

Advanced Maternal Age and Their Obstetric Outcome

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ABSTRACT

To compare the prevalence of multiple antenatal complications in pregnancy among women aged 35 and up to younger women aged 20 to 34 years. The prevalence of multiple antenatal problems in women over the age of 35 and women between the ages of 20 and 35 who attended our antenatal clinic was evaluated using the percentage of incidence method. It is reasonable to believe that elderly mothers who have a thorough assessment of their pre-pregnancy health status, prenatal screening, antenatal monitoring, and delivery in a tertiary institution with adequate NICU facilities should predict a positive perinatal outcome.

Keywords:pre-eclampsia, gestational diabetes mellitus, intrauterine growth restriction and antepartumhaemorrhage.

1.INTRODUCTION

Obstetrics as a profession has evolved significantly over the past few decades. 1 There was a reduction in the number of live births in the late 1960s and early 1970s, as well as a decline in the percentage of mothers 35 years and older. 2 Women are encouraged to follow their personal aspirations with zeal thanks to the vast range of educational and career options available today. A significant percentage of women want to postpone conception in order to improve their educational and financial status. They can now better monitor their fertility thanks to easy access to a wide variety of new contraception methods. 3 Women are gradually avoiding conception until their late 30s and beyond, resulting in an increased risk of prematurity and other related morbidities, as a result of societal developments such as the increased use of assisted reproductive devices and fertility therapies. 4 DaljinderKaur, who is believed to be at least 70 years old, gave birth to a son called Arman (which means "wish" in Hindi) on April 19, making her the oldest mother in recent history. After nearly

five decades of marriage, Kaur and her 79-year-old husband, Mohinder Singh Gill, welcomed their first child in April 2016 after two years of IVF care at the National Fertility and Test Tube Baby Centre in the Indian state of Haryana.

The term "advanced maternal age" refers to a woman's age at the time of birth when she is above the age of 35. This means a lower chance of having children and a higher risk of being pregnant. 2 Fertility decreases as people get older, and the likelihood of miscarriages, ectopic pregnancy, chromosomal defects, and congenital anomalies increases. Pre-eclampsia, gestational diabetes mellitus (GDM), intrauterine growth restriction (IUGR), and antepartum haemorrhage are also possible complications in the second half of pregnancy. Instrumental births, Caesarean sections, and postpartum haemorrhage are all more common among these mothers. Prematurity, low birth weight, IUGR, and fetal discomfort all concern newborns, increasing the likelihood of admission to the neonatal intensive care unit (NICU). 5

2.MATERIALSAND METHODS

STUDY DESIGN: Prospective Observational study

PLACE OF STUDY :Obstetric Outpatients and Inpatients, SreeBalaji medical college and hospital, Chromepet, Chennai.

SAMPLE SIZE:100

Sample size – 100, Study group I (n) = 50 Study and group II (n) = 50

INCLUSION CRITERIA

- Singletonpregnancies
- Delivery Occurring>28weeks

EXCLUSION CRITERIA

- Pregnancies ending in termination Before28weeks
- MultipleGestation
- Women with Known Psychologicaldisorder

The Study group I includes pregnant women of age 20-34years irrespective of parity. The study group II involved pregnant women of age 35years and above of any parity, who were registered in the antenatal clinic. Participants will be selected randomly to ensure diversity in demographic and Obstetric characteristics. This kind of selection often reduced

large amounts of Selection Bias.

The data collection technique adopted in this study is a Structured Questionnaire, after written informed consent. It involves Detailed history with age, method of conception– Spontaneous or assisted, details of antenatal complications, including previous bad obstetric history and abnormal presentations, mode of delivery, and its indication, various reasons for being pregnant at an advanced age. At each antenatal visit, Patient's General examination including vital parameters, Obstetrical examination for fetal growth and wellbeing were noted down.

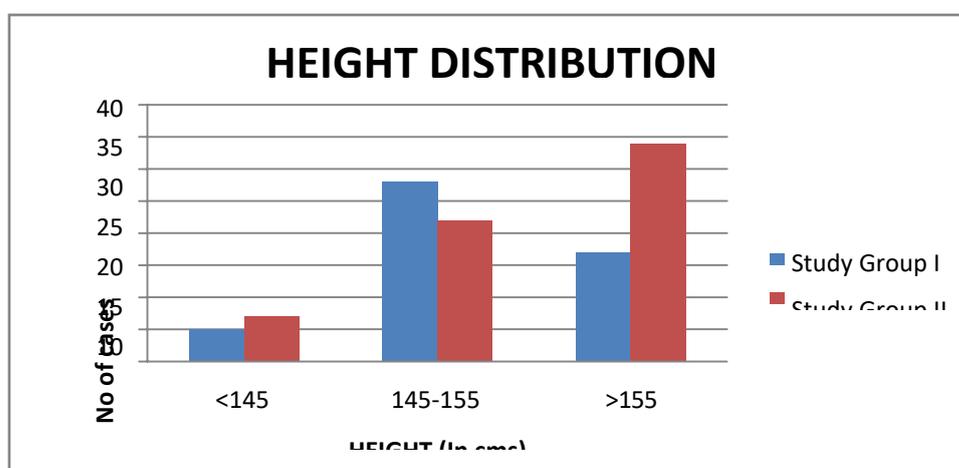
3. RESULTS

**TABLE 1 : DISTRIBUTION OF AGE
IN STUDY GROUP I & II**

Study Group	Age	Frequency
I	< 35 years	50
II	> 35 years	50

The above table shows our Study group I and study group II – each consisting of 50 samples.

Figure 1 – Bar diagram showing Height in Study group I and II



In our study group I majority of patients fall within the height range of 145 - 155cms. Whereas Study group II consists of patients > 155cms. This indirectly reflects the influence of Nutrition.

TABLE 2 : DISTRIBUTION OF GRAVIDA IN STUDY

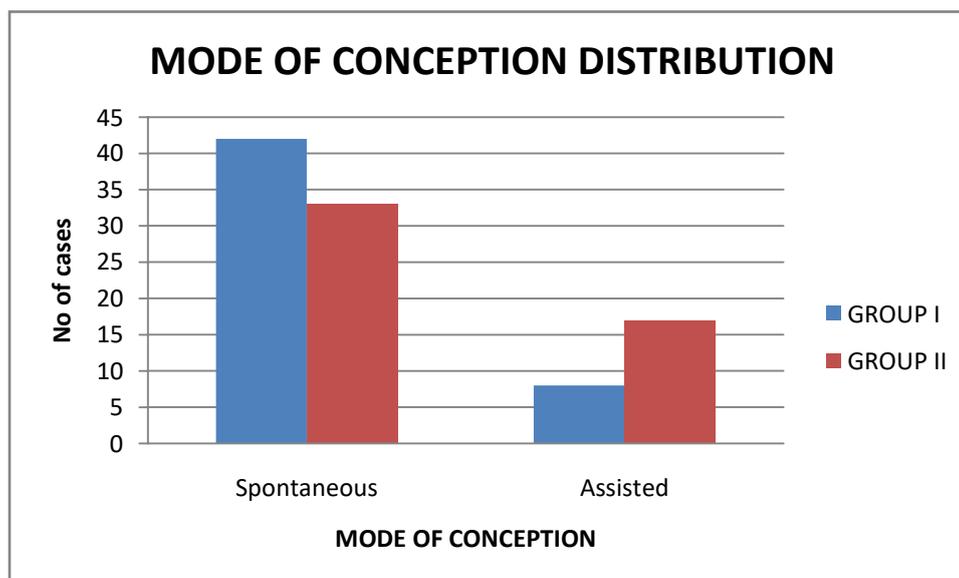
GROUP I & II

Study Group I			Study Group II	
Gravida	Frequency	Percentage (%)	Frequency	Percentage (%)
Primi	24	48	14	28
Multi	26	52	36	72
TOTAL	50	100	50	100

Most of the patients in our study group I and II are found to be Multigravida. Study group II (>35years) consists more of Multi than Primigravida.

Figure 2 – Bar chart showing Mode of conception in

Study group I &II



The mode of conception is found to be

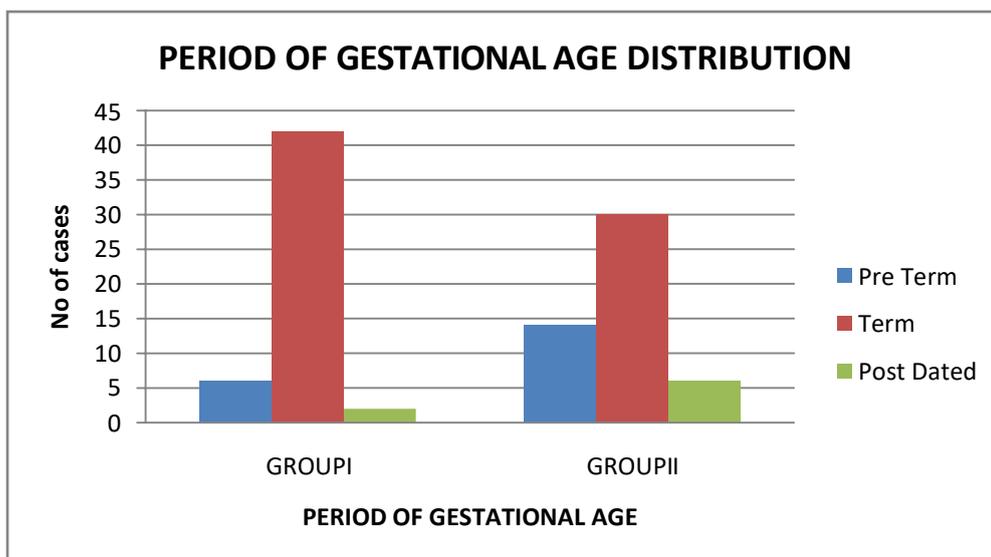
assisted more in Study group II than in Study group I

TABLE 3: PREVIOUS HISTORY OF ABORTION

PREVIOUS HISTORY OF ABORTION	Study Group I		Study Group II	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Yes	13	26	16	32
No	37	74	34	68
TOTAL	50	100	50	100

Patients in Study group II show higher rate of Abortions in previous pregnancies than Study Group I.

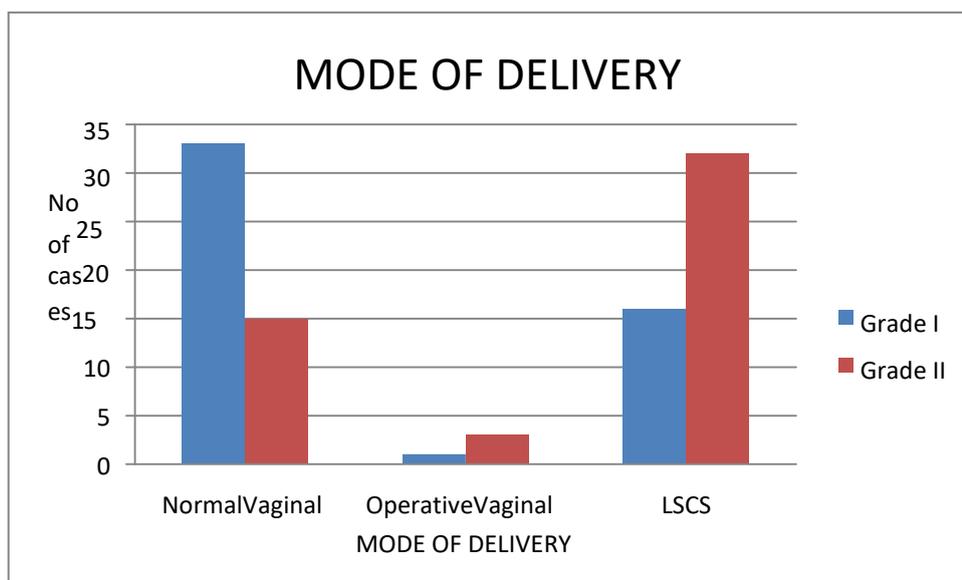
Figure 3 – Bar diagram showing Gestational age at the time of delivery in Study group I & II



The majority of patients in both groups deliver at term but there is a definite increase

in the incidence of preterm delivery (28%) in group II when compared to group I (12%). The incidence of prolonged pregnancy appears to be higher in group II (12%) compared to Study group I (4%)

Figure 4 – Bar diagram showing Different mode of delivery in study group I & study group II

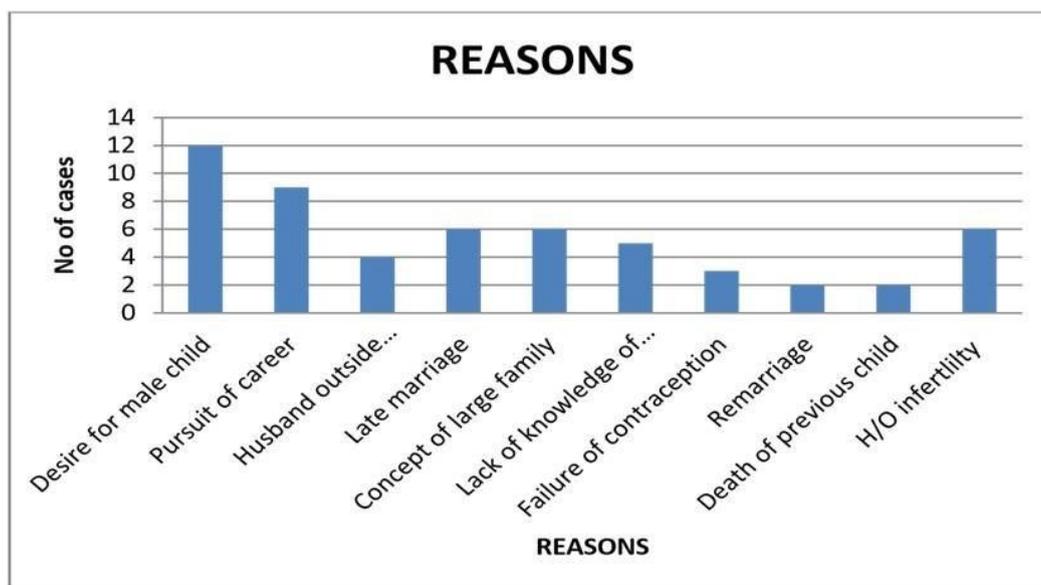


LSCS is found to be high in Study group II with 64% and 32% in Study group I. P value for Caesarean deliveries is 0.006, Hence statistically significant. Operative vaginal

TABLE 4: DISTRIBUTION OF BIRTHWEIGHT OF NEWBORN IN STUDY GROUP I & II

BIRTH WEIGHT (In Kgs)	Study Group I		Study Group II	
	Frequency	Percentage (%)	Frequency	Percentage (%)
< 1.5	-	-	1	2
1.5 – 2.5	4	8	12	24
> 2.5	46	92	37	74
TOTAL	50	100	50	100

Figure 5– Bar diagram shows various reasons for getting married at an Advancedmaternal age



The reasons for being pregnant at Advanced maternal age – First being desire for male child and the second being their Pursuation of career.

4.DISCUSSION

The effect is becoming more important than ever before as more women want to postpone pregnancy. The findings of the various trials available in the literature indicate a wide range of pregnancy outcomes. 6.7 Fortunately, the majority of findings show that deferring childbearing can be beneficial. This is a prospective retrospective analysis involving singletons that were randomly chosen. The findings reveal that the maternal and neonatal outcomes are both poor. Pre-existing medical conditions of advanced maternal age – In contrast to a study by Ramachandran N et al 44, where it is 9 percent, our study indicates a significant rise in Pre-existing Diabetes Mellitus in Study Group II compared to Study Group I, which is 10 percent (21.4 percent). Hypertension is also more common in Study group II, with 10% compared to 2% in Study group I.

GDM is the most common antenatal complication (58 percent vs 54 percent) in Study Group II and Study Group I, respectively, according to K.Sasirekha et al and

PawdeAnuyaet al 5. Despite the fact that Study Group II has a higher score, the P value is just 0.709, which is statistically negligible. Diabetes 3 has been linked to advanced age as an independent risk factor. In these women, advanced age, genetic impact, excess weight gain, and lifestyle factors may all play a role in the development of impaired glucose tolerance and frank diabetes long before conception. When compared to younger women in the Research group I 8-10, the likelihood of developing gestational diabetes was also found to be high in this study. Despite the high prevalence of gestational hypertension, thanks to careful monitoring and early delivery as indicated, there were few risks. Despite the fact that the values were greater than those in Research group I, the P value in our study was 0.168, making the results statistically insignificant. The majority of patients in all categories deliver at full term, but group II has a higher rate of preterm delivery (28%) than group I (12%). This is consistent with the findings of Sahu et al and Salihuet al⁹. However, all births longer than 36 weeks are used in the preterm column shown above. 11,12 Pawde et al found that 14 percent of babies born to mothers 35 years and older had a birth weight of less than 2,500 g, and 12.28 percent of babies had a birth weight of less than 2,000 g, compared to 18.34 and 7% for women under 35 years of age. This indicates that babies born to elderly mothers have a higher number of babies who were born with a very low birth weight, i.e., less than 2,000 g. This may be attributed to a higher number of women suffering from other issues like pre-eclampsia and intrauterine growth restraint. 13 and 15

Chan et al. found that women above the age of 40 had 4.5 percent of low birth weight babies compared to 7.2 percent of women under the age of 40. 8 Birth weight has a Pvalue of 0.103, which is statistically insignificant in our sample. Perinatal mortality was 8% in study group II and 2% in study group I, according to our findings. It is four times higher among women over the age of 35. Cleary-Goldman et al., on the other hand, found that women aged 40 and up had a high rate of perinatal mortality. 15 Perinatal risks are more common even in women who do not have serious pregnancy complications that impair the fetal outcome, according to recent research. While antenatal complications such as gestational diabetes mellitus, hypertensive disorders of pregnancy, and abruptio placenta (all of which are general causes of adverse perinatal outcome) were more common in our sample, NICU admissions were comparable in both groups in the elderly women >35 years. This may be the result of effective monitoring and prompt action. Caesarean sections were performed at a higher pace. There were no birth deaths, but one neonatal death occurred in a woman over the age of 35..16,17

5. CONCLUSION

The fall in the birth rate and postponement of childbearing is a well-known phenomena all over the world. Advanced maternal age is linked to lower oocyte production and a higher rate of pregnancy complications, all of which can lead to poor perinatal and obstetric outcomes. As a result, avoid delaying conception until the couple has been properly counseled on the risks. Miscarriage, pre-eclampsia, gestational diabetes mellitus, antepartum haemorrhage, preterm deliveries, Caesarean sections, low birth weight infants, and postpartum complications are all more likely during pregnancy than accidental conception. Oocyte production declines with maternal age, so if you're postponing pregnancy, be sure to prepare for oocyte protection.

Since women over the age of 35 have a greater chance of complications than women under the age of 35, they should be encouraged to have routine antenatal appointments and be closely monitored by a senior Obstetrician. It is reasonable to believe that elderly mothers who have a thorough assessment of their pre-pregnancy health status, prenatal screening, antenatal monitoring, and delivery in a tertiary institution with adequate NICU facilities should predict a positive perinatal outcome.

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Ethical approval: The study was approved by the Institutional Ethics Committee

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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