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Observational Study of Maternal and Fetal Outcome in Elderly Primigravida

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Abstract: ***Background: Maternal age plays an important role in determining pregnancy outcome and women aged 35 years and above undergoing their first pregnancy are often classified under high risk pregnancy group. Objective: The objective of this study was to determine the maternal and fetal outcome in an elderly primigravida. Material and Methods: Case records of 4167 pregnant women were reviewed retrospectively. Primigravidas with age more than 35 years old at the time of delivery were included in the study. Data regarding age, socioeconomic status, booking status, mode of delivery, maternal and foetal complications were collected. Results: During the study period, there were 4167 deliveries out of which 80 were elderly primigravidae giving the incidence of 1.9%.Increased maternal complications like hypertensive disorder in pregnancy(22.5%), gestational diabetes mellitus(7.5%), anemia(7.5%), hypothyroidism(6%), oligohydramnios(5%) were seen. Increased fetal complications like IUGR(13%), preterm delivery(6%), anomalies(4%) and intrauterine fetal demise(4%) were seen. Caesarean section rate was 56%. Conclusions: Despite technological advancements, the rates of maternal and fetal morbidity and mortality remain high in advanced maternal age. We believe that with advent of preconceptional counselling, prenatal diagnosis and antepartum fetal surveillance, maternal and fetal morbidity and mortality can be reduced.***

Keywords: Elderly primigravida, Pregnancy, High risk pregnancy

1. Introduction

Elderly Primi Gravida is a woman who becomes pregnant first time after the age of 35 years.[1]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.[2]

Delayed childbearing has become increasingly common in the past decades, and this has raised concern for the possible risks for both the mother and the foetus. The prevalence of advanced maternal age within all pregnancies has been previously reported to be around 1.5%; however, these numbers may change according to the population studied.[3,4]

Elderly women are at a high risk of several complications including instrumental deliveries, malpresentations, malpositions, prolonged labour, increased caesarean section rate, induction of labour, pregnancy induced hypertension, diabetes mellitus, antepartum and post partum haemorrhage.[5]

The elderly primigravida is generally believed to have decreased fertility and increased risk for adverse pregnancy outcomes.[6]

2. Materials and Methods

The labour ward registers and case records were used and all elderly primigravida women delivered at Rajarajeswari medical college and hospital over a period of 2 years from January 2015- December 2016 were identified. The records were retrieved and studied retrospectively. Data regarding socio-demographic characteristic such as age, socioeconomic status, occupation, booking status, pregnancy complications, mode of delivery and neonatal outcome were extracted from the case records.

Inclusion criteria

- Primi gravida
- Married women with age more than 35 years

3. Result

Table 1: Distribution of cases according to age

Age wise distribution of cases	*No. of cases*	*Percentage (%)*
35-38 years	60	75
38-40 years	16	20
>40 years	04	5
Total	80	100

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

Year of Marriage	*No. of Patients*	*Percentage(%)*
<2 years	47	59
2-5 years	24	30
>5 years	9	11
Total	80	100

Table 3: Distribution of cases according to socioeconomic status

Socio-economic status	*No. of Patients*	*Percentage (%)*
Class 1	6	8
Class 2	19	24
Class 3	27	34
Class 4	14	17
Class 5	14	17
Total	80	100

Table 4: Distribution according to the booking status

Booking status	*No. Of patients*	*Percentage(%)*
Booked	71	89
Unbooked	9	11
Total	80	100

Table 5: Distribution according to the occupation

Occupation	*No. Of patients*	*Percentage(%)*
Home-maker	58	73
Working	22	27
Total	80	100

Table 6: Distribution according to the maternal complications

Antenatal complications	*No. of cases*	*Percentage(%)*
Hypertensive disorders in pregnancy	18	22.5
GDM	6	7.5
Anaemia	6	7.5
Hypothyroidism	5	6
Oligohydramnios	4	5
Post myomectomy	3	4
Others	6	7.5
No complication	32	40
Total	80	100

Table 7: Distribution according to mode of delivery

Mode of delivery	*No. of cases*	*Percentage(%)*
LSCS	45	56
Vaginal delivery	31	39
Instrumental delivery	4	5
Total	80	100

Table 8: Distribution according to foetal complications

Foetal complication	*No of cases*	*Percentage(%)*
IUGR	11	14
Preterm	7	9
Malpresentation	4	5
IUD	3	3.75
Anomalies	2	2.5

4. Discussion

This study is a hospital based retrospective study, conducted over a period of two years. The study included 80 elderly primigravida women with age more than 35 years. During the study period, there were 4167 deliveries, giving an incidence of elderly primigravidity as 1.9% or 1 in 52 deliveries.

The incidence of elderly primigravidae was reported as 1.4% in a study by Ojule et al (2011) in Port-Harcourt.[7] Advanced maternal age was reported to be 7.8% in Çetinoglu et al.[8]

Demography:
In our study 75% belonged to 35-38years, 20% belonged to 38-40years and 5% belonged to above 40 years of age groups. The mean age group was 36.8 years in this study. Marriage to conception interval in elderly primi gravida was studied it was found that in 59% the interval was <2 years, 30% interval was 2-5 years and in 11% interval was >5 years of marital age. 89% of elderly primigravidas were booked cases in comparision to 11% of unbooked cases.73% of elderly primigravidas were home makers.

Maternal complication
The elderly primigravida are more likely to encounter complications and it was noted that 60% women in the our study had complications. Hypertensive disorders of pregnancy were seen in 22.5% of elderly primigravidae while in a study by Sahu T Meenakshi et al it was noted to be 10%.[9] Incidence of Gestational diabetes mellitus was 7.5%which is higher to Rajmohan Laxmi et al.[10] The incidence of anaemia, hypothyroidism, oligohydramnios were 6%,5% and 4% respectively in the our study.4% of the women underwent myomectomy prior to pregnancy.

Fetal complications
In our study complications like IUGR(14%), preterm(9%), malpresentation(5%), IUD(3.75%) and anomalies(2.5%) were seen.Sekeroglu et al reported a premature birth rate of 23.6%, Bekdas et al found it to be 19.3%.[11,12]In our study incidence of preterm was found to be 9%In a previous study, the ratio of fetal mortality was 0.4% in advanced maternal age and 3.5% in very advanced maternal age.[12] In our study it was found to be 3.75%.Fetal anomalies were detected in 3.8% of the cases in Sekeroglu et al.[11]In our study incidence was 2.5%.

Mode of delivery
In addition to doctor and patient concerns over increased medical problems during pregnancy in advanced-age mothers, decrease in myometrial function and increase fetal distress with increasing age are considered to be fundamental factors that increase the incidence of birth by Cesarean sections.[13]Cesarean sections were used in 35.2% of cases in Yogev et al.and in 65.4% of cases in Çetinoğlu et al.[14,8] In our study, 56% of the births were by Cesarean sections.

5. Conclusion

Elderly primigravida remains a high risk pregnancy. These women are significantly associated with adverse pregnancy outcomes and operative obstetric interventions. Early booking and vigilant antenatal care shall improve their pregnancy outcomes. Preconceptional counselling is very important in elderly primigravidas and many women willingly seek it. This is a must for women with pre- existing medical disorders so that they reach pregnancy in their optimal health. Prenatal diagnosis is extremely important considering the increased chance of chromosomal defects. Ultrasound screening for Down's syndrome and targeted anomaly scan at 18-20 weeks should be done. Role of chorionic villous sampling and amniocentesis is important.
Frequent antenatal visits, antepartum fetal surveillance play major role. Close monitoring is indicated during labour. Hospital delivery preferably in a tertiary center. A lower threshold for cesarean section is preferred. The newborn should be taken care of by an expert.

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