Oral Misoprostol among Participant. (N=80)

Groups	mean	SD	Mean difference	t-value	df	p value	Inference
Injection Oxytocin Group	5.65	0.61	0.15	1.30	78	0.19	Not Significant
Oral Misoprostol Group	5.8	0.4					

(p<0.05 significant level)

Table 4.1: Association between the Maternal outcomes of Oral Misoprostol among pregnant women with their selected demographic Variables. (N=80)

Demographic variable	χ^2	d	p value	Significance
Age in years	5.1771	4	0.269	NS
Occupation	10.267	8	0.2468	NS
Family monthly income	2.46	6	0.872	NS
Type of family	1.99	2	0.369	NS
Residence	2.796	6	0.833	NS
Gravida	6.66	6	0.353	NS
Parity	1.7	4	0.791	NS
Gestational age at induction	0.4136	2	0.813	NS
BMI	4.91	4	0.297	NS
Bishop score	1.39	2	0.49	NS
Previous history of induction of labor	1.743	2	0.417	NS
History of medical illness	3.66	2	0.15	NS
History of obstetrical complication	6.616	2	0.036	S
Time of each dose (Oral Misoprostol)	3.1385	2	0.208	NS
Total misoprostol dose	5.4706	6	0.485	NS

(p<0.05 significant level) S: Significant, NS: Not Significant

Table 4.2: Association between the Neonatal outcomes of Oral Misoprostol among pregnant women with their selected demographic Variables. (N=80)

Demographic variable	χ^2	d	p value	Inference
Age in years	2.030	2	0.362	NS
Occupation	2.259	4	0.688	NS
Family monthly income	2.5	3	0.475	NS
Type of family	0.1191	1	0.73	NS
Residence	0.2585	3	0.520	NS
Gravida	2.0560	3	0.560	NS
Parity	3.0745	2	0.215	NS
Gestational age at induction	0	1	1	NS
BMI	2.1267	2	0.345	NS
Bishop score	0.2303	1	0.631	NS
Previous history of induction of labor	2.5	1	0.113	NS
History of medical illness	1.1285	1	0.288	NS

History of obstetrical complication	3.3334	1	0.067	NS
Time of each dose (oral misoprostol)	1.2532	1	0.262	NS
Total Misoprostol dose	0.8894	3	0.828	NS

(p<0.05 significant level) S: Significant, NS: Not Significant

Table 5.1: Association between the Maternal Outcomes of Injection Oxytocin among pregnant women with their selected demographic Variables. (N=80)

Demographic variable	χ^2	df	p value	Inference
Age in years	4.891	4	0.298	NS
Occupation	4.7866	8	0.780	NS
Family monthly income	10.605	6	0.101	NS
Type of family	0.5072	2	0.776	NS
Residence	4.5223	6	0.606	NS
Gravida	0.8717	4	0.928	NS
Parity	1.0559	4	0.901	NS
Gestational age at induction	3.0769	2	0.214	NS
BMI	5.5585	4	0.234	NS
Bishop score	2.4006	2	0.301	NS
Previous history of induction of labor	0.905	2	0.636	NS
History of medical illness	0.4339	2	0.805	NS
History of obstetrical complication	3.2873	2	0.193	NS
(Injection Oxytocin) Maximum dose reached	2.2062	6	0.899	NS

(p<0.05 significant level) S: Significant, NS: Not Significant

Table 5.2: Association between the Neonatal outcomes of Injection Oxytocin among pregnant women with their selected demographic Variables. (N=80)

Demographic variable	χ^2	df	p value	Inference
Age in years	2.6195	2	0.2699	NS
Occupation	3.4875	4	0.4798	NS
Family monthly income	1.1404	3	0.7673	NS
Type of family	2.5477	1	0.1105	NS
Residence	6.6062	3	0.085	NS
Gravida	1.8601	2	0.3945	NS
Parity	1.9694	2	0.3736	NS
Gestational age at induction	0.1982	1	0.656	NS
BMI	0.6976	2	0.7055	NS
Bishop score	0.729	1	0.393	NS
Previous history of induction of labor	0.120	1	0.728	NS
History of medical illness	0.5979	1	0.4394	NS
History of obstetrical complication	6.7051	1	0.0096	S
(Injection Oxytocin) Maximum dose reached	4.1297	3	0.2478	NS

(p<0.05 significant level) S: Significant, NS: Not Significant

The data presented in table 2. 1.Shows the distribution of the maternal outcomes that the Oral misoprostol resulted in better overall outcomes, with 55.00% of cases rated as "good maternal outcome" compared to 25.00% for Injection Oxytocin Injection. Oxytocin had a higher rate of "poor maternal outcomes" at 10%, while Oral Misoprostol was lower at 2.50%. The majority of women in both groups fell into the "moderate maternal outcome" category (65.00% for Injection Oxytocin and 42.50 for Oral Misoprostol).

The data presented in table 2.2. shows the distribution of neonatal outcomes that the Good Outcomes: Oral Misoprostol achieved a higher rate of "good neonatal" outcomes (80%) compared to Injection Oxytocin (72.5%). Moderate neonatal outcome: Injection Oxytocin had (27.5%) than Oral Misoprostol (20%). Poor Outcomes: Both methods were highly safe, with 0% "poor" outcomes recorded in either group**.** The data presented in table 3.1. showed that the mean maternal outcome score in the oral Misoprostol group was 13.4 with a standard deviation of 1.60, whereas the mean maternal outcome score in the Injection Oxytocin group was 12.475 with a standard deviation of 1.85. Although the oral Misoprostol group had a higher mean score, the unpaired t-test value was 2.38 and the p-value was 0.020, which indicated that the difference was statistically significant at the <0.05 level. This means that, in the present study, 0ral Misoprostol mean is higher than Injection Oxytocin were found in maternal outcome.

The data presented in table 3.2 showed that the mean neonatal outcome score in the oral Misoprostol group was 5.8 with a standard deviation of 0.4, while in the Injection Oxytocin group the mean score was 5.65 with a standard deviation of 0.61. The mean difference was 0.15, the t-value was 1.30, and the p-value was 0.19, which indicates that the difference was not statistically significant at the <0.05 level.

DISCUSSION

Discussion on Maternal Outcome

The present study compared the Outcomes of oral Misoprostol and Injection Oxytocin for induction of labor among term pregnant women. The findings revealed that the mean maternal outcome score in the oral Misoprostol group was 13.4 ± 1.60, whereas in the Injection Oxytocin group it was 12.475 ± 1.85. The mean difference was 0.925, with an unpaired t-value of

2.38 and a p-value of 0.020, indicating a statistically significant difference between the two groups. These findings suggest that oral Misoprostol was associated with better maternal outcomes compared to Injection Oxytocin among the study participants.

The better maternal outcome observed with oral Misoprostol may be attributed to its dual mechanism of action, as it promotes both cervical ripening and uterine contractions, thereby facilitating labor progression. In contrast, Oxytocin primarily stimulates uterine contractions and is more effective when the cervix is already favorable. Consequently, Misoprostol may offer an advantage in women with an unfavorable Bishop score by improving cervical readiness before the onset of active labor. This pharmacological characteristic may explain the superior maternal outcomes observed in the present study.

The present findings are supported by the study conducted by Ahmed et al. (2023), who reported that oral Misoprostol resulted in high vaginal delivery rates and maternal safety outcomes comparable to Oxytocin among women undergoing induction of labor. Similarly, Bhuvaneswari and Reddy (2024) found no significant increase in maternal complications with Misoprostol and concluded that it is a safe and effective alternative to Oxytocin for labor induction. These studies support the effectiveness of Misoprostol in achieving favorable maternal outcomes and are consistent with the results of the present study.

Discussion on Neonatal Outcome

With regard to neonatal outcome, the mean neonatal outcome score in the oral Misoprostol group was 5.8 ± 0.4, while in the Injection Oxytocin group it was 5.65 ± 0.61. The mean difference was 0.15, with a t-value of 1.30 and a p-value of 0.19, indicating that the difference was not statistically significant. However, a greater proportion of neonates in the oral Misoprostol group demonstrated good neonatal outcomes (80%) compared with those in the Oxytocin group (72.5%). No neonate in either group experienced poor neonatal outcomes, indicating that both induction methods were generally safe for newborns.

A possible explanation for the slightly better neonatal outcome observed in the Misoprostol group is that low-dose oral administration may promote gradual cervical ripening and labor progression, thereby reducing fetal stress during labor. Controlled uterine activity may contribute to improved fetal adaptation and better immediate neonatal condition following delivery.

The findings of the present study are in agreement with Disha Ajila and Ritu Sharma (2023), who reported comparable Apgar scores and NICU admission rates among neonates born following induction with oral Misoprostol and Oxytocin. Similarly, Ahmed et al. (2023) found no significant difference in neonatal outcomes between the two induction methods in term PROM cases. These findings indicate that oral Misoprostol is at least as safe as Oxytocin with respect to neonatal well-being and may provide a slight clinical advantage in selected settings.

Discussion on Association with Demographic Variables

The present study also examined the association between selected demographic and clinical variables and induction outcomes. Chi-square analysis demonstrated that the majority of demographic variables, including age, occupation, family income, residence, gravida, parity, gestational age, BMI, Bishop score, and previous history of induction, were not significantly associated with maternal or neonatal outcomes in either group. These findings suggest that the effectiveness of both oral Misoprostol and Injection Oxytocin was relatively consistent across different maternal characteristics.

Overall, the findings of the present study indicate that oral Misoprostol is an effective, safe, and practical alternative to Injection Oxytocin for induction of labor among term pregnant women. The statistically significant improvement in maternal outcome and the favorable neonatal profile observed in the Misoprostol group support its use in routine obstetric practice, particularly in resource-constrained settings where ease of administration, cost-effectiveness, and room-temperature stability are important considerations.

NURSING IMPLICATIONS

Nursing practice

Nurses working in labour rooms are continuously involved in preparing women for induction, monitoring the progress of labour, observing uterine contractions, assessing fetal heart rate patterns, documenting labour events, and identifying complications at the earliest stage. Since the study showed that oral Misoprostol is comparable to Injection Oxytocin in maternal outcome and slightly better in neonatal outcome, labour room nurses can consider oral Misoprostol as a clinically acceptable induction option under institutional guidelines and medical orders.\

Nursing education

The study has significant implications for nursing education because induction of labour is a major topic in obstetric nursing curricula. Student nurses and postgraduate nursing scholars should be taught the comparative indications, mechanisms of action, dosage principles, contraindications, side effects, and nursing responsibilities associated with Oral Misoprostol and Injection Oxytocin. The findings of the study can be integrated into classroom teaching, case discussions, seminars, and clinical postings to improve students' understanding of evidence-based induction practices.

Nursing Administration

The findings of the study can be integrated into classroom teaching, case discussions, seminars, and clinical postings to improve students' understanding of evidence-based induction practices. The present study also has implications for nursing administration, particularly in tertiary care hospitals and maternity centres where induction of labour is routinely carried out. Nurse administrators are responsible for ensuring the availability of essential drugs, equipment, protocols, training, supervision, and quality assurance systems in labour rooms.

Nursing research

Nursing researchers can build on the present study by conducting larger multicentre trials, subgroup analyses, intervention studies, and longitudinal follow-up studies related to labour induction. Future research may also

examine maternal satisfaction, pain experience, cost-effectiveness, nursing workload, and long-term neonatal adaptation in relation to different induction methods. The study therefore opens avenues for broader evidence generation in obstetric nursing practice and policy.

Recommendations

Based on the findings of the present study, the following recommendations are made:

- A similar study may be conducted on a larger sample size to increase the generalizability and statistical power of the findings.
- Comparative studies may be undertaken in multiple hospitals or different geographic settings to determine whether the present findings are reproducible across institutions.
- Future studies may compare oral Misoprostol and Injection Oxytocin separately in primigravida and multigravida women, since parity may influence induction success and labour duration.

LIMITATIONS

- The sample size was relatively small, consisting of only 80 pregnant women.
- The study included only term, singleton, cephalic pregnancies, so the findings cannot be generalized to high-risk pregnancies, multiple pregnancies, preterm pregnancies, or malpresentations.

CONCLUSION

The study concludes that both Oral Misoprostol and Injection Oxytocin are effective agents for induction of labour among term pregnant women. However, Oral Misoprostol demonstrated superior maternal outcomes and comparable neonatal outcomes when compared with Injection Oxytocin. The findings suggest that Oral Misoprostol is a safe, effective, economical, and convenient alternative for labour induction. Its ease of administration, favourable maternal outcomes, and satisfactory neonatal safety profile support its wider utilization in obstetric practice, particularly in resource-constrained healthcare settings.

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