

Obstetrical Outcome of Teenage Compared with Adult Pregnancies

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ABSTRACT

Aim: To compare the obstetrical outcome of teenage pregnancies (13-19 years) with adult pregnancies (20-29 years) in tertiary care hospital.

Methods: This cohort study was carried out in the Department of Obstetrics and Gynaecology, Nishtar Hospital, Multan from August 2010 to February 2011. A total of 222 patients were included in the study. Patients of age 13-19 years were labeled as group-A and those 20-29 years were labeled as group-B. Each group had 111 patients.

Results: Mean age of women was 17.83 + 0.10 vs 24.92 + 0.21 years in teenage and adult group respectively. There were 58.6% vs 73.9% booked women in teenage and adult group respectively. Mean gestational age was 37.6 + 0.23 vs 38.95 + 0.14 weeks in teenage and adults. Anemia was prevalent in 36% vs 17.1% women in teenage and adults. Pregnancy induced hypertension was more frequent in teenage pregnancies (21.6%) as compared to adults (12.6%). Teenage had 24.3% cases of preterm delivery while adult had 6.3% preterm deliveries. There were 18% vs 9% low birth weight babies in teenage and adults. Normal vaginal delivery was 62.2% in teenagers and 79.3% in adults. Caesarean delivery in 29.7% vs 14.4% and instrumental vaginal delivery in 8.1% vs 6.3% cases in teenagers and adults respectively.

Conclusion: Teenage mothers had more risk of complications like anemia, preterm delivery, low birth weight babies, pregnancy induced hypertension, caesarean deliveries and instrumental deliveries than adult population.

Keywords: Teenage, adult, anemia.

INTRODUCTION

Teenage pregnancy is an important public health problem, especially in developing countries with high rate of marriage at a young age, along with poor prenatal and postnatal care¹. Teenage is defined as young women between ages of 13-19 years¹. Approximately 10% of all babies occur in teenage mothers worldwide². One local study showed frequency of teenage pregnancy as 11.09%³. About 19% of adolescent mothers worldwide are unmarried and a greater number of adolescent pregnancies are unplanned⁴.

Teenage pregnancy is usually regarded as high risk category. It has been associated with increased risk of adverse pregnancy outcome⁵ perhaps due to double burden of reproduction and growth^{6,7}. Regarding mode of delivery, teenage mothers had a higher proportion (65.7%) of normal vaginal delivery compared to the adult mothers (61.4%)⁸, assisted deliveries (teenage 34.6% vs adult 10.6%) are significantly more common in teenagers⁹. Studies have also found association between teenage pregnancy and antepartum fetal death^{10,11,12}.

Industrialized and developing countries have distinctly different incidences of teenage pregnancy. In developed regions, teenage mothers tend to be unmarried and adolescent pregnancy is seen as a social issue whereas in developing countries, such pregnancies mostly occur in married teenagers and their pregnancy most often welcomed by family and society. However in these societies early pregnancy combines with malnutrition and poor health care to cause medical problems¹³.

Studies on complications of teenage pregnancy have yielded conflicting results. Opinions of different authors vary in this regard. Some have opinion that age by itself is not a risk factor and poor outcomes are associated more with socio-economic factors other than biological factors¹⁴. Other researchers have failed to find any evidence of major impairments of pregnancy outcome among teenage mothers with provision of high quality maternal care with complete coverage¹⁵. Some explanations proposed for these adverse birth outcomes are biological. A pregnant teenager who is still growing may be competing for nutrients with fetus. A pregnancy within two years after menarche increases the risk of preterm delivery¹⁶.

Physiological factors may also be involved, since many adolescent pregnancies are unplanned, unwanted or discovered late¹⁷, a pregnant teenager

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may lack the emotional maturity to take responsibility for a pregnancy even after she has decided to carry it to term.

The objective of the study was to compare the obstetrical outcome of teenage pregnancies (13-19 years) with adult pregnancies (20-29 years) in tertiary care hospital.

MATERIAL AND METHODS

This cohort study was carried out in the Department of Obstetrics and Gynaecology, Nishtar Hospital, Multan from August 2010 to February 2011. A total of 222 patients were included in the study. Patients of age 13-19 years were labeled as group-A and those 20-29 years were labeled as group-B.

RESULTS

In present study, there were 111 teenage pregnancies whose outcome was compared with another 111 adult pregnancies. Mean age of women was 17.83 + 0.10 vs 24.92 + 0.21 years in teenage and adult group respectively. There were 58.6% vs 73.9% booked women in teenage and adult group. Mean gestational age was 37.6 + 0.23 vs 38.95 + 0.14 weeks in teenage and adults. Anemia was prevalent in 36% vs 17.1% women in teenage and adults. Pregnancy induced hypertension was more frequent in teenage pregnancies (21.6%) as compared to adults (12.6%).

Table-1: Frequency of preterm delivery

Group	Preterm delivery		Risk
	Yes	No	
Teenage	27(24.3%)	84 (75.7%)	3.85
Adults	07(6.3%)	104 (93.7%)	95% CI 17-8.5

Table-2: Frequency of low birth weight

Group	Yes	No	Risk
Teenage	20 (18%)	91(82%)	3.85
Adults	10 (9%)	101(91%)	95% CI 0.9-4.1

Table-3: Mode of delivery

Mode	Group-A	Group-B
Normal vaginal deliver	69(62.2%)	88 (79.3%)
C. section	33(29.7%)	16 (14.4%)
Instrumental delivery	09(08.1%)	07 (6.3%)

Teenage had 24.3% cases of preterm delivery while adult had 6.3% preterm deliveries (Table-1). There were 18% vs 9% low birth weight babies in teenage and adults (Table 2). Normal vaginal delivery was 62.2% in teenagers and 79.3% in adults. Caesarean delivery in 29.7% vs 14.4% and instrumental vaginal delivery in 8.1% vs 6.3% cases in teenagers and adults respectively as shown in table-3.

DISCUSSION

Teenage pregnancy is a worldwide problem bearing serious social and medical implications relating to maternal and child health. Internationally, teenagers are at higher risk for pregnancy related morbidity and mortality¹⁸. Teenage pregnancies have been reported to be associated with an adverse obstetric outcome and there is a strong correlation between the age of the mother and maternal mortality and morbidity. Girls aged 15-19 years are twice as likely to die in pregnancy or childbirth as women aged 20-24 years²⁰. Many studies have reported an increased risk of maternal complications like pregnancy induced hypertension, pre-eclampsia and eclampsia in pregnant teenagers²⁰.

In present study, obstetric outcome of 111 teenage was compared to equal number of adult pregnancies. Regarding booking status, 58.6% vs 73.9% patients were in group-A and group-B respectively were booked. Anemia, pregnancy induced hypertension, preterm delivery, low birth weight babies, caesarean delivery and instrumental vaginal delivery were prevalent in teenage than adult pregnancy which were 36%vs 17.1%; 21.6% vs 12.6%; 24.3% vs 6.3%; 18% vs 9%; 29.7% vs 14.4% and 8.1% vs 6.3% in teenage and adult pregnancy respectively.

In a local study, mode of delivery was spontaneous vaginal delivery in 49.2% vs 38.5% (P<0.05), induced vaginal delivery 16.4% vs 14.6% and caesarean delivery 14.7% vs 20% (P,0.05) in teenage and adults²¹. It is evaluated in a study that teenage mothers were more likely to suffer from severe anemia 8% vs 4.3%; P=0.03²⁰. Low birth weight babies were common (38.9% vs 30.4%) among teenage as compared to adult mothers respectively^{11,12}.

Rasheed et al suggested rates of ectopic pregnancy, pre-eclampsia, eclampsia, premature rupture of membranes, preterm labour and caesarean significantly higher among primigravida teenage younger than 15 years of age; the risk then decreased steadily with age and became comparable to the control group (21-30 years) after 16 years of age²².

Another study revealed that teenage mothers had a higher incidence of pre-eclampsia, anemia, not statistically significant²³. Significantly higher incidence of low birth weight babies has been reported in a study. Incidence of preterm delivery was more common in teenage than adults (20.1% vs 13.9%, p,0.001) in a study²⁴.

Teenage mothers were most likely to have low birth weight and very low birth weight babies (p<0.05)²⁵. Similar findings regarding anemia,

pregnancy induced hypertension, preterm delivery, mode of delivery and low birth weight babies were observed in teenage pregnancies^{26,27}.

CONCLUSION

Teenage mothers had more risk of complications like anemia, preterm delivery, low birth weight babies, pregnancy induced hypertension, caesarean deliveries and instrumental deliveries than adult population.

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