

Original Article**Obstetric Outcome in Elderly Mothers aged 35 Years and above:
Comparative Study**

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Kiran Kumar SingalEmail: drkiranambala@gmail.com**ABSTRACT**

Introduction: Many women increasingly delay pregnancy and childbirth into their later decades of life because of different reasons, such as delay in marriage, educational and professional reasons. Advanced maternal age has been regarded as a risk factor for complications in pregnancy.

Objective: This study is aimed at comparing the obstetric outcomes of pregnancy in women aged 35 years and above.

Methods: Prospective comparative observational study was done over a period of 2 year at the M.M.Medical College & Research Centre, Mullana, Ambala (Haryana) India.

Forty pregnant women of age 35 years and above at any gestational age were taken into the study population irrespective of the parity. Forty control population was pregnant women of age 20-34 years of any parity.

Results: The incidence of pre-gestational diabetes, gestational diabetes and preeclampsia was found to be higher in the study group. 65% patients in the study group had Cesarean section. 25% underwent vaginal delivery. In the control group, 80% delivered vaginally. This study did not find any increased incidence of malpresentation in elderly women.

Conclusion: Pregnancy in older multiparous women seem to have higher rates of obstetric complications and such as hypertension, diabetes. Women should be informed that the risk of pregnancy complications increases with age.

Keywords: maternal age, gestational diabetes, maternal outcome.

INTRODUCTION

Many women increasingly delay pregnancy and childbirth into their later decades of life because of different reasons, such as delay in marriage,

educational and professional reasons¹. Advanced maternal age has been regarded as a risk factor for complications in pregnancy. The association between advanced maternal age and increased risk

of chromosomal abnormalities and spontaneous abortion has been well documented in studies^{2,22}. Although a number of studies found an association between delaying child birth and adverse maternal and fetal outcomes^{3,4,5,6,7,8,21} other studies challenge these findings^{9,10}. As the number of advanced maternal age gravidas continues to grow, obstetric care providers would benefit from up-to-date outcome data to enhance their preconceptual and antenatal counseling. The purpose of this study is to evaluate obstetric outcomes in advanced maternal age women.

AIM OF THE STUDY

This study is aimed at comparing the obstetric outcomes of pregnancy in women aged 35 years and above with younger women of age group 20-34 years.

METHODS

Study design: An observational study.

This is a prospective comparative study, done over a period of 2 year and from January 2012 to December 2013 at the M.M.Medical College & Research Centre, Mullana, Ambala (Haryana) India.

Pregnant women of age 35 years and above at any gestational age were taken into the study population irrespective of the parity. The control population was pregnant women of age 20-34 years of any parity, who were registered in the antenatal clinic on the same day as the study cases. This kind of patient selection largely avoided the problem of selection bias.

Study group: n = 40

Control group: n = 40

Women with multiple gestations were excluded from the study, as problems inherent to multiple gestations itself would confound the results.

All these women were followed right from the time of registration to the postnatal period, and perinatal outcomes were compared.

The presence of preexisting medical disorders, incidence of aneuploidy, miscarriage, pregnancy complications like Gestational Diabetes Mellitis,

preeclampsia, antepartum hemorrhage, need for labour induction and intrapartum factors like requirement of analgesia, duration of first and second stage of labour, instrumental deliveries, caesarean deliveries and Post Partum Haemorrhage were recorded.

RESULTS

The mean age of women in study group was 37.3 and 26.5 in the control group

10% in the study group of patients had assisted conception whereas all of patients in the control group conceived spontaneously.

There were 4 (10%) miscarriages in the study group and 1 (2.5%) miscarriage in the control group.

The incidence of pre-gestational diabetes, gestational diabetes and preeclampsia was found to be higher in the study group.

There were 2 (5%) of patients with abruption in the study group secondary to severe preeclampsia but none in the control group. There were no patients with placenta previa in both groups.

This study did not find any increased incidence of malpresentation in elderly women.

Labour induction rates were higher in the study group compared to the control group where 10% of patients had labour induction due to medical complications. 75% of women in the control group had labour induction for prolonged pregnancy.

65% patients in the study group had Cesarean section. 25% underwent vaginal delivery. In the control group, 80% delivered vaginally. The high caesarean rate may well explain the low rate of labour induction in the study group.

40% of women in the study group underwent caesarean section for the second time. In half the cases, the indication was the patient's desire to get delivered by caesarean section and in the rest, the indication was medical complications like diabetes or severe preeclampsia.

Table 1: Distribution of age

Group	Age	No.	%
Cases	35-39	35	87.5
	>40	5	12.5
Controls	20-25	10	25
	26-29	20	50
	30-34	10	25

Table 2: Distribution of parity

Group	Primigravida	Multigravida
Cases	17(42.5%)	23(57.5%)
Controls	22(55%)	18(45.%)

Table 3: Mode of conception

Mode of conception	Cases(n)	Controls(n)
Spontaneous	36	40
OI with clomiphene	2	0
IUI with clomiphene	2	0
IVF	0	0

Table 4: Pregnancy outcome

Outcome	Cases n (%)	Controls n (%)
Miscarriage	4(10%)	1(2.5%)

Table 5: Medical disorders

Variables	Cases(n)	Controls(n)
Pregestational DM	7	1
Gestational DM	5	1
Preeclampsia	2	1
Anemia	8	0

Table 6: Antepartum haemorrhage

Variables	Cases(n) (%)	Controls (n) (%)
Placental abruption	2(5%)	0
Placenta previa	0	0

Table 7: Labour induction

Variables	Cases(n) (%)	Controls(n) (%)
Induction of Labour	3(7.5%)	15(37.5%)

Table 8: Pregnancy outcome

Outcome	Cases n (%)	Controls n (%)
Labour natural	10(25%)	32(80%)
Assisted vaginal delivery	4(10%)	4(10%)
LSCS	26(65%)	4(10%)
Total	40	40

DISCUSSION

As more women decide on delaying pregnancy, the impact is gaining more relevance than never before. The numerous studies available in literature show varied results on the pregnancy outcomes¹⁷. Fortunately so, most of the studies express optimism, towards delayed child bearing.

This study is a prospective comparative study, with unselected patients with singletons. The results show that the maternal outcomes are favourable. Our study confirms a significant higher incidence of hypertension and diabetes mellitus among pregnant women age 35 and older, which has been reported in other studies^{11,12,13,20}. The prevalence of diabetes and hypertension are increased by age and considered to induce vascular endothelial damage that occurs with aging¹⁴.

Advanced aged is found to be an independent risk factor for diabetes¹⁷. Advanced age, along with genetic influence, excess weight gain and life style factors may contribute to the development of impaired glucose tolerance and frank diabetes, well before conception, in these women. The risk of developing gestational diabetes was also found to be high in this study when compared to younger women in the control group.

Other medical complications like chronic hypertensions, renal diseases, cardiovascular diseases, autoimmune disorders were not found in any of the patients in the study group.

Advanced maternal age is a definite risk factor for chromosomal derangements. High miscarriage rates are attributed to be cause⁶. But this study did not find any increased incidence. This may be due to the fact that many of the patients in the study group got registered at the antenatal clinic, late in the second trimester, leaving the yield inadequate. Of the women screened in the first trimester none showed screen positivity either.

There were four cases of miscarriage, one spontaneous and the others being missed abortion, chromosomal status are not known in both, whereas there was one case of miscarriage in the control group.

In agreement with most of the studies the incidence of preeclampsia was found to be increased. Microvascular endothelial dysfunction which is the basic pathology in preeclampsia, accelerates with advancing age¹⁷In the study there were two cases of severe preeclampsia that progressed to placental abruption, severely affecting the perinatal outcome. Jane Cleary-Goldman et al¹⁷reported in contrast that age alone is not a risk factor for hypertensive disorders of pregnancy, their study showing no statistically significant association between age and preeclampsia.

Vascular dysfunction is said to be the cause for placenta previa also, the incidence of which increases with age as quoted by large studies like those of Bianco et al³., Gilbert et al¹⁵., Chan et al¹⁶., Cleary-Goldman et al¹⁷., Joseph et al¹⁸., and most other authors. Gilbert et al¹⁵., reported eightfold increase in older women, even when controlled for prior caesarean delivery, induced abortion and parity. But this study had no patients with placenta previa. The rate of labour induction was not high in the study group in contrast to the reports by Prysak et al⁶., Chan et al¹⁶., and Joseph et al¹⁸., who found increased induction rates among elderly nulliparae. But the rate of primary elective caesarean deliveries were high. This may also be one of the reasons for the low induction rates. In the control group a few cases were induced following medical complications and for the rest, the indication was prolonged pregnancy.

The incidence of assisted vaginal deliveries was high in the study group, the indication for most being failed maternal forces. It is possible that decreased myometrial efficiency occurs with age¹⁷. Most authors support this finding and they also found increased rate of labour analgesia and anal sphincter tears in elderly women.

Comparison with the control group as with the indication for operative deliveries is not available, as there was no case of assisted vaginal delivery in the control group.

The high rate of primary elective caesarean section in the study group may explain the low

induction rates. The indication for elective caesarean in most cases was either medical complications like GDM or, the inclination of both the patient and the obstetrician, towards safer delivery of the baby, as these pregnancies are considered precious by both. This fact is quoted in most studies.

The incidence of malpresentation was the similar in both groups.

CONCLUSION

Pregnancy in older multiparous women seem to have higher rates of obstetric complications and such as hypertension, diabetes. Women should be informed that the risk of pregnancy complications increases with age.

Though there is significant association between maternal age and medical disorders that complicate pregnancy, the perinatal outcomes are optimistic as evident by various larger studies.

The limitation of this study is that the sample size is very small, often insufficient to draw a significant association between age and many other variables like placenta previa, malpresentation, labour induction etc.

The other drawback is that confounding factors like, BMI, parity and socioeconomic status are not well controlled.

The good pregnancy outcomes observed in older mothers even prompted authors like Chan et al¹⁶., to suggest that the threshold defining, advanced maternal age be raised to 40 from 35 years.

This kind of optimism is of prime importance in the current era of more and more women electing to delay childbearing. It is appropriate to conclude that elderly mothers with meticulous pre-pregnancy evaluation, prenatal care and surveillance can expect a good perinatal outcome.

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