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ORIGINAL ARTICLE

MATERNAL AND FETAL OUTCOME IN ADVANCED MATERNAL AGE

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ABSTRACT: BACKGROUND: Globally, there is a rising trend among women towards delaying pregnancy and childbirth. But in a developing country like India, the scenario is different where poor socio-economic status, lack of contraceptive knowledge, religious issues, desire for male child, dowry system, concept of large family predominate. **OBJECTIVE OF THE STUDY:** To study the maternal and fetal outcome of pregnancy in advanced maternal age. **METHODOLOGY:** A retrospective hospital based study was carried out in the department of obstetrics & gynecology; over a period of 3 years. Data was analyzed using Statistical Package for Social Sciences Version 16. **RESULTS:** 101 patients who met all the parameters in the inclusion and exclusion criteria were taken into consideration in this study. The mean age of the patients were 36.4 +/-2.24. Majority of them were under the group of multigravida (2-4), which is 63 (62.37%) in number. Grand multi was 34 (33.66%). There were increased incidence of congenital and chromosomal abnormalities with comparatively reduced incidence of maternal complications. **CONCLUSION:** Advanced maternal age is a vital time to screen for congenital and chromosomal abnormalities.

KEYWORDS: Advanced maternal age, Congenital anomalies.

INTRODUCTION: Globally, there is a rising trend among women towards delaying pregnancy and childbirth. This is due to improved outlook of women and the society in regard to educational status, professional goals, easy access to wide range of modern contraceptive methods and availability of assisted reproductive technology.[1] But in a developing country like India, the scenario is different where poor socio-economic status, lack of contraceptive knowledge, religious issues, desire for male child, dowry system, concept of large family predominate.

Advanced maternal age is usually defined as age 35 or more for the mother at the time of delivery. Becoming pregnant after the age of 35 years can present a challenge because of the maternal risk factors associated with it, such as–subfertility, miscarriages, ectopic pregnancy, pre-eclampsia, gestational diabetes mellitus, anemia, intrauterine growth restriction, antepartum hemorrhage, placental abruption, placenta previa, higher incidence of instrumental deliveries, cesarean section, post-partum hemorrhage and fetal risk factors such as – chromosomal abnormalities (Mainly down's), malpresentations, multiple pregnancy, IUGR, prematurity, increased nicu admissions due increased perinatal morbidity and mortality.[2,3,4,5] Hence to summarize advance maternal age of a pregnant women is a high risk factor and such patients needs to be handled by a trained person from the very early stage of pregnancy.

Objective of the Study: To study the maternal and fetal outcome of pregnancy in advanced maternal age.

MATERIAL & METHODS: A retrospective hospital based study was carried out in the department of obstetrics & gynecology; a tertiary health care referral Centre in Mangalore, Karnataka over a period of 3 years from January 2011 to December 2013.

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Data obtained from the patients' medical records and hospital database included: age, parity, BMI, pre-existing medical disorder, obstetric complications, multiple pregnancy, and mal presentation, presence of uterine fibroid, mode of delivery, average size of the baby, NICU admission, and any congenital or chromosomal abnormalities.

Inclusion Criteria: All pregnant women with advanced maternal age of 35 years and more.

Exclusion Criteria: Pregnant women less than 35 years.

Statistical Analysis: The data will be entered in master sheet and will be statistically analysed in terms of frequency percentage and mean and standard deviation. Statistical Package for Social Sciences Version 16. Was used for analysis. Descriptive statistics was used to express the results.

RESULTS:

- 101 patients who met all the parameters in the inclusion and exclusion criteria were taken into consideration in this study.
- The mean age of the patients were 36.4+/-2.24. Among the 101 patients 96(95.04%) were between 35 to 40 and more than 40 years of age were only 5 (4.95%) in number.
- Majority of them were under the group of multigravida (2-4), which is 63 (62.37%) in number. Grand multi was 34 (33.66%), which was quiet a large number. Primigravida was just 4 (3.96%) in number.
- The mean BMI 25.7+/-3.39 of which majority were under the normal category 61 (60.39%) followed by overweight 21(20.79%).
- Even though majority of the patients were free any pre-existing medical disorder, asthma was found to be most common disorder among them comprising of 5(4.95%) in number compared to overt diabetes and chronic hypertension.
- Only 7.92 % (8) patients were anaemic and 3.96% were Rh incompatible.
- The other variables which were considered are – gestational hypertension(4),gestational diabetes(2),abruption(1),IUGR(2),PROM(4),multiple pregnancy(2),placenta previa(1),uterine fibroid(3),malpresentation(3).
- Average duration of active phase 2.04+/-1.94 hours and second stage 17.5+/-17.53 minutes.
- Mode of delivery – vaginal delivery (66), vacuum (2), vbac (1), lscs (30).
- Previous LSCS (14) was the commonest indication followed by fetal distress (6).
- There was one maternal death due to splenic artery rupture at 36 weeks period of gestation with severe anemia and still born.
- Majority of the babies were appropriate for gestational age (89.10%).
- In this study there was 4.95% incidence of downs which points out towards the increased incidence of chromosomal abnormalities. All these cases were unbooked and didn't have anomaly scan.
- There were 2 cases of congenital diaphragmatic hernia and one case of VACTERAL

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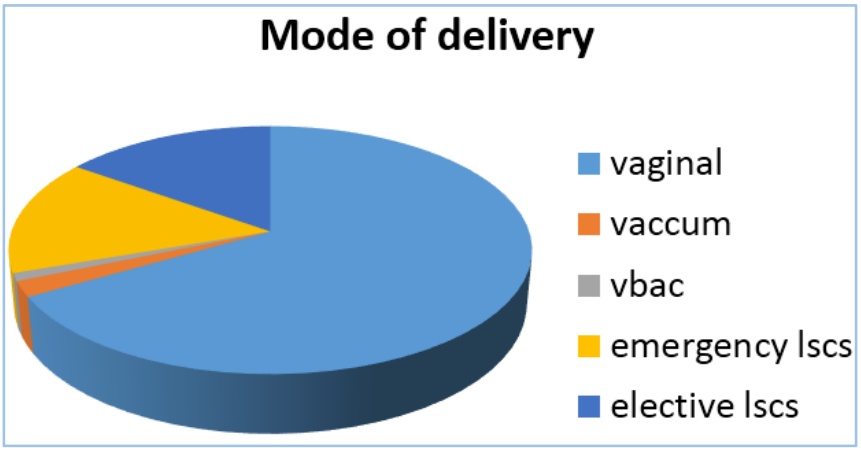

Figure 1: Mode of Delivery

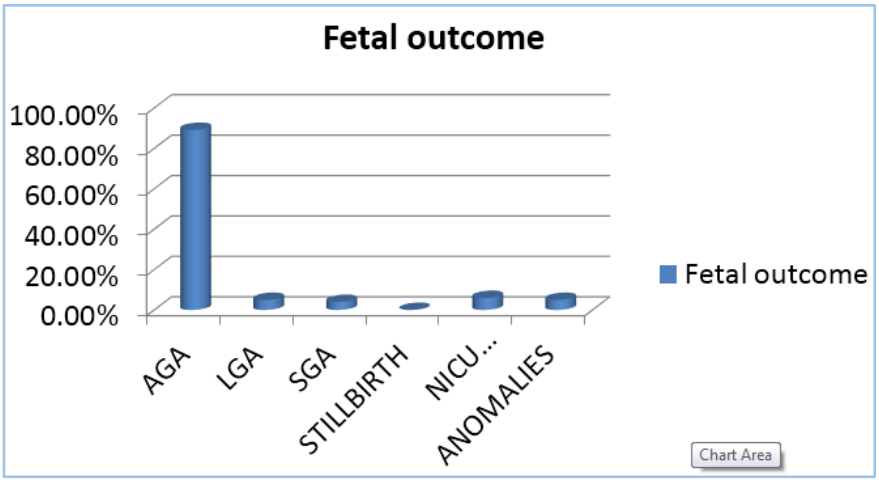

Figure 2: Fetal Outcome

Maternal Complications	Number of Patients (%)
Gestational hypertension	4 (3.96%)
Gestational diabetes	2 (1.98%)
PROM	4 (3.96%)
Abruption	1 (0.99%)
IUGR	2 (1.98%)
Placenta previa	1 (0.99%)
Uterine fibroid	3 (2.97%)
Malpresentation	3 (2.97%)

DISCUSSIONS: Pregnancy at advanced maternal age is associated with increased adverse maternal and fetal outcome. Many studies have analyzed this effect. Our study was conducted to evaluate the outcome in the advanced maternal age in our hospital which can give us an idea about the risk involved in our area. Majority of the patients in our study group was multigravida or grand multi. Mean age was 36.4 which was comparable to study conducted by Ramachandran et al (37.1).[1] and Giri et al (36.9).[6]

There is a reduced incidence of maternal medical complications like diabetes, hypertension and PPH in the studied population, which may be attributed to the few number of primigravida compared to the majority of multigravida in the studied group of population.

The incidence of abruption (0.48%), placenta previa (0.80%), previous caesarean being commonest indication were reported by pawed et al.[4] which was comparable to our study. Indications for caesarean section was almost comparable to study conducted by Zahan et al.[3] except cephalopelvic disproportion. CPD was found to be more in their study (8.5%) compared to ours (0.99%). May be this can be attributed to higher incidence of multigravida (62.37%) than grand multi (33.66%) or primigravida (3.96%) in our study. Multiple pregnancy (1.5%), instrumental delivery (3.7%), chromosomal abnormalities (3.3%) reported by meenakshi et al.[7] were similar to our study.

Advanced maternal age was associated with higher incidence of congenital and chromosomal abnormalities in our study which was also reported by meenakshi et al.[7] and goldman et al.[2] in their studies. Major highlight of this study is the increased incidence of congenital and chromosomal abnormalities in the studied population. Of which almost all of whom were unbooked case with irregular antenatal check up with higher order pregnancies coming under low socio-economic class. Hence counseling them regarding the importance of frequent antenatal check-ups will help to ensure a better maternal and perinatal outcome and reduce the emotional and financial burden on a family and indirectly improve the overall wellbeing of the family in a larger perspective.

CONCLUSION: Advanced maternal age is vital time to screen for congenital and chromosomal abnormalities.

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