



Case Report

A DESCRIPTIVE STUDY OF ADVERSE PERINATAL OUTCOME ASSOCIATED WITH PREGNANCY BEYOND 40 WEEKS AMONG PREGNANT WOMEN ATTENDING OBG DEPARTMENT, SMS MEDICAL COLLEGE JAIPUR

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ABSTRACT

Objective(s):- To assess the perinatal outcome in pregnancy beyond 40 weeks in terms of fetal distress, meconium aspiration syndrome, low apgar score, nicu admission, caesarean section.

Study design:- This is a hospital based observational study conducted at Obstetrics and Gynecology Department, S.M.S College Jaipur from April 2014 onwards.

Sample size:- The sample size was calculated 596 subjects at 95% confidence limit and 10% relative allowable error, assuming 39.3% beyond 40 weeks of pregnancy proportion of women who delivered child(as per seed article). Perinatal Outcome Noted in Terms of Meconium Aspiration, Fetal Distress, Macrosomia, Low Apgar Score, Rate of Cesarean Section, NICU Admission Rate.

Result(s):- out of 596 babies delivered 89(14.93%) babies had meconium aspiration .And out of these 89 babies 50 (8.39%) got admitted to nicu. P value for distribution of meconium aspiration and nicu admission in was $p < 0.001$, this was found highly significant.

Conclusion(s):- The management of pregnancy beyond 40 weeks remains controversial. The value of routine induction of labour in such pregnancy also remains controversial because of the concern that it may result in an increase in the incidence of caesarian section without any significant improvement in the fetal outcome. In infants admitted to NICU one of the risk factor attributed is postdatism. So care of the post-dated fetus should start right from in utero. In this complex clinical condition we should identify the fetus at risk and to institute an appropriate management following adequate counseling of patient.

1 **KEYWORDS:** Postdated pregnancy, meconium aspiration.

INTRODUCTION

A Pregnancy is said to be term when it is between 37 weeks and 42 weeks of gestation. As the weeks progress in

this period, so does the incidence of perinatal morbidity and mortality. In clinical practice, it is difficult to decide at what gestational age, in this period, should the patient be best delivered. Recent studies have shown that the risk to

the fetus and to the mother, in continuing the pregnancy beyond the estimated date of delivery, is higher than what was estimated earlier. The American college of Obstetrician and gynaecologist (ACOG) and the World Health Organization (WHO) had defined post-term pregnancy as that last 42 weeks(294 days) or more from the first day of the last menstrual period. However, it was noted that from gestation of 37 weeks to 42 weeks, the timing of delivery during this 5 week gestational period often determines the neonatal outcomes, especially respiratory morbidity. About 4 to 15% of pregnancies result in being prolonged pregnancy, depending on the method to calculate the gestational age.

It has been well established that postterm pregnancy is associated with increased risks of labor dystocia, severe perineal injury, and cesarean delivery with associated morbidity for the mother, and perinatal mortality (intrauterine fetal demise plus neonatal deaths), meconium aspiration, infectious morbidity, birth trauma, low umbilical artery pH levels, and low Apgar scores for the neonate. Currently the American College of Obstetricians and Gynecologists (ACOG) recommends initiation of antenatal surveillance between 41 weeks and 42 weeks of gestation because perinatal morbidity and mortality increases with advancing gestational age.

Most research on outcomes of term pregnancy focuses on perinatal complications associated with postterm pregnancy and its management thereof. There is less information regarding outcomes in term pregnancy at 37-42 weeks of gestation. Studies of perinatal mortality have reported the rate of stillbirth is lowest at 37-38 weeks of gestation and increases 6-fold from 0.35 per 1000 ongoing pregnancies at 37 weeks to 2.12 per 1000 ongoing pregnancies at 43 weeks. Because perinatal morbidity and mortality in postterm pregnancy may be partly related to the slow deterioration of placental function and the progressive increase in fetal size that both occur during the term period of pregnancy, the risk of perinatal complications might be expected to increase with advancing gestational age in a continuous, rather than threshold, fashion. Indeed, there is increasing evidence to support that the risk of maternal and neonatal complications increases as pregnancy progresses beyond 40 weeks of gestation.

MATERIAL AND METHODS:

Study design:- This is a hospital based observational study conducted at Obstetrics and Gynecology Department, S.M.S College Jaipur from April 2014 onwards.

Sample size:-The sample size was calculated 596 subjects at 95% confidence limit and 10% relative allowable error, assuming 39.3% beyond 40 weeks of pregnancy proportion of women who delivered child(as per seed article).

Inclusion criteria:- Pregnant females at or beyond 40 weeks with LMP confirmed gestational age, irrespective of whether they go for spontaneous, induced or cesarean section.

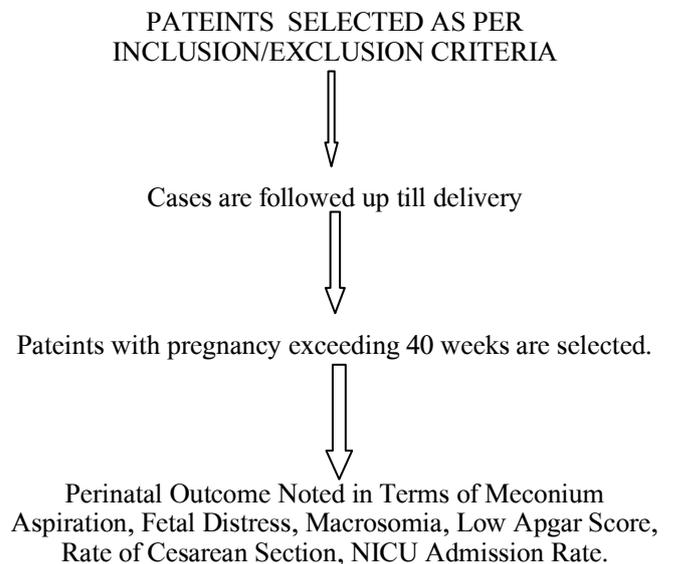
Exclusion criteria:-

- Females with medical and obstetrical complication such as pre-eclampsia,
- Abnormal fetal presentation
- Multiple fetal pregnancy
- Pregnancy with known case of medical disease
- Babies with congenital malformation

METHOD

Women fulfilling the inclusion criteria will be selected. History taking and general and systemic examination done. EDD calculated from LMP. Patients followed up till delivery Perinatal mortality and morbidity noted. Outcome will be noted in terms of rate of meconium aspiration syndrome, low apgar score, fetal distress, nicu admission, macrosomia, stillbirth, neonatal death.

FLOW CHART



OBSEVATIONS AND RESULTS

The data thus obtained were analyzed and the observations made are summarized in the ensuing tables. Table no. 1,2,3,4,5,6 enlists intergroup comparison of different demographic variables as age, residence, religion, literacy, socioeconomic status, birthweight of newborn and gravida of mother. Table No. 18 shows Distribution of Meconium Aspiration According to APGAR at 1 min of Study Subjects. This table shows distribution of meconium aspiration acc. to APGAR at 1 min of study subjects. out of 596 study subjects, 89 (14.93%) newborns had meconium aspiration. Out of 563 newborn delivered, only 67 (11.9%) newborns with APGAR score >7, had meconium aspiration. out of 33 newborn delivered 22 (66.66%) newborn with APGAR score <7, had meconium aspiration. Table No. 19 shows Distribution of Meconium Aspiration According to NICU Admission of Study Subjects. This table shows distribution of meconium aspiration in newborn babies and NICU admission out of 596 patients who delivered, 89(14.93%) of newborns had meconium

aspiration. Out 516 babies who did not get admitted to NICU, only 39 i.e. (7.5%) babies had meconium aspiration. Out of 80 babies who got admitted to NICU, 50 i.e (62.5%) babies had meconium aspiration.

It was concluded that, there is significant association between meconium aspiration of newborn babies with NICU admission hence $\chi^2 = 164.59$ at d.f.= 1. The association between these two parameters is statistically significant.

DISCUSSION

A total of 596 patients were included in the study. The patients were admitted in Obs. and Gynec. Department, Mahila Chikitsalya, Sangneri GATE. Patients were studied according to age, religion, literacy, rural/urban and socioeconomic status characteristics.

Out of 596 patients 252 i.e (42.28%) belonged to age group 23-26yrs. 177 i.e (29.70%) belonged to 19-22 yrs and 167 i.e (28.02%) belonged to 27 yrs and above.

On analysis it was found that meconium aspiration was highest in patients with more than 27 yrs of age and macrosomia was seen mostly in patients in 19-22 yrs of age group.

It was found on analysis that meconium aspiration was mostly seen in babies with APGAR SCORE OF <7 at 1 min. While it was seen in very few babies with APGAR SCORE >7.

It was also found on analysis that those babies who had meconium aspiration were mostly admitted in NICU.

It was seen on analyzing the data that meconium aspiration was seen mostly in those post-term patients who delivered spontaneously.

CONCLUSION

Considering the changing attitude of women the trauma of a caesarian section is much less than mental trauma and its unfortunate consequence of losing a perfectly normal baby or having a neonatal morbidity.

In view of low neonatal intensive care unit admission it may be wiser to deliver the patient before 40 weeks. This may be the topic for another study.

Proper attention to menstrual history combined with ultrasonic and other information discloses some cases that are wrongly labelled as beyond term. Resources spent on cardiotocography and ultrasonography of gradually dwindling numbers must be weighed against efforts at induction. Recent publications suggest that ultrasound assessment of amniotic fluid volume combined with non-stress tests are the best markers of fetal condition in post-term surveillance.

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