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LABOURINDUCTIONINGESTATIONALHYPERTENSION-AGREATOBSTETRICCHALLENGE

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ABSTRACT:BACKGROUND:
Pregnancy induced hypertension has higher incidence in developing countries like India. Labour induction is an important option for termination of pregnancy, when the progression of pregnancy increases the risk on maternal health as well a foetal health. The objective of this study is to observe the maternal and foetal morbidity and mortality with induction of labour in pregnant women with mild preeclampsia at term.

METHOD: This was a retrospective study conducted at the Department of Obstetrics and Gynaecology, Government Rajaji hospital, Madurai. The study population were 100 antenatal women who were diagnosed as mild preeclampsia during the period of October 2018 - December 2018. The antenatal women were between 37-40 weeks gestational period in whom labour was induced, while the pregnant women who had labour induction for other reasons were excluded. The data was collected and analysed.

RESULT: Out of 100 cases , mean age of women was 26.2,primi gravida women were 64(64%), gestational age in these women between 37-40 weeks.Labour induction in majority of cases 62 was with dinopristone gel (62%).Majority delivered vagainally 56 cases (56%).The caesarean section was needed in 44 cases(44%) in emergency due to fetal reasons or due to failed induction.Fetal complications were birth asphxia with neonatal intensive care admissions 35 babies(35%)

CONCLUSION: The emergency caesarean rate was quite low with induction of labour in pregnant women with mild preeclampsia in our hospital. The maternal morbidity as well as fetal morbidity and mortality was also low.

KEYWORDS: mild preeclampsia, induction of labour, fetal and maternal complications.

I. INTRODUCTION

Pregnancy induced hypertension complicates about 10% of pregnancies, but there is a widespread geographical variation in its incidence. The incidence is higher in developing countries. Labour induction is an important option for the termination of pregnancy, when the progression of pregnancy increases the risks on the maternal health as well as on growing foetus. Labour induction with unfavourable cervix is done with prostaglandins, cervical Foleys catheter and misoprostol then followed by amniotomy and augmentation with oxytocin, when cervix is favourable then induction with amniotomy and augmentation with oxytocin is carried out.

Women with gestational hypertension or with mild pre-eclampsia at term, induction of labour is less costly than expected, but before taking the decision for labour induction women should be thoroughly evaluated regarding subsequent harmful effects of induction. Surprisingly the effectiveness for the induction of labour is not proven, so decision for induction of labour must be individualized. The safety and effectiveness of labour induction depends on the health of the woman and her baby, previous obstetrical history, appropriate time and method of induction and the availability of the birth capacity. Labour induction in women with gestational hypertension who had completed 38 weeks pregnancy duration results in better outcome in comparison with those women in whom induction of labour is carried out at earlier gestation period. In these women there are increased risks for the babies like breathing problems, infections as well as neonatal intensive care unit admission. Despite a clinical benefit of induction of labour, long-term health-related quality of life is equal after the induction of labour and expectant management in women with gestational hypertension or preeclampsia beyond 36 weeks of gestation. Labour induction increases the chances of Caesarean section especially in primi gravidas as cervix fails to soften and open. Many studies have unequivocally shown that the labour arrest and Caesarean delivery is high in the presence of an unripe cervix. It also requires careful monitoring during the process of labour by maintaining the progress with partographic record, intravenous line,

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continuous electronic foetal monitoring and use of medication after birth to reduce the risk of haemorrhage. There is a lack of clinical and practical evidence of immediate delivery and expectant management in the pregnant women with hypertensive disorders. The decision for termination of pregnancy in women with pregnancy induced hypertension and its associated consequences must be individualized considering its effects on the maternal health and foetal outcomes; there is a strong need of time to conduct such types of studies.

II. METHODS

This was a retrospective study conducted at the Department of Obstetrics and Gynaecology, Government Rajaji hospital, Madurai. The study population were 100 antenatal women who were diagnosed as mild preeclampsia during the period of October 2018 - December 2018. During this study period 100 pregnant women were selected for induction of labour. Sample size was calculated by applying formula (N= (z) 2(pq)/e2) (Pregnancy induced hypertension complicates about 10% of pregnancies, sample size was calculated by empirical means with confidential interval 95%). Sampling technique was Non probability convenient. These women were registered on the predesigned proforma after taking informed written consent and taking approval from institutional ethical review committee. These women were between 15-36 years of age, primigravid as well as multigravid, their gestational period varied between 37-40 weeks. On clinical examination their blood pressure was recorded, symphysiofundal height was measured, fetal heart sounds were recorded. Relevant investigations such as complete blood picture, blood group, blood sugar level, screening of virology markers, liver function tests, renal function tests, ultrasonographic examination in all as well as Doppler ultrasound examination in required cases were done. These women were managed with the departmental management protocol for pregnancy induced hypertension; labour induction was decided with pelvic assessment, cervical condition, for foetal assessment cardiotocographic examination was carried. Appropriate mode for labour induction was decided after Bishops scoring and methods used were prostaglandin endocervical gel, intracervical Foleys catheter and syntocin infusion. Patients general condition, foetal condition and labour progress was vigilantly monitored with partographic record and foetal condition was monitored with cardiotocography. Immediate intervention steps were taken with any maternal or foetal problem according to the available institutional facilities along with multidisciplinary approach. The data was collected and analysed. The frequency and percentage was calculated for continuous variables, age was calculated with mean and standard deviation, Chi-Square statistical test was applied for qualitative type of analyses-Value <0.05 was considered significant.

III. RESULTS

Out of total 100 women included in the study 6(6%)women were up to 20 years of age, 21(21%) women were 31 and above years of age,while 73(73%) women were between 21-30 years of age. The mean age with standard deviation was 26.Cervical condition was favorable in 62(62%) women, and unfavorable in 38(38%) women. Labour induction was done with prostaglandin gel in 62(62%) women and intracervical Foleys catheter in 38(38%) women . (Table-II). Labour induction outcome resulted in normal vaginal delivery in 40(40%) women, instrumental vaginal delivery in 16 (16%) women, while Caesarean section was performed totally in 44(44%)

Table-I: Sociodemographic characteristics N=100

S/No	Sociodemographic characteristics	No: of cases	Percentage %	Chi Square test	P Value
1	**Age in years** Upto 20 21-30 31and above	 6 73 21	 6 73 21		
2	**Parity** Primi Para 1-2	 64 30	 64 30		

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	Para 3 and above	6	6		
3	**Gestational age in weeks** 37-38 38-39 39-40	 14 65 21	 14 65 21		

Table – II:METHODS OF LABOUR INDUCTION

S/No	Labour induction	No: of cases	Percentage %	Chi Square test	P Value
1	**Bishop score** Favourable Unfavourable	 62 38	 62 38		
2	**Method of induction** Prostaglandin gel Intracervicalfoley catheter	 62 38	 62 38		

Table – III LABOUR INDUCTION OUTCOME AND FETOMATERNAL COMPLICATIONS

S/No	Fetomaternal outcome	No: of cases	Percentage %	Chi Square test	P Value
1	**Labour induction outcome** Normal vaginal delivery Instrumental delivery Caesarean section	 40 16 44	 40 16 44		
2	**Maternal complications** PPH ICU admissions	 2 0	 2 0		
3	**Fetal complications** Birth asphyxia NICU admissons Still birth Early neonatal death	 35 10 0 0	 35 10 0 0		

Women, out of these failed induction comprises 20(20%) women,24 cases featl distress (24%) and 44(44%) women had in emergency Caesarean section for maternal or fetal reasons(P-Value 0.126). Maternal complications observed were postpartum haemorrhage in 2(2%). Fetal birth with good apgar score was seen in 65(65%) cases, while fetal complications observed were birth

asphyxia in 35(35%) cases, intensive care neonatal unit admission in 10(10%) cases.

IV. DISCUSSION

Labour induction is an important option when continuation of the pregnancy increases the risk on the mother and baby, but the induction of labour itself increases the risks as well as there are chances of its failure. The safety and effectiveness of labour induction depends on the health of the woman and her baby.In this study most of the pregnant women 73 (73%) presented between 21-30 years of age and were prim gravid 64(64%), in comparison with Nigerian study12 wherein common age of the women were between 25-29 years (30.4%) and nulliparous women were 39.1%, this difference could be due to the early marriage and high frequency of hypertensive disorders in prim gravid women**.** The gestational period was between 38-39 weeks in majority of the women 65(65%), this is tertiary care hospital receiving all the referred cases, these were the women with gestational hypertension and with associated problems, considering the health of the women and her baby labour induction was decided. Comparing with other studies pregnant women with gestational hypertension having induction of labour between 38-39 weeks leading to lowest chances for maternal and neonatal morbidity and mortality as well as lower in cost and decrease Caesarean section rate. Despite the lack of evidence that would justify intervention, many obstetricians induce labour in women at term with pregnancy-induced hypertension or preeclampsia. Such a policy may increase the risk of assisted vaginal delivery and caesarean section, thus generating additional morbidity and costs. Proper antenatal cares and hospitalization in case of need at appropriate time with careful fetomaternal monitoring will help in continuation of pregnancy till term and it will lead to improvement in maternal condition and foetal outcome.

Cervix was unfavorable in majority of the cases and labour induction was performed with prostaglandins in 38(38%) women, other methods were intracervicalfoley's catheter. These all are the recommended methods for the induction of labour. Labour induction outcome resulted in normal vaginal deliveries in 40(40%) women, instrumental vaginal deliveries in 16(16%) women. Caesarean section was performed in 44(44%) women due to failed induction or with maternal or fetal reasons. In this study maternal morbidities and fetal morbidities as well as fetal mortality rate was lower. This can be due to the booked status, severity of the condition, and good intensive care facilities for the new born, low birth weight, and multidisciplinary approach. The clinical course of pregnancy induced hypertension is progressive as its severity increases the chances of fetomaternal complications that can only be stopped by delivery therefore the frequency of labour induction and related fetomaternal morbidity is high considering all these factors early detection of the risky cases and with timely, early appropriate management will overcome this.

V. CONCLUSION

Caesarean section rate was due to failed induction and fetomaternal reasons in emergency. Maternal morbidity as well as foetal morbidity and mortality rate was low. Appropriate decision prior to induction of labour considering the condition of mother and foetus is very important. Vigilant labour monitoring, timely decision for intervention, and proper new-born care will help in decreasing morbidity and mortality.

Declaration of interest: There is no conflict of interest on the authorship.

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