

## STUDY ON OBSTETRIC OUTCOME OF PREGNANCIES IN WOMEN 35 YEAR AND ABOVE AT A TERTIARY CARE CENTRE

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### Abstract

**Background:** The term "advanced maternal age" (AMA) refers to pregnancies after the age of 35, it first appeared in medical literature in 1950. Although pregnancy and childbirth are considered normal physiological processes with generally good outcomes for mothers and babies, pregnancy in older women is thought to carry a higher risk and they need to be managed by a trained person from the very early stage of pregnancy. In these patients, there is an increase in perinatal morbidity and mortality. Some medical illnesses such as diabetes mellitus and hypertension along with Caesarean sections and instrumental births are also more common in this subset of women leading to increased maternal morbidity. The aim is to study the fetomaternal outcomes in women 35 years and above.

**Materials and Methods:** The present study was an Observational study. All Antenatal women who are 35 or more years of age delivering in the Department of Obstetrics and Gynecology, Gandhi Medical College, Bhopal between 1 January 2021-31 July 2022 were included. **Result:** In the present study, anaemia was present in 282(52.2%) of participants and was the most common medical condition followed by pregnancy induced hypertension and chronic hypertension. 153(28.3%) underwent LSCS and 9(1.7%) had Instrumental Delivery. The most common indication of LSCS was fetal distress (19.6%) followed by previous LSCS (18.3%). PPH 65(12%) was the most common obstetric complication and 78(14.4%) of the study participants required ICU admission. In the present study, 45(8.3%) babies were stillborn. 106(21.4%) babies were having weight < 2.5kg. 82(15.1%) of the babies required NICU admission. 78(15.8%) required resuscitation and 5(1.0%) of the babies born with congenital anomalies. **Conclusion:** Prevalence of advanced maternal age is increasing with time. They are at great risk of antepartum, intrapartum, and postpartum complications and should be provided close supervision for better pregnancy outcome.

## INTRODUCTION

The term "advanced maternal age" (AMA) refers to pregnancies after the age of 35. It first appeared in medical literature in 1950.<sup>[1]</sup> Although pregnancy and childbirth are considered normal physiological processes with generally good outcomes for mothers and babies, pregnancy in older women is thought to carry a higher risk and they need to be managed by a trained person from the very early stage of pregnancy.<sup>[2]</sup> It has been estimated that 1.5% of all pregnancies involve mothers who are older than 35.

Pregnancy at an advanced maternal age has become increasingly common in the last two to three decades. This changing trend can be attributed to various reasons.<sup>[3]</sup> The social, educational, and economic

changes toward gender equality that have made it possible for women to participate in family planning and make decisions about their reproductive lives and career aspiration account for these shifting trends in childbirth.<sup>[4]</sup>

According to broad consensus, elderly women have lower fertility and are more likely to experience unfavourable pregnancy outcomes.<sup>[5]</sup> They are more likely to develop risk factors such as hypertension, diabetes mellitus, subfertility, miscarriage, ectopic pregnancy, anemia, antepartum haemorrhage, malpresentation, and postpartum haemorrhage. The danger to fetuses and newborns is also substantial because of the prevalence of chromosomal disorders (mostly down syndrome), multiple pregnancies, IUGR, and preterm, which increases the need for

NICU admissions. These lead increase in perinatal morbidity and mortality.<sup>[6]</sup> Caesarean sections and instrumental births are also more common in this subset of women leading to increased maternal and fetal morbidity.

In recent years, several studies concerning pregnant women aged 35 years or older have been conducted which have focused on risk associated with AMA, relationship between AMA and maternal outcomes, evidence of risk faced by women of AMA associated between maternal age and stillbirth. This study was conducted to assess the maternal and perinatal outcomes of pregnancies among women 35 years and above.

## MATERIALS AND METHODS

It is an Observational study in all Antenatal women who are 35 or more years of age delivering in the Department of Obstetrics and Gynecology, Gandhi Medical College, Bhopal between 1 January 2021-31 July 2022 were included. Sample size: To calculate the sample size based on the prevalence with 99% confidence level.

### Inclusion Criteria

- Antenatal women of more than 35 years and above of age at the time of delivery.

### Exclusion Criteria

- Antenatal Women not willing to participate in the study.

**Method of data collection:** Permission from the institutional ethics committee and university clearance was obtained Meeting and rapport building with the study participants.

Informed written consent was obtained after explaining about the purpose, nature and process of the study and then data collection was started.

The detailed history and through physical and obstetric examination along with relevant investigation were done. Maternal and foetal monitoring was performed according to standard guidelines. Maternal and fetal outcomes were noted in pre structured peer reviewed proformas.

### Outcome variables:

**Maternal outcomes-** Gestational age, associated medical condition, complications if any, ICU admission and maternal death.

**Foetal outcomes-** baby birth weight, preterm birth, NICU admission, still birth, perinatal mortality and IUGR

Factors influencing conception at advanced maternal age.

**Data Analysis:** Data was collected and entered simultaneously in the statistical package for social sciences (SPSS) version 23 and coded appropriately. The data was analysed keeping in view the aim and objectives of the study. Descriptive statistics were calculated to summarize the sample characteristics in terms of frequency and percentage. Charts were made. Analytical and inferential analysis was done. Significance was set at standard 0.05.

## RESULTS

**Table 1: Distribution of patients according to Age**

Age Group	Frequency	Percentage %
35 - 37 years	337	62.4%
38 - 40 years	162	30.0%
> 40 years	41	7.6%
Total	540	100%

In the present study, the majority of the study participants were in the age group of 35-37 years (62.4%) followed by 38 - 40 years (30%).

**Table 2: Distribution of patients according to History of infertility**

History of infertility	Frequency	Percentage%
Yes	173	32.0%
No	367	68.0%
Total	540	100%

In our study, 173 (32%) of the participants had a history of infertility.

**Table 3: Distribution of patients according to reason of pregnancy at advanced maternal age.**

Reasons	Frequency	Percentage%
Desire for male child	142	26%
Late Marriage	104	19%
Failure of Contraception	75	14%
Remarriage	38	7%
Death of Previous Child	95	18%
Ambition of Career	37	7%
No specific reason	49	9%
Total	540	100%

Desire for male child 142(26%) was the most common reason followed by late marriage 104(19%).

**Table 4: Distribution of patients according to associated comorbidities**

Comorbidities	Frequency	Percentage %
Anaemia	282	52.2%
Gestational Diabetes Mellitus	54	10.0%
Pregnancy induced Hypertension	103	19.1%
Chronic Hypertension	75	13.9%
Hypothyroidism	13	2.4%

In our study, anaemia was present in 282(52.2%) followed by 103(19.1%) participants had pregnancy induced hypertension.

**Table 5: Distribution of patients according to Period of Gestation**

Period of Gestation	Frequency	Percentage %
< 37 weeks (Preterm)	91	16.9%
37 - 40 weeks (Term)	422	78.1%
>40 weeks (Post dated)	27	5.0%
Total	540	100%

Most of the patients presented between 37 – 40 weeks of gestational age, 5% after 40 weeks of gestation.

**Table 6: Distribution of patients according to mode of delivery**

Mode of delivery	Frequency	Percentage %	
Vaginal Delivery	Vaginal Delivery	352	65.2%
	LSCS	153	28.3%
	Instrumental Delivery	9	1.7%
	Assisted Breech Delivery	26	4.8%

In the present study, 352 (65.2%) women had vaginal delivery and 153(28.3%) underwent LSCS.

**Table 7: Distribution of patients according to indication for LSCS**

Indication of LSCS	Frequency	Percentage %	
Fetal Distress	Fetal Distress	30	19.6%
	CPD	18	13.0%
	Previous LSCS	24	15.6%
	Abnormal presentation	33	21.5%
	Placenta Previa	9	5.8%
	Abruptio placentae	14	9.1%
	Oligohydramnios	12	7.8%
NPOL	13	8.4%	

In the present study, the most common indication of LSCS was Abnormal presentation (21.5%) followed by fetal distress (19.6%).

**Table 8: Distribution of patients according to Obstetric Complications**

	Frequency	Percentage %
Preterm Labour	91	16.8%
Placenta Previa	09	1.6%
Abruptio Placenta	13	2.4%
Post Partum Haemorrhage	65	12.0%
Eclampsia	14	2.59%
Blood transfusion > 2 units	22	4.1%
Shoulder Dystocia	19	3.5%
ICU Admission	78	14.4%

In the present study, it was found that preterm labour 91(16.8%) was the most common obstetric complication followed by PPH 65(12%). 78(14.4%) of the study participants required ICU admission.

**Table 9: Distribution of patients according to baby status at birth**

Baby status at birth	Frequency	Percentage %	
Alive	Alive	495	91.6%
	Stillborn	45	8.3%
Total	540	100%	

In the present study, 495(91.6%) babies were born alive and 45(8.3%) were stillborn.

**Table 10: Distribution of patients according to weight of baby at birth**

Birth weight	Frequency	Percentage %
<2.5 kgs	106	21.4%
>2.5 kgs	389	78.6%

In the present study, 106(21.4%) babies were weighing < 2.5kg.

**Table 11: Distribution according to NICU admission**

NICU Admission	Frequency	Percentage %
Yes	82	16.6%
No	413	83.4%
Total	495	100.00%

In the present study, 82(16.6%) of the babies required NICU admission.

**Table 12: Fetal outcome according to need of resuscitation and congenital anomaly**

	Frequency	Percentage %
Resuscitation	78	15.8%
Congenital Anomaly	05	1.0%

In the present study, 78(15.8%) required resuscitation and 5(1.0%) of the babies born with congenital anomalies.

## DISCUSSION

Over the last 30 years, there has been a shift towards postponement of marriage and childbirth, especially among women who are healthy, educated and have career opportunities. The scientific literature and the clinical experience of obstetricians show that maternal aging increases the risk and is associated with poor maternal and fetal outcomes. In the present study, the majority of the women were in the age group of 35-37 years (62.4%) followed by 38 - 40 years (30%) and only few women were more than 40 years of age. Similar observation were made conducted by in the previous studies Deshpande S et al, Basa A et al.<sup>[7,8]</sup>

In the present study, It was found that Desire for male child 142(26%) was the most common reason followed by late marriage 104(19%) then 95 (18%) had the death of a previous child. Higher percentage of the desired male child signifies that the community is still not accepting the equality of male and female child and shows the mentality of male dominance over female in the Indian communities. Deshpande S et al,<sup>[7]</sup> Rajput et al,<sup>[6]</sup> Ritu et al,<sup>[9]</sup> reported that among major reasons of advanced maternal age was desire of male child (35.33%) (23.95%), (23%). Whereas Basa A et al,<sup>[8]</sup> reported maximum cases of subfertility. Nozomi M et al,<sup>[10]</sup> reported that 25.5% of the patients had a history of infertility.

Anaemia was present in 52.2% of participants, followed by 19.1% had gestational hypertension and 13.9% had chronic hypertension, 10% had GDM. Similar reports have been found in Deshpande S et al.<sup>7</sup> with high no. Of cases in anemia and hypertensive disorder in pregnancy. Also, Moses et al,<sup>[11]</sup> found incidence of anemia at the rate of 19 %.

In this study, it was found that Preterm labour (16.8%), PPH (12%), shoulder Dystocia (3.5%), Abruptio Placentae (2.4%), Placenta Previa (1.6%), and other obstetric complications present in this study. PPH is the most common complication occurring at advanced maternal age which results in an increased number of icu admissions. Which is similar to Gaikwad SS et al,<sup>[12]</sup> and Mohato V et al,<sup>[13]</sup> the rate of preterm delivery respectively in study was 49 % and 22.12%.

Advanced maternal age was associated with an increased obstetric and medical risk to the women.

In this study, 8.3% resulted in Stillborn. 21.4% babies had weight < 2.5kgs and 16.6% of the babies required NICU admission, 15.8% required resuscitation and 1% of the babies born with congenital anomalies. Basa A et al,<sup>[8]</sup> reported that incidence of low birth weight was 23.08 %. Radon-Pokracka, et al,<sup>[14]</sup> where low birth weight in advanced maternal age was 10.7%. Pawde et al,<sup>[15]</sup> in their study reported congenital anomalies as 0.95%.

## CONCLUSION

Prevalence of advanced maternal age is increasing with time and it is bound to increase further. Elderly women more than 35 years of age are at risk of antepartum, intrapartum, postpartum complication and fetal complications and should be provided close supervision for better pregnancy outcome. Consistent with other studies, hypertension and anemia were the most common disorders complicating pregnancy in advanced maternal age. Improved pregnancy outcomes in elderly pregnant females are expected if preconception counseling, prenatal screening and diagnosis, frequent antenatal visits and expert intrapartum care is provided. Larger studies are needed to determine the extent of association of risk factors and complications with advanced maternal age and measures to mitigate them.

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