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Original Research Article

Pregnancy outcome in elderly primi gravidas

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ABSTRACT

Background: The health of the mother lays a strong foundation to the health of the nation in general. Pregnancy and child birth are normal physiological processes and outcomes of most pregnancies are good. But pregnancy in woman with advanced age is considered high risk. In obstetric practice, maternal age is an important determinant of the outcome of pregnancy. One such risk factor is an elderly pregnancy that leads to many complications during pregnancy, labor and also for the baby. Elderly Primi Gravida - Women who become pregnant first time after the age of 35 years. In recent times women have changed their life style such as in the pursuit of higher education and entry into work forces and career advancement outside the home. Consequently, this has lead to postponement of child bearing, resulting in an increasing maternal age and it contributes to this upward trend. This study was designed to assess pregnancy outcomes in elderly primigravidas.
Methods: This study was a Prospective hospital based study done in 100 elderly primigravida enrolled after exclusion criteria in M. Y. Hospital and Kalyanmal Nursing Home, MGMMC Indore during Jan. 2015 to Dec. 2015.
Results: This study showed 38% women postponed their pregnancy due to education and increased maternal complications like Gestational hypertension develop in 24% elderly primigravida. Gestational diabetes mellitus in 6%, anemia in 19%. Antepartum haemorrhage in 3%. Cesarean section rate 40%. Preterm vaginal delivery 17%. Induction of labour in 11% and normal delivery only in 29% and congenital anomaly 3%.
Conclusions: Elderly women are at a high risk of several complications including instrumental deliveries, mal-presentations, mal-positions, prolonged labor, increased caesarean section rate, induction of labor, pregnancy induced hypertension, diabetes mellitus, ante and post partum hemorrhage. It was concluded that among maternal pregnancy outcomes PPH, Induction of labour and cervical dystocia were found significantly more in elderly primi gravida, fetal pregnancy outcomes such as, Oligohydramnios, Breach and Transverse lie were found significantly more in elderly primigravida. Likewise vaginal deliveries were significantly less in elderly primi gravida. IUGR and low birth weight was significantly higher in newborns of elderly primi gravida.

Keywords: Elderly primigravida, Pregnancy, Maternal complication

INTRODUCTION

The health of the mother lays a strong foundation to the health of the nation in general. Pregnancy and child birth are normal physiological processes and outcomes of most pregnancies are good. but pregnancy in woman with advanced age is considered high risk.[1] In obstetric practice, maternal age is an important determinant of the outcome of pregnancy and both extremes are known to be associated with adverse maternal and fetal outcome One such risk factor is an elderly pregnancy that leads to many complications during pregnancy, labour and also for the baby.

Elderly Primi Gravida

Women who become pregnant first time after the age of 35 years.[2] In recent times women have changed their life style such as in the pursuit of higher education and entry into work forces and career advancement outside the

home. Consequently, this has led to postponement of child bearing, resulting in an increasing maternal age and increase in the rate of divorce followed by remarriage etc. contributes to this upward trend.

Elderly women are at a high risk of several complications including instrumental deliveries, mal-presentations, mal-positions, prolonged labour, increased caesarean section rate, induction of labour, pregnancy induced hypertension, diabetes mellitus, antepartum and post partum haemorrhage.[3] The elderly primigravida is generally believed to have decreased fertility and increased risk for adverse pregnancy outcomes.[4] Reduced fertility with increasing maternal age is evidenced by decline in ovarian oocyte reserve and quality with increasing number of ovulatory cycles poor oocyte quality is associated with an increased risk for aneuploidy, chromosomal abnormalities, and spontaneous abortions in this group of women who are routinely screened for these problems in some countries.[5]

In recent times, women have changed their life style such as in the pursuit of higher education and entry into work forces and career advancement outside the home. Consequently, this has led to postponement of child bearing, resulting in an increasing maternal age and increase in the rate of divorce followed by remarriage etc. contributes to this upward trend. Traditionally such women are considered to be high risk obstetric patients because of the complications associated with their pregnancies and deliveries. This study was designed to assess pregnancy outcomes in elderly primigravida.

METHODS

This was a hospital based prospective observational study. This study was conducted in Department of Obstetrics and Gynaecology, M.G.M. Medical College and Kalyanmal Nursing Home of Hospitals, Indore during a period from January 2015 to December 2015. This study was approved by subject committee and permission obtained from the hospital authority where this study was conducted.

All women having age >35 years elderly primigravida were enrolled in this study after their admission in the hospital. A total of 100 cases were enrolled in the study.

The labour ward register and case records were used of all elderly primigravida women delivered and details of these patients were recorded in the proforma.

Exclusion criteria

- Married women who have age <35 yr.
- Married women who have underwent permanent sterilization.
- Multiple gestation, patients having major respiratory, heart disease.

RESULTS

Table 1: Age wise Distribution of cases.

Age wise distribution of cases	No. of cases	Percentage
35-36 years	46	46%
36-37 years	30	30%
38-39 years	20	20%
>40 years	4	4%
Total	100	100%

Table 2: Distribution of cases according to years between marriage and birth.

Year of Marriage	No. of Patients	Percentage
<2 years	51	51%
3-5 years	41	41%
>5 years	8	8%

Table 3: Distribution of cases according to reason for postponing child bearing.

Reason of postponed	No. of Patients	Percentage
Occupation	22	22%
Education	38	38%
Infertility	4	4%
Social	20	20%
Others	16	16%

Table 4: Distribution of cases according to educational status.

Socioeconomic status	No. of Patients	Percentage
Illiterate	22	22%
High school	30	30%
Higher secondary	28	28%
Graduate / postgraduate	20	20%
Total	100	100%

Table 5: Maternal complications in elderly primi gravid.

Antenatal complications	No. of cases	Percentage
Gestational hypertension	24	24%
GDM	6	6%
Anaemia	19	19%
Antepartum Haemorrhage	3	3%
H/o of Abortion	7	7%
breech	6	6%
Pregnancy with Fibroids	5	5%
oligohydramnios	10	10
Hypothyroidism	3	3%
Preeclampsia	4	4%
other	13	13%

Table 6: Mode of delivery in elderly primi gravida.

Diagnosis	No. of Patients	Percentage
Normal labour	29	29%
LSCS	40	40%
Preterm labour	17	17%
Induced labour	11	11%
Assisted breech delivery	1	1%
TVSD	2	2%
Total	100	100%

Table 7: Various causes of perinatal outcome.

Perinatal outcome	No. of cases	Percentage
Congenital anomaly	3	3%
IUGR+lbw	22	22%
Still Birth	2	2%
Other	73	73%
Total	100	100

DISCUSSION

The present study was a hospital based prospective study, conducted over the period of one year. The study included 100 elderly primigravida >35 years of age. All the cases were evaluated till delivery for maternal and fetal complications and outcome. A definite increase in the number of women bearing children in their 30's and 40's is expected to occur both in developing and developed countries. Women's career priorities, tertiary education, availability of fertility control, late and second marriages, changes in socio-cultural patterns and mores are some of the common factors affecting postponement of childbearing. Postponement of marriage in the Indian women may be due to a lack of opportunity to meet the right partners Amrin et al.[6] Very often this is due to high literacy rates amongst these women. Teachers, civil servants and other female professionals serving in the rural areas lack the opportunity of meeting men of equal social standing.

Age group

96% belonged to 35-40 years, 4% belonged to 41-45 age groups. The mean age group was 36.8 years in this study (Table 1). Marriage to conception interval in elderly primi gravida was analyzed and found that 51% the interval was <2 years, 41% interval was 3-5 years and 8% interval was >5 years of marital age (Table 2).

Pregnancy in women of advanced age is considered a high risk. This concept has been diffused into the health delivery system of the country and prompt referral of these patients for consultation and care is made. Improvement of pregnancy outcome should be anticipated with the availability of amniocentesis, cytogenetics, electronic fetal monitoring and ultrasonography. Except for the latter, the other facilities were not available at this hospital during the period of study. Clinical supervision was largely relied on in management of the cases.

Complications in pregnancy

The elderly primigravida is more likely to encounter complications which are the result of the natural process of ageing. It was noted that 87 (87%) out of the 100 cases included in the study group had antenatal complications. Infect, the risk of antenatal complications were about three times higher in the women of age group 35 years and above. Complications of early pregnancy like abortions have been observed in 7 cases. Pregnancy induced hypertension occurred in 24% of elderly primigravidae. This is significantly higher when compared with Sahu T Meenakshi et al 10% of the complication in primigravidae.[7] Abruptio placentae occurred in 3% patients in present study which are similar to above study. Diabetes mellitus was 6% which are higher to Rajmohan Laxmi et al.[8] The frequency of this metabolic disorder was increased among primiparas aged 35 and above Naqvi MM et al.[9] As the patient gets older, she may develop other gynaecological problems. Of these, uterine myoma appears to be the most common. A higher incidence of breech presentation has been reported in elderly primigravida. This high incidence was not related to prematurity, uterine anomaly or fetal anomaly.

Management of labour

The incidence of preterm labour was 17%. Tocolytic agents play a limited role in management of established preterm labour. The availability of an excellent neonatal care unit may compromise the need for prolongation of pregnancy in these cases.

Patients delivered vaginally 29%, in which instrumental delivery required 6%. Caesarean section was performed on 40% of cases.[10,15] Stanton demonstrated an increase in prolonged labour among older pregnant women. Friedman showed an increase in prolonged second stage with advancing age.

An elderly primigravida is anxious and often unsure of her ability to deliver safely. Some degree of uterine inertia may also play a role in causing prolonged labour. Induction and augmentation of labour with oxytocics were carried out in 32% of the cases. A high intervention rate is a consistent finding in the literature. A caesarean section rate of 17% was reported by Grimes and Gross compared to 10% in those under 35 years of age.[11] These figures are much lower than that reported by other workers. Blum found a higher caesarean section rate (49%). In our series the caesarean section rate (40%) was four times higher than that of the hospital population.[12,16] The hospital policy of performing caesarean section for all breech presentations in elderly primigravida may have contributed towards the increased rate. Postpartum

haemorrhage due to uterine atony was seen in only 3% patients.

Mortality and morbidity

There were no maternal deaths in this series. The increased maternal morbidity was due to the increased incidence of hypertension.[13]

Anemia was noted in 19% of cases in spite of close supervision. This was attributed to failure to take prescribed hemanatemics, food preference and food taboo in pregnancy. A refractory anemia most probably due to a chronic renal pathology was suspected. However, this patient was lost to follow-up after recovering from a caesarean section.

Perinatal mortality and morbidity

In the present study congenital anomaly was present in 3%, IUGR+LBW babies were 22%, stillbirth 2% This was in accordance with the findings of Ziadeh et al, Delpisheh A et al who found that the incidence of low birth weight babies is more among elderly nulliparous women a much higher perinatal deaths have been reported in the literature.[14,17,19] Early booking, close supervision in the antenatal and intrapartum period, appropriately timed obstetric intervention and the advocation of active management of labour may have contributed to good fetal outcome.[9] Obstetric practice presently has moved away from high cavity forceps delivery and unwarranted breech extraction. The liberal use and early resort to caesarean sections has, however, to be looked upon with caution. Advocation of abdominal delivery purely on the grounds of advanced age should be discouraged.

Management

Pregnancy in women after 35 years is considered high risk due to the various risks factor so when planning pregnancy and during pregnancy special care given to elderly primi gravida.

1. Preconceptional counseling

- Preconceptional counseling is very important in this age group and many women willingly seek it.
- This is very important for women with pre-existing medical problems in which case pregnancy can be planned after stabilizing the medical condition.

2. Prenatal diagnosis

- Prenatal diagnosis is extremely important considering the increased chance of chromosomal defects.
- Ultrasound screening for Down's syndrome is recommended.
- Targeted anomaly scan at 18-20 weeks is a must.
- Chorion villus sampling (CVS) or amniocentesis may have to perform to rule out chromosomal anomalies.

3. Antepartum management

- More frequent antenatal visits with antepartum fetal surveillance with serial ultrasound and Doppler.
- Opinion of a physician may be necessary, if there are associated medical complications.

4. Intrapartum management

- Close monitoring is indicated in labor.
- Hospital delivery preferably in a tertiary center with good neonatal care facilities is a must.
- CTG monitoring is ideal.
- Judicious monitoring of labor is required.
- A lower threshold for cesarean section is preferred in these women and in many cases, elective cesarean section may be ideal.
- The newborn should be taken care of by an expert neonatologist.

5. Postpartum management

- Elderly primi gravida need better care to avoid postpartum complications and failing lactation.
- They also need contraception advice.

CONCLUSION

Elderly women are at a high risk of several complications including instrumental deliveries, mal-presentations, mal-positions, prolonged labour, increased caesarean section rate, induction of labour, pregnancy induced hypertension, diabetes mellitus, ante and post partum haemorrhage.

It was concluded that among maternal pregnancy outcomes PPH, Induction of labour and cervical dystocia were found significantly more in elderly primi gravida. Maternal pregnancy outcomes such as, Oligohydramnios, Breach and Transverse lie were found significantly more in elderly prim igravida. Vaginal deliveries were significantly less in elderly primi gravida.[8] Also, IUGR and low birth weight was significantly higher in newborns of elderly primi gravida.

Consistent with other studies, hypertension was the most common disorder complicating pregnancy at age 35 and above. Cases were more likely to undergo induction of labour and operative delivery. Larger studies are needed to establish the exact magnitude of these associations and to show any significant difference in antepartum obstetric problems and fetal and neonatal outcome measures.

Unwarranted intervention in labour based on age alone is not acceptable. Management will largely depend on attempts at improving perinatal outcome without

compromise to health and well-being of the mother. The perinatal mortality rate was low but the caesarean section rate was high in this study.

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