

Pregnancy Outcome at Maternal Age 40 and Older

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ABSTRACT

OBJECTIVE: The objective of this study was to compare pregnancy outcome of women aged 40 & above with those of 20- 30 year.

STUDY DESIGN: Cross-sectional and comparative study.

SETTING: Department of obstetrics& Gynecology Peoples University of Medical & Health Sciences Nawabshah.

DURATION: From 1st July 2011 to 31st Dec 2011.

MATERIAL & METHOD: Consecutive 100 cases of women aged 40 & above and 100 cases of women aged between 20-30 years were included in the study, and labeled as group A & B respectively. All patients were under gone general & physical examination & routine laboratories tests. The biological effects of age on the pregnancy out come were observed, & results were tabulated.

RESULT: The mean age for case group was 41.56 ± 2.06 & that for control group 25 ± 2 years. Among the maternal complication of increased maternal age were abortion in early half & pre-term labor in second half of pregnancy (10%) & (12%) respectively. Hypertension (14%) & Diabetes (9%) were more common than in younger age group. Risk of fetal malformation (11%) was also three fold more than younger group (2%). Increased rate of c- section (6%) was seen more with advanced maternal age with high parity.

CONCLUSION: The advanced maternal age is candidate with high risk of maternal & perinatal morbidity & mortality. Appropriate management can be formulated to ensure better maternal & fetal outcome during pregnancy.

KEY WORDS: advanced maternal age, Maternal out come, Perinatal out come.

INTRODUCTION

Since past decades women have been encouraged to delay their 1st pregnancy & some women continue beyond 40 years because of their social, educational & economical factors. With introduction of infertility treatment women of almost all age groups can sustained pregnancy even in post menopausal state^{1,2}.

Advanced maternal age has long been considered to be an risk factor for the ante natal complications like preterm labor, pre eclampsia hypertension which may or may not be associated with IUGR, Gestational Diabetes, Ante partum hemorrhage & increased rate of Caesarean section. Many of them experience pregnancy unwillingly because of negligence of using contraceptive method³.

At the moment 10% of pregnancies occur after the age over 35 years⁴. It has been widely documented that advanced maternal age confers risk to both mother & child health⁵.

Some author have reported no significant difference in obstetric out come⁶, & perinatal out come⁷, birth weight & gestational age⁸ between older & younger mother but the results are not supported by the other studies^{9,10}.

In Pakistan especially in rural areas mostly women continue their child bearing in advanced age and tak-

ing it as norm and avoid contraception due to religious & social influences.

This study was conducted in obstetrics & gynaecology department at Peoples University of Medical & Health Sciences Nawab Shah which encompasses the rural area mostly. The purpose of this study is to observe the different out come of pregnancy at advance maternal age with those of age 20-30 years.

MATERIAL AND METHOD

This study was carried out in department of Obstetric & Gynae Peoples University of Medical & Health Sciences Nawabshah over period of six months from 1st July 2011 – 31st Dec 2011. During study period 100 consecutive cases of aged 40 years (Booked/Un booked) regardless of their parity & gestational age with their previous normal pregnancy out come were taken & considered as group A & Compared their pregnancy out come with those ages 20-30 years & labeled as group B. Exclusion criteria are all women above 40 years with Bad obstetrical out come like recurrent miscarriage & peri natal death(still birth & NND) & history of caesarean section, primi para with history of cousin marriage, women with established diabetes, women age <19 years & multiple pregnancy were excluded from the study. All details regarding

biodata, parity, address, socioeconomics status , gestational age & other maternal complications like abortion ,hypertension, gestational diabetes, ante partum hemorrhage along with mode of deliveries & associated perinatal out come. Past medical, surgical & detailed obstetrical history were also noted. All patients were under gone general & physical examination & routine laboratories tests like Blood C.P, Blood group, RBS, Urine D.R, Hepatitis B& C screening, & oral glucose tolerance test was done accordingly. Medical problem like uncontrolled hypertension & gestational diabetes were evaluated in detailed after consultation from medical department during pregnancy & for further follow up. All the data was recorded on a proforma designed for the study & results were tabulated.

Statistical analysis:

The data were entered and analyzed in statistical program SPSS version 16.0. Qualitative data were presented as n(%) and chi square test was used to compare the proportions between two age groups. P value < 0.05 was considered as statistically significant level.

RESULTS

Total 200 women were included in this study. The mean age for Group A was 41.56 ± 2.06 years & majority of them were unbooked. Advance parity is an additional risk factors for pregnancy complications & mode of delivery as shown in **Table I**.

Risk of abortion in 1st & 2nd trimester (10 %) likely to depend on other factor along with increasing age of women. Pre term birth (12%) risk was increased with increased maternal age & parity.

Medical problem like & Hypertension (14%) & gestational diabetes (9 %) had a positive association with the increasing age . Increased risk of Caesarean Section (6 %) was also seen with advanced maternal age due to complications of pregnancy. Further obstetrical complications like placenta previa & placental abruption had no direct association with increasing age of women in our study (4 %) & (5 %) respectively. Increasing maternal age along with multi parity had become a significant risk factor for high Cesarean Section rate (6 %).

Table II shows perinatal out come. Among perinatal out come, congenital abnormality were (11 %) more than younger age group. low birth weight (14%), Macroscopic babies (6 %) ,still birth (13%)& Neo natal deaths(5%) were more than younger age group.

Bad perinatal outcome in patient >40 years of age was also attributed to GDM& Hypertension in these women. Among 6 GDM, 4 had macrosomia, 1 still-birth, 1 NND. Hypertension contributed to 6 low birth weight, 2 still birth & 1 NND.

TABLE I: MATERNAL OUTCOME IN ELDERLY VERSUS YOUNGER PREGNANCIES (n = 200)

Risk Factor	Age > 40 n=100	%	Age 20-30 n=100	%	P-Value
Parity					
0-0	3	3	30	30	30
1-4	52	52	50	50	50
5 &above	45	45	20	20	20
Abortion	10	10	5	5	0.17
Pre term labor	12	12	5	5	0.07
Hypertension	14	14	3	3	0.005
GDM	9	9	1	1	0.009
Placental abruption	5	5	2	2	0.24
Placenta previa	4	4	2	2	0.40
C-Section	6	6	3	3	0.30

TABLE II: PERI NATAL OUT COME IN ELDERLY VERSUS YOUNGER PREGNANCIES (n = 200)

Risk Factor	Age 40 or above n=100	%	Age 20-30 n=100	%	P-Value
Cong:anamolies	11	11	2	2	0.10
Low birth weight	14	14	8	8	0.17
Macrosomia	6	6	2	2	0.35
Still birth	13	13	4	4	0.02
NND	5	5	2	2	0.24
Alive	80	80	91	91	--

DISCUSSION

As an underdeveloped country majority of our population living in rural area where ante natal facilities are not available. Early marriages leading to teen age pregnancies with continuation of child bearing till the extreme of reproductive age would further increase the risk for the adverse obstetrical outcome. Pregnancy rate for women of 40 year & older increased to 38% b/w 1976-1979^{11,12}. They have 2-3 fold high risk of morbidity as well as mortality than women in twenties & risk become more dramatic if they are more than 40 year old¹³.

The recent reports provide the evidence for direct correlation b/w increasing miscarriage as the result of aneuploidy in elder women¹⁴. Advance maternal age is the self predictor of miscarriage as seen in our study that the frequency of miscarriage was (10 %) which was higher than younger age group(5 %). Low or high parity in extreme of reproductive age is always important regarding obstetrical management as most of multi gravida have risk of pre term & C-

section. Similarly nullipara elderly pregnancies usually have low birth weight even at term.¹⁵

In our study (12 %) of pre term were found in multiparous women. The over all frequency of pre term labor was doubled than younger age group (5%) & had an unsatisfactory perinatal outcome as it is proven in other studies that maternal age contribute to an increased incidence of pre term labor & delivery¹⁵.

This study showed that both multiparous & nulliparous women aged 40 & older had high risk for cesarean delivery (6 %) Possibly due to deterioration of uterine activity with age¹⁶. Diabetes & hypertension are predisposing factor for macrosomia & low birth weight respectively, are also contributing factor for cesarean deliveries. A low threshold of obstetrician for performing cesarean section in older women referred as "precious baby syndrome" has also been proposed in many reports^{17,18}.

All aging women developed underlying medical problem which may or may not be symptomatic at the time of pre conception. It usually involve the whole metabolic changes that occur in the body causing more vascular resistance, inflammatory response & glucose intolerance may be due to insulin resistance with increasing age. During pregnancy it represent hypertensive crises, IUGR, GDM & Poor perinatal outcome^{19,20}.

All these pathophysiological responses were also deteriorated in our studied population in term of hypertension & gestational Diabetes (14 %), (9 %) P-Value 0.005, 0.009 respectively, so medical consultation for their detailed evaluation done.

In our study abruptio placenta (5 %) was more frequently seen in older group which could be related to the higher incidence of hypertension in these women which coincide with other studies.²¹ than younger age (2%).

In different studies foetal abnormalities & still birth were twice in aging women than younger women^{22,23}. Similar result was seen in our study. congenital anomalies (11 %) was 3 time more common than younger age group (2 %) P-Value is 0.10.

Our study showed Perinatal mortality (Still birth & NND) is increased in older women this finding is supported by other studies^{12,24,25}.

CONCLUSION

High incidence of complications such as hypertension, gestational diabetes, placental accident, cesarean delivery, abortion, pre term birth, congenital anomalies were seen in pregnant women age 40 years & older. Hence appropriate management plan can be formulated to ensure better outcome during pregnancy. Post partum follow up especially for diabetes & hypertension also reduces the risk of complications for fu-

ture pregnancy.

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