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Original Research Article

Obstetric outcome in elderly gravida

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ABSTRACT

Background: Maternal age is an important determinant of the outcome of pregnancy. Advanced maternal age generally signify age after 35 years at the time of delivery. It is associated with decreased fertility and increased risk. Elderly gravida is associated with many complications during pregnancy, labour and also for the baby. In recent times women has changed their lifestyles such as pursuit of higher education and entry into work forces and career advancement outside the home.

Methods: This was a retrospective study done in 57 elderly pregnant women more than 33 years age, over a period of 18 months, conducted in a multi-specialty hospital.

Results: 57 elderly pregnant women were selected for the study. 47% were in age group of 33-35 years and 42% were in age group of 36-40 years. 61.40% patients were housewives and 38.59% were employed. 50.8% of patients had history of previous abortions and 35% were conceived after treatment for sterility. 64.9% of patients conceived spontaneously and 35% by assisted reproductive technology. Majority of patients (33.3%) required In vitro-fertilization. Multiple pregnancy was high- 21.05%. Hypertension was observed in 26.3% of patients, Antepartum haemorrhage in 4.34%, Preterm delivery 49.1%, Induction of labour in 10.52%, Normal vaginal delivery only in 14%. Majority of patients (80.7%) were delivered by caesarean section.

Conclusions: Elderly pregnant patients have higher risks of specific pregnancy complications which contribute to a higher frequency of maternal morbidity and greater health care costs. The risks are due to Hypertension, diabetes, multiple pregnancy, preterm labour, antepartum haemorrhage, PROM, malpresentation, prolonged labour, increased caesarean section rate and postpartum haemorrhage.

Keywords: Assisted reproductive technology, Antepartum haemorrhage, Elderly gravida, Multiple pregnancy, Preterm delivery

INTRODUCTION

Maternal age is an important determinant of the outcome of pregnancy.

Who is the elderly gravida? That is the question that still remains not satisfactorily answered even today. The majority of writers apply the term to a woman over the age of 35.¹ Other writers also suggest that from 30 years of age, a gravida becomes elderly. While advances in

medical care can help women over age 35 years have safer pregnancies than in the past, infertility and pregnancy complications for this age group are higher than for younger women.^{2,3} The trend of delaying pregnancy by women is worldwide and observed in both low- and high-income countries, especially among more educated and financially secure women. Wide educational and career choices encourage women to pursue their professional goals. Easy access to modern contraceptive methods has enabled them to achieve better

fertility control.⁴ Increasing rates of divorce is another cause for delay in conceiving. Primary and secondary infertility due to various reasons may also cause a delayed conception.⁵

In India, the scenario is different where poor socio-economic status, lack of contraceptive knowledge, religious issues, desire for male child, concept of large family and women conceiving from marriage to menopause, are the common causes of pregnancy with advanced maternal age. The increased incidence of underlying medical diseases decreased cardiovascular reserve, and diminished ability to adapt to physical stress that may accompany aging could combine to increase maternal morbidity or even mortality.

Elderly women are at higher risk of several complications such as Hypertension, diabetes, anaemia, multiple pregnancy, preterm labour, antepartum haemorrhage, PROM, malpresentation, fibroid, prolonged labour, increased caesarean section rate and post-partum haemorrhage.⁶ As fertility declines with age, there is a greater use of assisted reproductive technologies (ARTs) and the possibility of multiple pregnancy increases. This may independently adversely affect the risks reported.⁷

METHODS

It was a retrospective study conducted in Department of Obstetrics and Gynaecology for 18 months. During this study period 57 patients of more than 33years of age were selected.

Exclusion criteria

- All pregnant women below 33 years age.
- Women willing for MTP with age >33 years.
- Patients not willing for participation in the study.
- Patients with chronic renal failure, severe cardiac disease, chronic liver disease, pulmonary tuberculosis and COPD.
- Pregnant women before 20 weeks of gestation.

All the patients above age 33 years were analysed for 18 months after 20 weeks of gestation. Maternal outcome analysed such as Hypertension, diabetes, anaemia, multiple pregnancy, preterm labour, antepartum haemorrhage, premature rupture of membranes (PROM), malpresentation, fibroid, prolonged labour, mode of delivery, operative vaginal delivery, caesarean section, postpartum haemorrhage. Information related to patient’s demographical information, previous obstetric history, and mode of conception was analysed.

RESULTS

According to our data, 47% of the patients were in 33-35 years age group and 42% were in age group 36-40 years. Maximum age of the patient was 46yrs. >45-year age group had only 1 patient (1.75%) (Table 1).

Table 1: Age wise distribution of cases.

Age of the mother (years)	No. of patients (n=57)	Primigravidae (n=19)	Multigravidas (n=38)
33-35	27 (47.36)	10 (37)	17 (62.9)
36-40	24 (42.10)	6 (25)	18 (75)
41-45	5 (8.77)	3 (60)	2 (40)
>45	1 (1.75)	0	1
Total	57 (100)	19 (33.3)	38 (66.6)

Majority of patients were housewives 61.40% and 38.59% were employed (Table 2).

Table 2: Occupation of mother.

Occupation	No. of patients
Housewife	35 (61.40)
Employed	22 (38.59)

In our data 50.8% of patients had history of previous abortions and 35% were conceived after treatment for sterility. 8.67% patients gave preference for male child as cause for delay in conception. Late marriage was in 5.26% of cases (Table 3).

Table 3: Causes of delay in pregnancy.

Causes	No. of women
Abortions	29 (50.87)
Ectopic pregnancy	5 (8.67)
Treatment for sterility	20 (35.08)
Late marriage	3 (5.26)
Preference for male child	5 (8.67)

According to our data, 64.9% of patients conceived spontaneously and remaining required assisted reproductive technology (35%), majority of patients (33.3%) required In vitro fertilization among them 5.2% of patients were conceived with IVF using donor oocyte. IUI was done in 1 patient (1.75%) (Table 4).

Table 4: Mode of conception.

Mode of conception	Number of patients
Natural	37 (64.91%)
IVF	19 (33.33%)
With donor oocyte	3 (5.26%)
IUI	1 (1.75%)

According to our data, Because of use of assisted reproductive technology, multiple pregnancy rates were high. 22.8% of patients had twin pregnancy (Table 5). Hypertension was observed in 26.3% of patients all of them were cases of pregnancy induced hypertension. 3.5% of patients were of gestational diabetes. 10.5% of patients were anaemic. Preterm labour was observed in 14% of cases. PROM was observed in 9 patients (15.7%).

Malpresentation like Breech and transverse lie were observed in 10.5% of cases.

Table 5: Pregnancy complications.

Complications	No of patients (%)
Hypertension	15 (26.3)
Diabetes	2 (3.5)
Anemia	6 (10.5)
Multiple pregnancy	13 (22.80)
Preterm labour	8 (14)
Antepartum hemorrhage	2 (3.5)
PROM	9 (15.7)
Malpresentation	6 (10.5)
Fibroid	2 (3.5)
Prolonged labour	5 (8.7)
Post-partum hemorrhage	2 (3.5)

Labour was prolonged in 8.7% of cases. Post-partum haemorrhage was seen in 3.5% of cases. Majority of the patients (80.7%) were delivered by caesarean section. Out of 14% of patients who had delivered vaginally almost all had required induction of labour (10.5%). In present study preterm delivery rate was as high as 49%. Operative vaginal delivery was required in only 1 patient (Table 6).

Table 6: Labour outcome among the women.

Outcome	No. patients
Normal vaginal deliveries	8 (14%)
Operative vaginal deliveries	1 (1.75%)
Induction of labour	6 (10.52%)
Preterm delivery	28 (49.1%)
Caesarian section	46 (80.7%)

DISCUSSION

This study group comprised of elderly pregnant women 33 years or older, 57 women were assessed to determine the effect of age on maternal outcomes after 20 weeks of gestation. In present study 47.3% women were in age group 33-35 years, 42.1% in 36-40 years group, 8.7% in 41-45-year group and 1.7% in >45 years age group. In the study of B. Luke and M.B. Brown, 59% women were in age group 30-34 years, 31% were in 35-39 years, 7.8% in 40-44yrs and 0.4% were >45 years.⁸ In present study 61.4% of women were housewives and 38.55% were employed. W. Marai and Z. Lakew, in their study 63% were housewives and 26% were employed. 35% of patients in present study had history of infertility and required assisted reproductive technology for conception.⁹ Marzieh Nojomi and his associates in 2010 had 25.5% of patients with history of infertility.¹⁰

Complications in pregnancy

The increased incidence of diabetes and hypertension in present study confirms prior reports (Paulson et al; Salihu

et al) and most likely reflects the age-related changes.^{11,12} Associated risk factors such as hypertension and diabetes account for increased incidences of placental abruption, intra-uterine growth retardation and (pre-)eclamptic disease, all of them being associated with a higher risk for (emergency) Caesarean section. In present study group. Authors found the incidence of Hypertension of 26.3%. W. Marai, Z. Lakew in observed rate of hypertension of 19%.⁹ KE Fitzpatrick et al observed rate of hypertension of 15%.¹³ In present study 3.5% of patients were diabetic, Marzieh Nojomi and his associates in found incidence of diabetes of 3.7% in his study.¹⁰ Incidence of anemia in present study was 10.5%, Moses et al found incidence of anemia of 19%.¹⁴ The rate of multifetal gestation was higher in the study group, largely because of artificial reproductive technologies, which explains the higher rates of preterm labour and caesarian section delivery. In present study 5.2% of patients conceived with IVF techniques using donor oocytes, In vitro fertilization was required in 33.3% of cases and intrauterine insemination was required in 1.7% of cases. In present study 22.80% of women were with multiple pregnancy. In the study of Richard P. Porreco, Leslie Harden in April, incidence of women conceived with assisted reproductive technology was 78% and the Rate of multiple pregnancies was 48%.¹⁵

The rate of preterm delivery in present study was 49%. Yariv y, Melamed N, Tenenbaum-Gavish K et al found rate of 54% in 30-39 years age group, 42% in 40-45 years and 15% >45 years age group.¹⁶ Malpresentation was observed in 10.5% in present study. Ezechi OC and associates in 2007 found the incidence of 9.1% in their study.¹⁷ Awad Shehadeh, in his study rate of fibroid was 2.9% and authors found the rate of fibroid of 3.5% in our patients.¹⁸

Management of labour

In present study the pregnancy was terminated by induction in 10.5% of cases. W. Marai and Z. Lakew in found induction rate of 13.2% in their study.⁹ In present study total caesarian section rate was 80% which was higher than Rajput N et al who found the rate of caesarean section of 35.41%, Yariv Y, Melamed N, Tenenbaum-Gavish K et al, in found caesarian section rate of 78.5%.^{16,19} Postpartum haemorrhage was found in 3.5% of our patients. In July 2010 Yun Wang and Tom Tanbo found postpartum haemorrhage in 18.5% of elderly women.²⁰

CONCLUSION

The study of complications and obstetric outcome in women with elderly gravida is important. Elderly pregnant patients have higher risks of complications such as Hypertension, diabetes, multiple pregnancy, preterm labour, antepartum haemorrhage, PROM, malpresentation, prolonged labour, increased caesarean section rate and postpartum haemorrhage. This study

defines the importance of both counselling and following patients for specific adverse outcomes associated with advancing maternal age. Many of these risks can be successfully managed through preconception and prenatal care. Focused care for women over age 33 plays a vital role in minimizing health risks, sensitively meeting their unique psychosocial needs, and maximizing health opportunities to achieve the best possible outcome.

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