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A STUDY ON LSCS AFTER INDUCTION OF LABOUR VERSUS EXPECTANT MANAGEMENT IN WOMEN WITH IMPENDING POST TERM PREGNANCIES AND PERINATAL OUTCOME.

Obstetrics and Gynaecology

Dr. Sagar Babasaheb Shirsath	Dept. of Obstetrics and Gynaecology, Comjnmh Hospital, Kalyani.
Dr. Gairik Bera*	Dept. Of Obstetrics and Gynaecology, Comjnmh Hospital, Kalyani. *Corresponding Author
Dr. Debarshi Jana	Institute of Post-graduate Medical Education and Research, A.J.C. Bose Road, Kolkata.

ABSTRACT

Post term pregnancy is associated with an increased risk of fetal and neonatal mortality and morbidity as well as an increased maternal morbidity. Comparison between induction of labour and expectant management of post term pregnancies in terms of perinatal outcome and rate of caesarean section.

Present study was conducted in the department of gynecology in COMJNMH HOSPITAL, KALYANI. 100 patients were selected using above defined criteria, 51 patients had in Induction of Labour and 49 patients had in Expected Management. Present study was conducted November 2019 to March 2020.

Difference of mean hospital stay vs. management was not statistically significant (p=0.0618). Association of NICU in management was not statistically significant (p=0.1251). In Expected Management, 4(8.2%) patients had MAS. In Induction of Labour, 1(2.0%) patient had MAS. Association of MAS in management was not statistically significant (p=0.1548).

Induction of labour also do not worsen the perinatal outcome with respect to expectant management when considered.

KEYWORDS

LSCS , Induction of labour, Expectant management, post term pregnancies, perinatal outcome

INTRODUCTION

Post term pregnancy is associated with an increased risk of fetal and neonatal mortality and morbidity [1] as well as an increased maternal morbidity [2]. Antepartum stillbirth at and beyond term (37-43 weeks gestation) is a major public health problem accounting for a greater contribution to perinatal mortality than either deaths from complications of prematurity or the sudden infant death syndrome [3]. Increased fetal mortality from postterm pregnancy could therefore be prevented by induction of labour (IOL) at term, however, both clinicians and patients alike are concerned about the risks of induction of labour including uterine hyper-stimulation, failed induction and increased Caesarean section rates. Postterm pregnancy is also associated with increased costs related to antenatal fetal monitoring and induction of labour[4,5] and can be a source of significant anxiety for the pregnant woman [6]. Optimisation of these conflicting pressures is a clinical challenge.

Postterm pregnancy is defined as pregnancy that has extended to or beyond 42 weeks of gestation (294 days), or estimated date of delivery (EDD) + 14days [7]. The terms prolonged pregnancy, postdates and postdatism are synonymously used to describe the same condition. The terms postdate and prolonged pregnancy are ill-defined and best avoided [8].

We had comparison between induction of labour and expectant management of post term pregnancies in terms of perinatal outcome and rate of caesarean section.

MATERIALS AND METHODS

100 women of impending post perm pregnancy. The study was conducted in the department of obstetrics and Gynaecology of COMJNMH HOSPITAL, KALYANI.

Eligible for Study: We were ask obstetrical low risk women ≥18 years with a singleton pregnancy in stable cephalic position and a certain gestational age of 40+5-41+0, based on first trimester ultrasound and without contra-indications for expectant management until 42 weeks for consent to participate in our study and to be allocated to induction of labour at 41+0/+1 week or at 42+0 weeks.

Exclusion Criteria:

Exclusion criteria are age <18 years, uncertain gestational age, obstetrical indications for secondary case (e.g. hypertension (systolic 140 mmHg and/or diastolic 90 mmHg or more), proteinuria (≥3 g/L),

pre existent maternal heart or kidney diseases, gestational diabetes previous caesarean section, multiple pregnancy, intra-uterine growth retardation) and non-reassuring fetal status (n fetal movements, abnormal fetal heart rate, known fetal abnormalities which could influence perinatal outcome, including abnormal karyo type, ruptured membranes at time of randomization and a non-reassuring fetal satus at time of randomisation).

STATISTICAL ANALYSIS:

For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS 24.0. and GraphPad Prism version 5. Data had been summarized as mean and standard deviation for numerical variables and count and percentages for categorical variables. Two-sample t-tests for a difference in mean involved independent samples or unpaired samples. Paired t-tests were a form of blocking and had greater power than unpaired tests. Unpaired proportions were compared by Chi-square test or Fischer's exact test, as appropriate. p-value ≤ 0.05 was considered for statistically significant.

RESULT AND ANALYSIS

In our study showed that the Expectant Management, the mean of age (mean±s.d.) of patients was 22.7347 ± 3.3465 yrs. In Induction of Labour, the mean of age (mean±s.d.) of patients was 23.3922 ± 3.4876 yrs. Difference of mean age vs. management was not statistically significant (p=0.3388). In Expectant Management, the mean of POG (mean±s.d.) of patients was 40.3204 ± .2131. In Induction of Labour, the mean of POG (mean±s.d.) of patients was 40.5059 ± .4183. Difference of mean POG vs. management was statistically significant (p=0.0066).

We found in our study Expectant Management, the mean of APGAR 1 (mean±s.d.) of patients was 7.2245 ± .6540. In Induction of Labour, the mean of APGAR 1 (mean±s.d.) of patients was 7.4706 ± .7837. Difference of mean APGAR 1 vs. management was not statistically significant (p=0.0920). In Expectant Management, the mean of APGAR 5 (mean±s.d.) of patients was 6.0000 ± .6455. In Induction of Labour, the mean of APGAR 5 (mean±s.d.) of patients was 6.1373 ± .7217. Difference of mean APGAR 5 vs. management was not statistically significant (p=0.3193).

We showed that the Expectant Management, the mean of bishop's score (mean±s.d.) of patients was 3.5918 ± 2.4742. In Induction of Labour, the mean of bishop's score (mean±s.d.) of patients was 3.7059

± 2.6855. Difference of mean bishop's score vs. management was not statistically significant (p=0.8258). In Expectant Management, the mean of AFI (mean±s.d.) of patients was 5.4898 ± 1.7574. In Induction of Labour, the mean of AFI (mean±s.d.) of patients was 6.0784 ± 1.7646. Difference of mean AFI vs. management was not statistically significant (p=0.0979).

In our study showed that the Expectant Management, the mean of hospital stay (mean±s.d.) of patients was 6.0612 ± 4.4178 days. In Induction of Labour, the mean of hospital stay (mean±s.d.) of patients was 4.6471 ± 2.9518 days. Difference of mean hospital stay vs. management was not statistically significant (p=0.0618). Association of parity vs. management was not statistically significant (p=0.8697). In Expectant Management, 3(6.1%) patients had forceps delivery MOD, 23(46.9%) patients had LSCS MOD and 23(46.9%) patients had VD MOD. In Induction of Labour, 3(5.9%) patients had forceps delivery MOD, 21(41.2%) patients had LSCS MOD and 27(52.9%) patients had VD MOD. Association of MOD in management was not statistically significant (p=0.8307).

We found according to Induction LSCS in Expectant Management, 2(8.7%) patients had Arrest of descunt, 6(26.1%) patients had Fetal Distress, 1(4.3%) patients had Induction Failure, 9(39.1%) patients had Meconium Stained Liquor, 4(17.4%) Patients had Non progress of Labour and 1(4.3%) patients had Prolonged 2nd stage of Labour. According to Induction LSCS in Induction of Labour, 4(19.0%) patients had Fetal Distress, 9(42.9%) patients had Induction Failure, 5(23.8%) patients had Meconium Stained Liquor and 3(14.3%) Patients had No progress of Labour. Association of Induction LSCS in management was statistically significant (p=0.0510). According to APGAR at 1mininExpectant Management, 5(10.2%) patients had 6, 29(59.2%) patients had 7, 14(28.6%) patients had 8 and 1(2.0%) patients had 9.According to APGAR 1in Induction of Labour, 5(9.8%) patients had 6, 21(41.2%) patients had 7, 4(7.8%) patients had 8 and 4(7.8%) patients had 9.Association of APGAR 1in management was not statistically significant (p=0.2175).

Our study showed that according to APGAR 5 min in Expectant Management, 10(20.4%) patients had 5, 29(59.2%) patients had 6 and 10(20.4%) patients had 7.According to APGAR 5 in Induction of Labour, 8(15.7%) patients had 5, 30(58.8%) patients had 6, 11(21.6%) patients had 7 and 2(3.9%) patients had 8.Association of APGAR 5in management was not statistically significant (p=0.5226). In Expectant Management, 6(12.2%) patients had NICU. In Induction of Labour, 2(3.9%) patients had NICU. Association of NICU in management was not statistically significant (p=0.1251).

We found that according to socio economic status in Expectant Management, 27(55.1%) patients had lower, 8(16.3%) patients had lower middle and 14(28.6%) patients had upper lower. According to socio economic status in Induction of Labour,26(51.0%) patients had lower, 12(23.5%) patients had lower middle and 13(25.5%) patients had upper lower. Association ofsocioeconomic statusin management was not statistically significant (p=0.6649). In Expectant Management, 4(8.2%) patients had MAS. In Induction of Labour, 1(2.0%) patient had MAS. Association of MAS in management was not statistically significant (p=0.1548).

DISCUSSION
Present study was conducted in the department of gynaecology in COMJNMH HOSPITAL, KALYANI. 100 patients were selected using above defined criteria, 51 patients had in Induction of Labour and 49 patients had in Expected Management. Present study was conducted November 2019 to March 2020.

Bernardes TP et al [9] found that the mean age both Expectant Management and Induction of Labour the mean of age were 28.0 Yrs.

We found that in Expectant Management, the mean of age (mean±s.d.) of patients was 22.7347 ± 3.3465 yrs. In Induction of Labour, the mean of age (mean±s.d.) of patients was 23.3922 ± 3.4876 yrs. Difference of mean age vs. management was not statistically significant (p=0.3388).

Bernardes TP et al [9] found that in Expectant Management, the mean of POG (mean±s.d.) of patients was 38 weeks and in Induction of Labour, the mean of POG (mean±s.d.) of patients was 37.9 weeks. Difference of mean POG vs. management was statistically significant.

We found that in Expectant Management, the mean of POG (mean±s.d.) of patients was 40.3204 ± .2131. In Induction of Labour, the mean of POG (mean±s.d.) of patients was 40.5059 ± .4183. Difference of mean POG vs. management was statistically significant (p=0.0066).

Bernardes TP et al[9] found that in Expectant Management, the mean of bishop's score (mean±s.d.) of patients was 3. In Induction of Labour, the mean of bishop's score (mean±s.d.) of patients was 3. Difference of mean bishop's score vs. management was not statistically significant

We found that in Expectant Management, the mean of bishop's score (mean±s.d.) of patients was 3.5918 ± 2.4742. In Induction of Labour, the mean of bishop's score (mean±s.d.) of patients was 3.7059 ± 2.6855. Difference of mean bishop's score vs. management was not statistically significant (p=0.8258).

In Expectant Management, the mean of AFI (mean±s.d.) of patients was 5.4898 ± 1.7574. In Induction of Labour, the mean of AFI (mean±s.d.) of patients was 6.0784 ± 1.7646. Difference of mean AFI vs. management was not statistically significant (p=0.0979).

In Expectant Management, the mean of hospital stay (mean±s.d.) of patients was 6.0612 ± 4.4178 days. In Induction of Labour, the mean of hospital stay (mean±s.d.) of patients was 4.6471 ± 2.9518 days. Difference of mean hospital stay vs. management was not statistically significant (p=0.0618).

Association of parity vs. management was not statistically significant (p=0.8697).

Bernardes TP et al [9] found that in in Expectant Management, 70 patients had forceps delivery, 99 patients had LSCS and 431 patients had VD. In Induction of Labour, 58 patients had forceps delivery, 88 patients had LSCS and 426 patients had VD. Association of MOD in management was not statistically significant.

We found that in Expectant Management, 3(6.1%) patients had forceps delivery, 23(46.9%) patients had LSCS and 23(46.9%) patients had VD. In Induction of Labour, 3(5.9%) patients had forceps delivery, 21(41.2%) patients had LSCS and 27(52.9%) patients had VD. Association of MOD in management was not statistically significant (p=0.8307).

According to Ind LSCS in Expectant Management, 2(8.7%) patients had Arrest of descunt, 6(26.1%) patients had Fetal Distress, 1(4.3%) patients had Induction Failure, 9(39.1%) patients had Meconium Stained Liquor, 4(17.4%) Patients had Non progress of Labour and 1(4.3%) patients had Prolonged 2nd stage of Labour. According to Ind#LSCSin Induction of Labour, 4(19.0%) patients had Fetal Distress, 9(42.9%) patients had Induction Failure, 5(23.8%) patients had Meconium Stained Liquor and 3(14.3%) Patients had No progress of Labour. Association of Ind LSCS in management was statistically significant (p=0.0510).

In Expectant Management, 6(12.2%) patients had NICU. In Induction of Labour, 2(3.9%) patients had NICU. Association of NICU in management was not statistically significant (p=0.1251).

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In Expected Management, 4(8.2%) patients had MAS. In Induction of Labour, 1(2.0%) patient had MAS. Association of MAS in management was not statistically significant (p=0.1548).

CONCLUSION
C-section rate does not increase after induction of labour in comparison to expectant management in impending post term pregnancy.

Induction of labour also do not worsen the perinatal outcome with respect to expectant management when considered.

Table: Distribution of mean age, distribution of mean pog, distribution of mean apgar 5, distribution of mean bishop's score, distribution of mean afi and distribution of mean hospital stay.

		No.	Mean	SD	Minimum	Maximum	Median	p-value
Age	Expectant Management	49	22.7347	3.3465	18.0000	31.0000	23.0000	0.3388
	Induction of Labour	51	23.3922	3.4876	18.0000	31.0000	23.0000	
POG	Expectant Management	49	40.3204	.2131	40.1000	41.0000	40.3000	0.0066
	Induction of Labour	51	40.5059	.4183	40.0000	42.1000	40.4000	
APGAR 1	Expectant Management	49	7.2245	.6540	6.0000	9.0000	7.0000	0.0920
	Induction of Labour	51	7.4706	.7837	6.0000	9.0000	7.0000	
APGAR 5	Expectant Management	49	6.0000	.6455	5.0000	7.0000	6.0000	0.3193
	Induction of Labour	51	6.1373	.7217	5.0000	8.0000	6.0000	
Bishop's score	Expectant Management	49	3.5918	2.4742	0.0000	8.0000	4.0000	0.8258
	Induction of Labour	51	3.7059	2.6855	0.0000	8.0000	4.0000	
AFI	Expectant Management	49	5.4898	1.7574	3.0000	12.0000	5.0000	0.0979
	Induction of Labour	51	6.0784	1.7646	3.0000	10.0000	6.0000	
Hospitalstay	Expectant Management	49	6.0612	4.4178	2.0000	23.0000	7.0000	0.0618
	Induction of Labour	51	4.6471	2.9518	2.0000	11.0000	3.0000	

Table: Distribution of mod, distribution of ind lscs, distribution of nicu and distribution of mas.

		Expectant Management	Induction of Labour	p-value
MOD	**Forceps Delivery** Row % Col %	3 50.0 6.1	3 50.0 5.9	0.8307
	LSCS Row % Col %	23 52.3 46.9	21 47.7 41.2	
	VD Row % Col %	23 46.0 46.9	27 54.0 52.9	
Ind LSCS	**Arrest of descunt** Row % Col %	2 100.0 8.7	0 0.0 0.0	0.0510
	Fetal Distress Row % Col %	6 60.0 26.1	4 40.0 19.0	
	Induction Failure Row % Col %	1 10.0 4.3	9 90.0 42.9	
	Meconium Stained Liquor Row % Col %	9 64.3 39.1	5 35.7 23.8	
	Non progress of Labour Row % Col %	4 57.1 17.4	3 42.9 14.3	
	Prolonged 2nd stage of Labour Row % Col %	1 100.0 4.3	0 0.0 0.0	
NICU	**NO** Row % Col %	43 46.7 87.8	49 53.3 96.1	0.1251
	Yes Row % Col %	6 75.0 12.2	2 25.0 3.9	
Mas	**No** Row % Col %	45 47.4 91.8	50 52.6 98.0	0.1548
	Yes Row % Col %	4 80.0 8.2	1 20.0 2.0	

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