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Induction Of Labour

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ABSTRACT

BACKGROUND: Modern obstetrics uses advanced technologies to detect adverse conditions, with induction of labor being a common procedure. The study aims to improve clinical practice and outcomes for mothers and newborns in high-risk situations.

OBJECTIVES: The aim is to investigate factors influencing induced labor, its prevalence, indications and evaluate maternal and neonatal outcomes.

METHODS:

The study is a prospective observational study involving 130 pregnant women admitted to Dhiraj Hospital labor room during routine and emergency hours. The sample size was 130, selected after informed consent, and the study duration 1.5 years. The inclusion criteria included singleton pregnancy, postdated and post term pregnancy, hypertensive disorder, intrauterine growth restriction, Rh-Isoimmunization, premature rupture of membranes, oligohydramnios, polyhydramnios, and medical disorders requiring termination of pregnancy.

RESULTS: The study reveals that labor inductions often lead to vaginal births in 70.77% of cases. Cerviprime is the most commonly used induction agent, followed by misoprostol in 21.54%. The duration from induction to delivery varies greatly, with a median of 9.50 hours. Complications vary depending on delivery method, with vaginal births causing seconddegree perineal tears and cervical tears, while cesarean sections result in more postpartum hemorrhage and pyrexia. The most common newborn complications are respiratory distress syndrome (RDS) grade 1 and meconium aspiration syndrome (MAS).

CONCLUSION: The study highlights the complex nature of labor induction, highlighting its potential for maternal and neonatal issues. It emphasizes the need for individualised induction protocols, intense monitoring and prompt intervention to improve maternal and neonatal well-being.

INTRODUCTION

The main aim of modern obstetrics is to ensure the well-being of mother and child and to promote their health. With technological advances, more advanced technologies have become available for the detection of specific adverse conditions associated with pregnancy and its complications. Despite the advances in obstetrics and the growing knowledge in the population about the problems associated with pregnancy and childbirth. Induction of labor is the intentional triggering of uterine contractions through a medical intervention before labor begins naturally. When there are more advantages to a speedy birth than hazards to carrying the pregnancy to term, it is utilized as a therapy.

Obstetricians have traditionally used artificial induction of labor as a treatment method.

AIM AND OBJECTIVES AIMS

- To study associated factors with induced labour and foetomaternal outcome OBJECTIVES
- To study indication for induction
- To study the various induction methods.
- To evaluate maternal outcome in induced labour
- To evaluate neonatal outcome in induced MATERIAL AND METHODS

STUDY DESIGN– A prospective observational study

TARGET POPULATION –All induced women in labor room of Dhiraj hospital.

PLACE OF STUDY –Obstetrics and Gynecology department, Dhiraj Hospital, Pipariya, Vadodara.

SOURCE OF DATA: Obstetrics and Gynecology department Pipariya, Vadodara.

SAMPLE SIZE - 100 pregnant women selected after taking informed consent.

TIME SCALE OF STUDY

The study duration was One and half year.

SELECTION CRITERIA:

Women who are admitted into the labor room during routine and emergency hours (booked /unbooked/referred) was taken for the study randomly with the following inclusion criteria

INCLUSION CRITERIA

Singleton Pregnancy with Reactive Fetal Heart Rate Pattern and

1. Postdated and Postterm pregnancy
2. Abruptio placenta
3. Hypertensive Disorder of Pregnancy
4. Intrauterine Growth restriction
5. Rh-Isoimmunization
6. Premature rupture of membranes (PROM)
7. Oligohydramnios
8. Polyhydramnios
10. Various Medical disorders requiring termination of pregnancy EXCLUSION CRITERIA

Pregnant women with relative contraindication for trial of labour

1) Multiple gestation
2) Abnormal lie and presentation
3) Contracted pelvis and cephalopelvic disproportion
4) Previous cesarean section or hysterotomy (scarred uterus)
5) Active Genital Herpes Infection

6) High risk pregnancy with fetal compromise
7) Heart disease
8) Umbilical Cord Prolapse
9) Chorioamnionitis

METHODOLOGY

Upon receiving permission from the obstetrics and gynecology department and the university's ethics council, The research included women who were admitted to the labor room, whether they had made prior appointments or not. The selection of participants was done randomly, based on certain inclusion criteria. The patient provided informed written permission (ANNEXURE – I) after receiving appropriate counseling upon arrival. The personal information and medical data of the chosen patients were gathered using a standardized proforma. The patient information document was provided to the patient in their preferred language prior to obtaining their permission.

Table 1: Distribution of women with different age group labor induction among women delivered

		n	%
Age	20-24 years	51	39.23
	25-29 years	74	56.92
	30-34 years	5	3.85
	>34 years	0	0.00

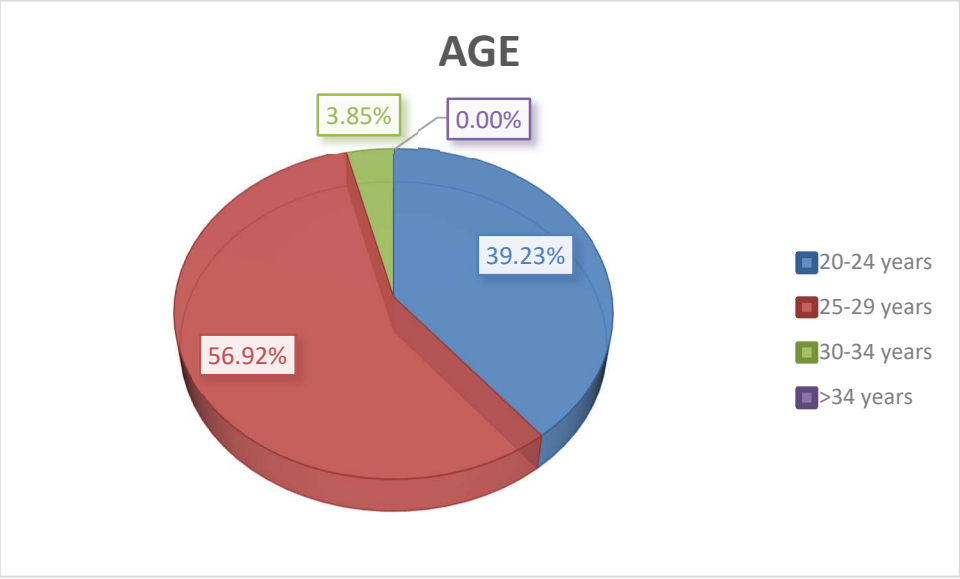

Figure 1. Distribution of women with different age group labor induction among women delivered

Labor induction among women shows a distinct distribution based on gravida status. Primigravida women, those experiencing their first pregnancy, account for the majority of inductions at 70.77% (92 out of 130). In contrast, multigravida women, those who have had previous pregnancies, represent only 21.54% (28 out of 130). This data indicates that labor induction is significantly more common in first-time mothers compared to those who have been pregnant before. Understanding these trends can assist healthcare providers in anticipating and managing the needs of different groups of pregnant women during labor induction.

Table 2: Distribution of women with different Gravida

		n	%
Gravida	Primigravida	92	70.77
	Multigravida	28	21.54

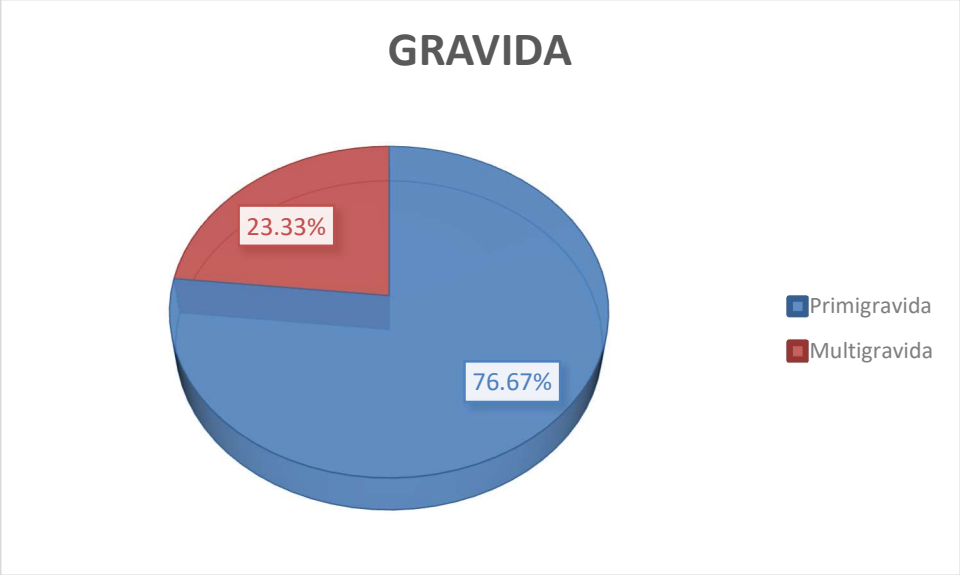

Figure 2. Distribution of women with different Gravida

Table-3 Distribution of women with different gestatioal age

		n	%
Gestational Age	28 to less than 32 weeks	0	0.00
	32 to 37 weeks	21	16.15
	37-40 weeks	25	19.23
	>40 weeks	85	65.38

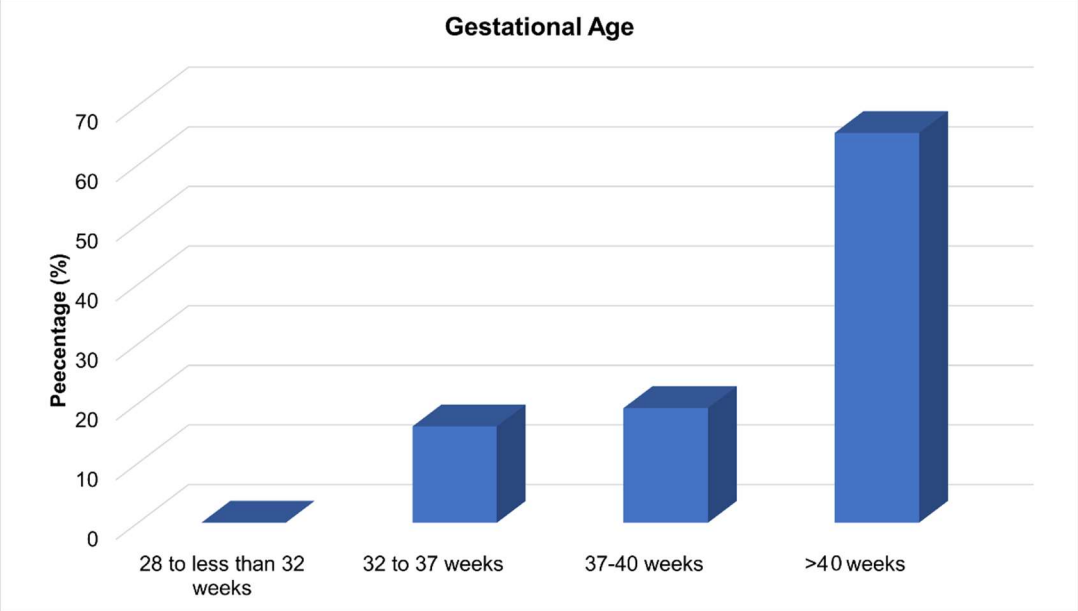

Table-4 Distribution of women with different Bishop's score

Bishop's score		n	%
A	4-6	41	31.54
B	7-8	50	38.46
C	9-10	23	17.69
D	>10	16	12.31

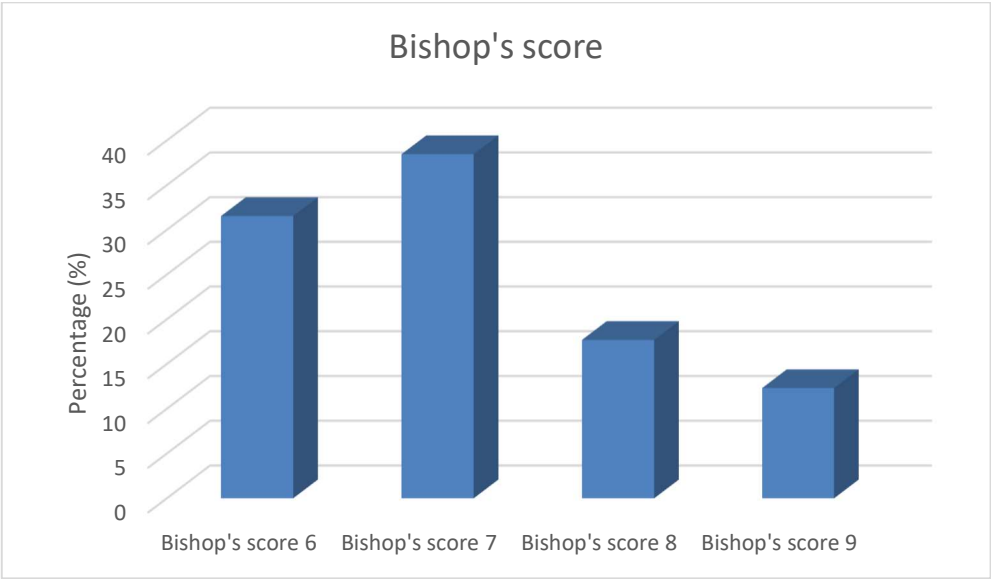

Figure 4: Distribution of women with different Bishop's

Table 5: Distribution of women with different Indication for induction

		n	%
Indication for induction	PROM	21	16.15
	POSTDATISM	83	63.85
	OLIGO	23	17.69
	MILD PIH	13	10.00
	IUGR	8	6.15
	SEVERE PREECLAMPSIA	2	1.54
	ABRUPTIO PLACENTA	2	1.54
	POLYHYDRAMNIOS	1	0.77

Table 6: Distribution of women with different Induction Agent

		n	%
Induction Agent	Cerviprime	71	54.62
	Cerviprime With Foley's	29	22.31
	Misoprostol	28	21.54
	Misoprostol With Foley's	2	1.54

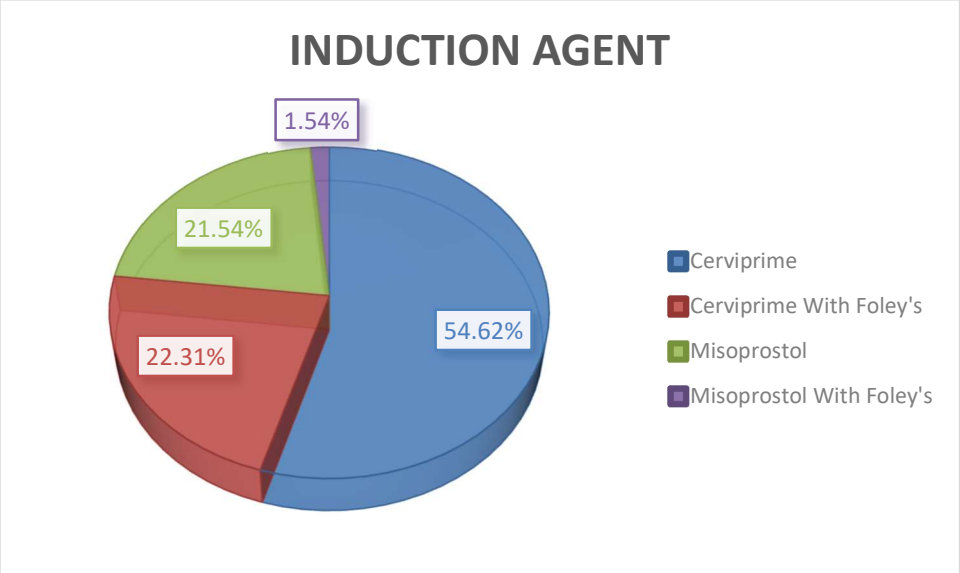

Table 7: Distribution of women with different Indication for LSCS

		n	%
Indication for LSCS	FAILURE OF INDUCTION	8	6.15
	FETAL DISTRESS	10	7.69
	NPOL	5	3.85
	NPOL WITH FETAL DISTRESS	3	2.31
	THICK MSL IN LATENT PHASE	7	5.38
	2ND STAGE ARREST	1	0.77
	CORD PROLAPSE	1	0.77
	DTA	2	1.54

Table 8: Distribution of women with different Fetal outcome

		n	%
Fetal outcome	RDS Grade 1	10	7.69
	RDS Grade 2	1	0.77
	MAS	6	4.62
	MAS WITH RDS GRADE 2	1	0.77
	MBA	4	3.08
	MBA WITH RDS GRADE 1	1	0.77

CONCLUSION

This study highlights the complicated and diverse features of labor induction. Although it leads to healthy vaginal births in most cases, it is associated with notable maternal and neonatal problems. Indication inducibility, induction agents, duration of labor, and mode of delivery are critical factors in outcome. These findings highlight the importance of individualized induction, careful monitoring and prompt intervention to improve maternal and neonatal well-being. Further studies should focus on improving labor induction techniques and investigating methods to reduce problems associated with this commonly used obstetric procedure.

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