ORIGINAL RESEARCH PAPER

Gynaecology

KEY WORDS: induction, gestational age, foleys induction, prostaglandin gel

INDUCTION OF LABOUR – WHEN IS IT IDEAL? A COMPARATIVE STUDY IN A TERTIARY CARE HOSPITAL IN CHENNAI

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ABSTRACT

AIM : To analyse the optimum period of intervention in pregnancies without compromising the Fetomaternal outcome and to evaluate the maternal and perinatal outcome when labour is induced at 40 weeks and above 40 weeks of gestation.

METHODOLOGY: This is a prospective study carried out in the department of Obstetrics and Gynecology at RSRM Lying in Hospital in Chennai during the period of april to September 2018. 100 primigravida patients were included in the study after fulfilling the inclusion criteria. 50 patients were induced at 40 weeks and 50 patients after 40 weeks of gestation. Each group of patients were subjected to induction with foleys and pge2 gel . Maternal and perinatal outcomes were studied.

RESULTS: 50 patients who were induced at 40 weeks of gestation, half with Foleys induction (25), 18(72%)patients delivered vaginally and 7(28%) delivered by lscs, and other 25 patients induced with PGE2 gel, 14(56%)patients delivered vaginally and 11(44%)delivered by lscs.The next 50 patients who were induced at more than 40 weeks of gestation by foleys induction in 25 patients, 20(80%)patients had vaginal delivery and 5(20%) patients delivered by LSCS , and the other 25 patients induced with PGE2 gel, 17(68%) and 8(32%) patients delivered by labour natural and LSCS respectively.

CONCLUSION: Induction of labour in otherwise uncomplicated pregnancies after 40 weeks of gestation is associated with reduced rates of cesarean section. And when considering the mode of induction of labour, mechanical methods for induction gave better outcomes in terms of reducing the cesarean section rates and maternal and fetal complications

INTRODUCTION

Induction of labour is defined as the process of artificial initiation of uterine contractions, any time after attainment of fetal viability, by a method that aims to secure vaginal delivery. Induction is carried out when the clinical course and outcome of pregnancy would be better if the pregnancy is terminated. The World Health Organisation (WHO) recommends induction is performed with a clear medical indication and when expected benefits outweigh potential harms.

An ideal inducing agent is one which:

- Achieves onset of labour within the shortest possible time.
- Does not result in greater pain and hence does not require greater analgesics as compared to spontaneous labour
- Has a very low incidence of failure to induce labour
- Does not increase the rate of cesarean or operative vaginal deliveries as compared to spontaneous labour.
- Does not increase perinatal morbidity.

POST-TERM/PROLONGED PREGNANCY

This is the commonest indication worldwide for induction of labour and perhaps the most definitive indication. Pregnancies that reach beyond 42 gestational weeks are defined as post-term. About five to ten per cent of all pregnancies maybe post-term, depending on the diagnostic criteria, dating policy and population being investigated (Roberto et al1992). Risk to the mother and the infant increase as pregnancy progresses beyond 40 weeks of gestation (Caughey and Musci 2004).Hilder et al (1998) demonstrated that the risks of stillbirth and infant mortality increase significantly in prolonged pregnancy. Associated morbidity includes an increased risk of fetal distress, labour dysfunction, shoulder dystocia, obstetric trauma and perinatal complications like meconium aspiration syndrome (MAS), asphyxia, fractures, nerve injuries, septicemia and pneumonia (Olesen et al 2003). However one Recent systematic review showed that a policy of labour induction for women with post term pregnancy compared with expected management is associated with fewer perinatal deaths and fewer caesarean sections

METHODOLOGY

This is a prospective study carried out in the department of Obstetrics and Gynecology at RSRM Lying in Hospital in Chennai during the period of april to September 2018. 100 primigravida patients were included in the study after fulfilling the inclusion criteria which included singleton pregnancy, regular cycles with reliable dates, with no maternal co morbidities and fetal anomalies. 50 patients were induced at 40 weeks and 50 patients after 40 weeks of gestation. Each group of patients were subjected to induction with foleys and pge2 gel . Maternal and perinatal outcomes were studied.

TABLES

TABLE 1: AGE DISTRIBUTION OF THE STUDY GROUP

AGE DISTRIBUTION		Frequency	Percent
Valid	18 - 20 yrs	15	15.0
	21 - 25 yrs	50	50.0
	26 - 30 yrs	27	27.0
	31 - 35 yrs	8	8.0
	Total	100	100.0

TABLE 2: EDUCATIONAL STATUS OF THE STUDY GROUP

EDUCATIONAL STATUS		Frequency	Percent
Valid	Illiterate	15	15.0
	Literate	85	85.0
	Total	100	100.0

TABLE 3: SOCIOECONOMIC STATUS

SOCIOECONOMIC CLASS		Frequency	Percent
Valid	Class III	87	87.0
	Class IV	13	13.0
	Total	100	100.0

TABLE 4: MODE OF DELIVERY

			Groups		Total
			40 Weeks	> 40 Weeks	
MODE OF DELIVERY	LN	Count	32	37	69
		%	64.0%	74.0%	69.0%
	LSCS	Count	18	13	31
		%	36.0%	26.0%	31.0%
Total		Count	50	50	100
		%	100.0%	100.0%	100.0%

TABLE 5: CHI SQUARE TEST FOR MODE OF DELIVERY

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.169a	1	.280		
Continuity Correctionb	.748	1	.387		
Likelihood Ratio	1.173	1	.279		

Fisher's Exact Test				.387	.194
N of Valid Cases	100				

TABLE 6: MATERNAL COMPLICATIONS

			Groups		Total
			40 Weeks	> 40 Weeks	
MATERNAL COMPLICATION	III CPT	Count	0	1	1
		%	0.0%	2.0%	1.0%
	NIL	Count	50	46	96
		%	100.0%	92.0%	96.0%
	PPH	Count	0	3	3
		%	0.0%	6.0%	3.0%
Total		Count	50	50	100
		%	100.0%	100.0%	100.0%

TABLE 7: FETAL COMPLICATIONS

			Groups		Total
			40 Weeks	> 40 Weeks	
FETAL COMPLICATION	FD	Count	7	10	17
		%	14.0%	20.0%	17.0%
	NIL	Count	43	40	83
		%	86.0%	80.0%	83.0%
Total		Count	50	50	100
		%	100.0%	100.0%	100.0%

DISCUSSION

From the study it was observed that most of the patients were of the age group 21 to 25 years. Among the first group of 50 patients who were induced at 40 weeks of gestation, half with Foleys induction (25), 18(72%)patients delivered vaginally and 7(28%) patients were delivered by lscs, and in the other 25 patients who were induced with PGE2 gel, 14(56%)patients delivered vaginally and 11(44%) patients were delivered by lscs.

The next 50 patients who were induced at more than 40 weeks of gestation by foleys induction in 25 patients, 20(80%)patients had normal vaginal delivery and 5(20%) patients delivered by LSCS , and the other 25 patients who were induced with PGE2 gel, 17(68%) and 8(32%) patients were delivered by labour natural and LSCS respectively.

This implies that induction of labour yielded better results in terms of reduction of cesarean sections when the induction was performed after 40 weeks of gestation(74% had vaginal deliveries). Coming to the mode of induction, mechanical method of induction proved to be superior to prostaglandins in terms of rate of vaginal deliveries.

Although fetal distress were present in patients who were induced after 40 weeks, the percent of nicu admission was less and there was no significant perinatal mortality.

CONCLUSION

From this study it could be observed that induction of labour in otherwise uncomplicated pregnancies after 40 weeks of gestation is associated with reduced rates of cesarean section. And when considering the mode of induction of labour, mechanical methods for induction gave better outcomes in terms of reducing the cesarean section rates and maternal and fetal complications.

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