Original Research Article

Pregnancy in elderly primigravida: Clinical profile

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Abstract

A changing trend towards pregnancy in increasing age has been observed, with a advent of economic liberalization greater educational opportunities for females, the age of marriage gets postponed particularly in urban areas with the marriage age being postponed consequently child bearing occurs at later stage. At the same time, the number of women in their 30s who remain chill less has increased sharply over two decades. A retrospective comparative study was done at Tertiary Institute. There were 85 primigravidas above 35 years of age (Group III) admitted during this period in the obstetric units of tertiary hospitals. These women were compared with two control groups comprising of 85 Primigravidas in each groups aged between 20 to 25 years (Group I) and 30 to 34 years (Group II) of age by a random selection of consecutive primigravidas admitted during the same period. No feto placental anomaly was detected in 96% and 90% of group I, II and III respectively. 8 feto placental abnormalities (9.41%) were detected during ultrasonography (USG) scan were seen in elderly primigravida (Group III). Oligohydramnios was the seen in (3.35%) of primigravida and (4.71%) of elderly primi. But this difference is stastistically not significant (*p*>0.05).

Keywords: Elderly primigravida, infertility treatment, oligohydramnios

Introduction

As the human race walks with time and as the years roll by, so do we acquire changes in our life style. The modern era is witnessing a change in its childbearing patterns. In the developed countries, more women have late marriages in pursuit of education and career goals. The post war baby boom has produced an absolute increase in the number of women who are currently nearing the end of their reproductive age. Other factors like a longer-life expectancy, better contraceptive techniques, and assisted reproduction offering chances of conception after years of infertility have all contributed to increasing of maternal age al first pregnancy [1].
This change is slowly reflecting in the developing countries also in India over the last few decades, a changing trend towards pregnancy in increasing age has been observed, with an advent of economic liberalization greater educational opportunities for females, the age of

marriage gets postponed particularly in urban areas with the marriage age being postponed consequently child bearing occurs at later stage. At the same time, the number of women in their 30s who remain chillless has increased sharply over two decades [2]. Hence, in today's world, pregnancy and its outcome in elder nulliparous is growing interest statistically, there are more women over the age of 35 years than any other era [2].

Advanced maternal age is defined by some authors, as age greater than 35 and others greater than 40 years [3].

In July 1958, the Council of International federation of Obstetrics and Gynecology (FIGO) recommended that maternal age of 35 years should be accepted as the international standard for "elderly primigravidae" [4] However, Donald5 thinks that to include all women going through their first pregnancy over the age 35 years is widening the definition too far. He maintains that many primigravidae between the ages 35 and 40 years run a perfectly normal obstetric course and these in no sense deserve to be classed as elderly. On the other hand certain authors like Baird. Hytten thomson have shown evidence of a decline of physiological efficiency from age of 25 onwards. In India, a primigravida at or about 30 years is considered elderly for obstetrics performance Dutta goes even further and takes 25 years as the lower age of limit for definition, which is not accepted by many. The woman who conceives towards the end of her reproductive age presents peculiar characteristics. Some of these may be the accrual of normal ageing process like hypertension, diabetes, cardiovascular, renal diseases and other chrnic medical conditions. Foetal factors like abnormal presentation, chromosomal anomalies, congenital defects, and prematurity are considered to be more prevalent. Increase rates of caesarean birth, maternal and peirnatal morality have been observed [5].

Pregnancy has been likened to an athletic performance, in that the capacity to undertake it efficiently falls off very rapidly with age. A woman is obstetrically old before she is chronologically old. The "Holy Bible says that Sarah wife of Ahraham was many years postmenopausal when she bore issac at age 91 years [6].

Pregnancy in a women of advanced age is traditionally considered to be "high risk." In the eighteenth and nineteenth centuries". This categorization as high-risk was due to concern for the mother. At present, the designation of high-risk refers to the foetus or neonate as well.

Methodology

A retrospective comparative study was done at Tertiary Institute. There were 85 primigravidas above 35 years of age (Group III) admitted during this period in the obstetric units of tertiary hospitals. These women were compared with two control groups comprising of 85 Primigravidas in each groups aged between 20 to 25 years (Group I) and 30 to 34 years (Group II) of age by a random selection of consecutive primigravidas admitted during the same period.

As there is a different opinion as to whom to call a woman as elderly primigravidas, we have taken 2 groups (20-25 yrs. and 30-34 yrs.) for comparisons of pregnancy and labour outcome.

The observations are presented in tabular, graphical forms to highlight the difference clearly. Our observations are compared with observations done by other authors in past 50 years.

The appropriate test of significance was applied to detect the difference observed among three groups are of any statistical significance or not.

Results

Table 1: Interval between marriages to conception

Duration of yrs.	Age in yrs.		
	Group I 20-25 yrs.	Group II 30-34 yrs.	Group III >35 yrs.
<2yrs	64(75.29%)	25(29.41%)	28(32.94%)
2 to 5yrs	21(24.71%	59(69.41%)	42(49.41%)
>5yrs	0(0%)	1(1.18%)	15(17.65%)

P=<18%)

The majority of elderly primigravidas delivered after 2 years of marriage (67%) Considering duration of infertility of 2 to 5 years leading to fist conception after 30 and 35 years of age indicate late marriage is probable factor responsible, when compared with young primigravidas between 20 to 25 years of age, where 75% conceived within 2 years of marriage. This difference in fecundity period is significant statistically (p<0.01).
However, it is yet unproved that duration of infertility has any effect on pregnancy outcome.

Table 2: History of infertility treatment

Treatment taken	Group I (n=85) 20-25 yrs.	Group II (n=85) 30-34 yrs.	Group III (n=85) >35 yrs.
Yes	7(8.24%)	25(29.41%)	36(42.35%)
No	78(91.76%)	60(70.59%)	49(57.65%)

P Value = $p<0.01$

Majority of elderly primigravids have taken infertility treatment (42.35%). The number of women seeking infertility treatment among 30 to 34 years and above 35 years of age is much higher than young primigravidas with p value of ($P < 0.01$) which is statistically significant, hence there is strong association between age of conception and infertility treatment taken.

Table 3: Number if ANC visits

Visits	Group I (n=85) 20-25 yrs.	Group II (n=85) 30-34 yrs.	Group III (n=85) >35 yrs.
<3Visits	1(1.18%)	0(0%)	7(8.24%)
3-5Visits	74(87.06%)	51(60%)	49(57.65%)
>5Visits	10(11.76%)	34(40%)	29(34.12%)

P Value = $p<0.01$

Women who conceived later than 30 years of age were seen to visit more frequently for prenatal care. Table 5 shows 40% and 34% (p>0.01) of 30-40 years and over 35 years of age respectively had more than 5 prenatal visit compared to young primigravidas below 25 years of age.
Surprisingly 8% elderly primigrivadas of (group III) women had less than 3 ANC visit. 87% of young Primi (Group I) visited 3 to 5 times for prenatal care compared to 60% and 57% of group III. Women respectively. (P>0.01) statistically significant.

Table 4: Gestational age at which primigravidas delivered

Weeks' gestation	Group I (n=85) 20-25 yrs.	Group II (n=85) 30-34 yrs.	Group III (n=85) >35 yrs.
< 34	3(3.53%)	1(1.18%)	6(7.06%)
34-36	7(8.24%)	12(14.12%)	10(11.76%)

37-40	69(81.18%)	70(82.35%)	61(71.76%)
>40	6(7.06%)	2(2.35%)	8(9.41%)

P Value = *p*<0.05

12% women in Group I delivered earlier to 36 weeks of gestation compared to 15.3% and 18.82% in Group II and III respectively.

There was not much difference in percentage of women in all 3 groups who delivered at term, however women who delivered after due date were 9.41% in Group III compared to 7.06% in Group L and 2.35% in Group II. The difference is not statistically significant (*P*>0.05

Table 5: Ultrasonography findings

USG findings	Group I (n=85)	Group II (n=85)	Group III (n=85)
	20-25 yrs.	30-34 yrs.	>35 yrs.
Normal	82(96.47%)	84(98.82%)	77(90.59%)
Oligohydromnios	3(3.53%)	-	4(4.47%)
IUGR	-	-	1(1.18%)
Placenta previa	-	-	2(2.35%)
Multiple	-	1 Twins (1.18%)	0
Others	-	-	1(1.18%)

P Value = *p*<0.05

No feto placental anomaly was detected in 96%, and 90% of group I, II and III respectively (Table 7). 8 feto placental abnormalities (9.41%) were detected during ultrasonography (USG) scan were seen in elderly primigravida (Group III). Oligohydramnios was the seen in (3.35%) of primigravida and (4.71%) of elderly primi. But this difference is statistically not significant (*p*>0.05).

Table 6: Medical disorders associated with pregnancy

Disease category	Group I (n=85)	Group II (n=85)	Group III (n=85)
	20-25 yrs.	30-34 yrs.	>35 yrs.
Anaemia	-	-	1(1.18%)
PIH	3(3.53%)	8(9.41%)	16(18.83%)
GDM	-	-	1(1.18%)
Brochial Asthma	-	-	2(2.35%)
CNS disorder	-	-	1(1.18%)
Seropositive	-	-	1(1.18%)
Others	-	-	1(1.18%)
Norma;	82(96.47%)	77(90.59%)	62(42.94%)

P Value = *p*<0.01.

23/85 (27.06%) had medical disorders including PIH associated with pregnancy in elderly primigravida (Group III) 27.06% Pregnancy induced hyperternsion (PIH) was common complication in all 3 age group and was seen with increasing prevalence among primigravidae of Group I, II and III. This shows strong association of material age at first pregnancy and PIH Medical disorders found in all 3 groups. PIH group I was 3.53% and 9.4% in Group II when compared to 18.83% in Group III which was high.

The P Value = *p*< 0.01 was statistically significant which suggest that age groups are highly associated with medical disorder.

Discussion

It was observed that elderly primi tend to visit prenatal clinic more frequently (>3visits)

however women with history of infertility may visit still more frequently i.e. > visits.

It was observed in our study that women of group II and III had visited 3 to 4 times more frequently than women of group I, in view of anticipated obstetric and medical complications. Thus, it is not surprising that ANC visits and antipartum hospital admission are substantially more frequent among older women than younger women.

Fetoplacental abnormalities like oligohydramnios (4.71%), placenta previa (2.3%), & Breech (1.18%) were observed in elderly primigravidas than young primi which were diagnosed on USG Scan antenatally. Prevalence of individual complication in other studies could not be known.

In Lennart Jacobson study in 8 cases of placenta previa were detected and in 2 cases premature separation of placenta occurred [7].

Liberal use of utrasonography is highly recommended for a more liberal use among elderly primi at early pregnancy which might yield a reduction in the rate of still births and can keep a check on foetal and maternal abnormalities in ulero for early diagnosis and management if any.

Medical disorders during pregnancy is expected to be higher in elderly primi and observing the linear relationship with increasing age of mother.

In present study we observed the prevalence of medical disorders which were higher (27%) in elderly primi than other two groups. Though, pregnancy induced hypertension (PIH) was observed in all the three groups, elderly primi had higher prevalence of PIH (18.83%). Other medical disorders like bronchial asthamia, gestational diabetes, anemia, seropositivity were observed as isolated case in group III only, though they are known to occur at any age.[8]

Pregnancy induced hypertension (10.3%) and diabetes (0.5%) were a common medical disorders found among elderly primi in a study done by Mukherjee and Choudhary.

Mehreen and Azra found 24.35% of PIH and 12.82% of diabetes. This indicate that Asian elderly women are equally prone for hypertensive disorder and diabetes during pregnancy.[9]

In several studies PIH complicated 10 to 20 present of pregnancies in women over 35 years of age. Diabetes is likely to be associated with elderly primi either as gestational diabetes or as pre-existing overt diabetes, or both and known to co-exist with PIH.

In present study PIH and diabetes was not observed in same individual. Adequate control of PIH and diabetes leads to favourable outcome [10].

In addition, the frequency of formidable number of medical and surgical complications of pregnancy are reported to be with increasing maternal age, these include cardiovascular, neurologic, pulmonary disorders, connective tissue, renal, as well as alcoholism and cancer though they were not observed in our study.

Conclusion

In our study, 27.06% had medical disorders including PIH associated with pregnancy in elderly primigravida (Group III) 27.06% Pregnancy induced hyperternsion (PIH) was common complication in all 3 age group and was seen with increasing prevalence among primigravidae of Group I, II and III. This shows strong association of material age at first pregnancy and PIH Medical disorders found in all 3 groups. PIH group I was 3.53% and 9.4% in Group II when compared to 18.83% in Group III which was high.

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