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ADOLESCENT PREGNANCY;
A COMPARATIVE STUDY FROM THE TEACHING HOSPITAL OF LAHORE, PAKISTAN

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ABSTRACT... Objectives: To compare the obstetric outcomes in adolescent and adult primigravida. **Study Design:** A comparative, cross sectional study. **Setting:** Gynae unit 3, Jinnah hospital, Lahore. **Period:** One year from Jan-Dec 2014. **Methodology:** Study population was adolescent primigravida (<19 years) and adult primigravida between the ages 20-29 years, 250 in each group who were ≥ 24 weeks of gestation**.** Obstetric complications were recorded as percentages of anaemia, pre-eclampsia, antepartum hemorrhage, postpartum hemorrhage, gestational diabetes mellitus, preterm delivery, instrumental delivery, cesarean section rate, low birth weight, Apgar score <7 at 5 minutes and NNU admission. Data was entered into SPSS 16. Chi square test applied and a p-value of≤0.05 was considered significant. **Results:** The mean age of adolescent group was 18.4± 0.56 years while it was 24±2.47 years in adult primigravida. The data revealed that the adolescent mothers are at higher risk of certain obstetric risks when compared to adult primigravida .These include anaemia (41.2% VS 17.6%), pregnancy induced hypertension (14.4% VS 1.6%), preterm delivery (21.6% VS 13.6%), instrumental delivery (6.4% VS 1.6%), cesarean section rate (24% VS 12%), low birth weight (20.4% VS 8%), Apgar score <7 at 5 minutes (4% VS 2%) and NNU admission (19.2% VS 8%). The risk of antepartum hemorrhage (1.6% VS 1.2%), postpartum hemorrhage (0.8% VS 1.6%), gestational diabetes mellitus (1.2% VS 2%) and malpresentation (1.6% VS 2%) were not different in two groups. **Conclusion:** Adolescent pregnancy is associated with a higher rates of certain obstetric risks like anemia, preterm delivery, pregnancy induced hypertension, instrumental delivery, cesarean section and poor neonatal outcome However the risk of antepartum hemorrhage, postpartum hemorrhage and malpresentation is no greater than adult pregnant mothers.

Key words: Adolescent pregnancy, outcome.

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Novelty

There is an increase in the reproductive and sexual health risks among the adolescents worldwide. The problem is even worse and inadequately addressed in developing countries like Pakistan. The published evidence on pregnant adolescent girls is inconclusive and contradictory at many points. Our study will contribute significantly in better understanding of snags among adolescent mothers. It will also help in signifying the need for women education, improved obstetric and contraceptive facilities so that the complications of adolescent pregnancies can be battled in a better mode.

INTRODUCTION

Adolescence refers to a transitional period of physical and mental human development, involving biological, social and psychological modifications that occur between 10-19 years of age.[1] A fifth of world's population consists of adolescents with the number exceeding a billion and rising further particularly in developing nations.[2] Adolescent pregnancy is the one that occurs after menarche to age of nineteen.[3] Pakistan is carrying 7th number among ten countries with the highest numbers of women between 20 to 24 years of age who have had a live birth before reaching the age of eighteen.[4] Teenage pregnancy carries some worrisome social and medical complications not only to the mother but to the offspring as well. It may also add to the progression of poverty and its added problems.[5,6] Teenage pregnancies are frequently

complicated by hyperemesis gravidarum, miscarriage, malaria, anaemia, preeclampsia, eclampsia, and prematurity. The complications of labor include obstructed labor due to fetopelvic disproportion, rupture uterus, stillbirth, obstetric fistulae, prolonged labor, instrumental delivery, caesarean section, and death. [3,7,8] The problem of adolescent pregnancy needs to be addressed with a multidimensional attitude. The burden of adolescent pregnancy problems can be reduced by widespread education about contraception which also involves provision of readily available, safe and appropriate contraceptive methods. Moreover, women specifically and the society in general require education about the problems encountered by teenagers not only during pregnancy but also in the child - raising. There is a definite need of counselling of the target groups about the importance of antenatal care and emergency obstetric services should be universally offered and freely reachable to manage such pregnancies optimally.[3,9]

Aim of this study was to compare the obstetric outcomes in adolescent mothers with those of adult mothers between ages 20-29 years attending a tertiary care hospital.

METHODOLOGY

The study was conducted from Jan 2014 to Dec 2014 at the Ob/Gyn unit III, Jinnah hospital, Lahore. 500 patients carrying single alive fetus at $\geq$24 weeks of gestation were included in the study comprising 250 of adolescent ($\leq$19years) primigravida (group 1) and 250 of adult (20-29 years) primigravida (group 2). The sampling technique was convenient non probability. Patients having medical disorders before pregnancy (on the basis of history), and fetal congenital anomalies (diagnosed on ultrasound) were excluded from the study. The data was collected on specially designed proforma. Observations such as maternal age, booking status, marital status, anemia (Hb <11g%), preterm delivery(delivery before 37 weeks of gestation), pregnancy induced hypertension(on the basis of history and examination), malpresentation(examination and ultrasound),antepartum hemorrhage(history and examination), instrumental delivery, cesarean section and postpartum hemorrhage(examination based). Neonatal observations included Apgar score <7 at 5-minute, low birth weight (<2.5kg) and NNU admission. Percentages were calculated for the above except maternal age for which mean $\pm$ SD were calculated for both groups. Chi square test was used for qualitative variables to assess any difference between the two groups. A p-value of $\leq$ 0.05 was considered significant.

RESULTS

The mean ages in group -1 group-2 were 18.4$\pm$0.56 years and 24$\pm$2.47years respectively. 65.6% (n=164) of group-1 women while 50.4% (n=126) of group-2 women were un booked. Anaemia was seen in 41.2% (n=103) of group-1 while 17.6% (n=44) of group-2 cases. 14.4% (n=36) of group -1 had pregnancy induced hypertension (PIH) while this percentage was 1.6% (n=4) in group-2. Preterm delivery was observed in 21.6% (n=54) of group-1 while 13.6% (n=34) of group-2 cases. The table shows the percentages of other variables like gestational diabetes mellitus (GDM), malpresentation, antepartum hemorrhage (APH), instrumental vaginal delivery, cesarean section, postpartum hemorrhage (PPH), low birth weight, low Apgar score and admission in neonatal unit among the two groups and their level of significance.

Variable	Group-1 N (%)	Group-2 N (%)	p-value
Un booked cases	164 (65.6)	126 (50.4)	0.0007
Anemia	103 (41.2)	44 (17.6)	0.0001
Preterm delivery	54 (21.6)	34 (13.6)	0.0006
PIH	36 (14.4)	4 (1.6)	<0.0001
GDM	3 (1.2)	5 (2)	0.371
APH	4 (1.6)	3 (1.2)	0.56
Malpresentation	4 (1.6)	5 (2)	0.65
Instrumental delivery	16 (6.4)	4 (1.6)	<0.0001
Cesarean section	60 (24)	30 (12)	<0.0001
PPH	2 (0.8)	4 (1.6)	0.317
Low birth weight	51 (20.4)	20 (8)	<0.0001
Apgar<7 at 5-min	10 (4)	5 (2)	0.025
NNU admission	48 (19.2)	20 (8)	<0.0001

Table-I. Comparison among obstetric outcome of adolescent and adult primigravida.

DISCUSSION

Adolescent pregnancy problems are global, both in the high income as well as low income nation. The association of adolescent pregnancy with a variety of adverse fetomaternal outcomes makes it a high risk one. There are complex reasons for the poor outcome ranging from medical aspects to the communal and traditional reasons. More over there is dearth of general health care facilities and lack of provision of adequate contraception adds fuel to the fire in such compromised circumstances prevalent in the developing world.[5,9]

The majority of cases were un-booked in both groups but this percentage was higher in adolescent pregnancies. This finding correlate with that of Naz S et al.[10] All the patients in both group were married. This finding differed from western studies due to variances in socio cultural tendencies. Current study showed that adolescent pregnancies are at higher risk of anemia (41.2% VS 17.6%). Talawar S et al coated this risk as 30% VS 14%.[11] This finding is also consistent with the one described by Qazi G.[1] Risk of preterm delivery was also higher in adolescent pregnancies (21.6% VS 13.6%) which correlate with the one observed by Derme M et al.[12] PIH was also higher in group-1 compared to adult group (14.4% VS 1.6%). This observation is supported by Ayuba II et al and others.[1,8,13] Percentage of GDM was 1.2% VS 2% in our study which correlate with a study conducted by Onoh RC et al.[13] The percentages for malpresentation, APH, PPH were not different statistically among the two groups which is supported by studies conducted by Mukhopadhyay P et al, Punn KD et al and Shah N et al respectively.[2,5,15] Instrumental delivery was commoner among adolescent pregnancies (6.4% VS 1.6%). Supporting this, Mukhopadhyay P et al observed similar trend in their study.[5] Cesarean section was performed more in adolescent group compared to group-2 (24% VS 12%). These findings are supported by Shuaib A et al, Naz U and others.[16,17] Low birth weight neonates, 5-minute Apgar <7 and NNU admission were seen more frequently in adolescent pregnancies than those in the adult primigravidas (20.4% VS 8%, 4% VS 2% and19.2% VS 8% respectively) with significant p-values of $\leq$0.05. These findings are supported by studies conducted by Naz U, Onoh RC et al and Naz S et al respectively.[10,13,17]

Current study is not without short comings. Being a hospital-based study, it may not reveal the precise frequency of the problems in the community. There is a certain need of community based studies with more elaborate exploration of the factors involved.

CONCLUSION

Adolescent pregnancy is associated with a higher rates of certain obstetric risks like anemia, preterm delivery, pregnancy induced hypertension, instrumental delivery, cesarean section and poor neonatal outcome however the risk of antepartum hemorrhage, postpartum hemorrhage and malpresentation is not greater than adult pregnant mothers.

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"Do not regret growing older;
it is a privilege denied to many."

Unknown

AUTHORSHIP AND CONTRIBUTION DECLARATION

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