ORIGINAL ARTICLE

Differentials in pregnancy outcome between adolescent and adult primigravidae in a tertiary care hospital

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ABSTRACT

BACKGROUND: Research question: Is there any difference in the outcome between Adolescent pregnancy and pregnancy in the adult mothers i.e. 20 – 29 yrs. Aim: To compare the perinatal and maternal outcome of pregnancy between the adolescent and older primigravidae. MATERIALS AND METHODS: It was a Hospital-based comparison study. 100 adolescent primigravidae who delivered in the teaching hospital during July 2011 to Dec 2011 were taken as study population and 200 primigravidae in the age group of 20-29 yrs who delivered in the same hospital during the same period were taken as the comparison group. Both the groups were assessed to compare the differentials in the outcome. RESULTS: Mean age of adolescent mothers was 18.2 yrs and their mean age at marriage was 16.2 yrs. Literacy status was lower among adolescent mothers. 63% of adolescents had anaemia as compared to 48% of adult mothers. Complications like gestational hypertension and preterm deliveries were significantly higher among adolescent mothers. The frequency of Low Birth Weight was higher (29% vs 18%) and the average birth weight was 2.3 kgs among teenage mothers. CONCLUSION: Preterm delivery, gestational hypertension and LBW were reported high among adolescent mothers and this indicates that encouraging child education, discouraging early marriages and delaying first pregnancy will definitely help adolescent girls.

Keywords: Teenage pregnancy, maternal complications, perinatal outcome.

INTRODUCTION

The transition from childhood to adulthood may be referred to as adolescence or teenage i.e., period between 10-19 years¹. Teenage pregnancies represent a high risk group in the reproductive health because of the double burden of reproduction and growth. Pregnancy during adolescence has serious consequences on the health of the mother and her infant and the pregnant teen mothers are likely to suffer from health, social and emotional problems¹. Adolescent pregnancy constitutes a major health and social problem the world over. Who estimates that about 16 million adolescent girls give birth every year world-wide, mostly in low and middle income countries. World-wide one in five girls give birth by the age of 18 years¹. Despite the fact that the legal age of marriage for girls in India is 18, child marriages are widely prevalent in many parts of the country. In India, 27% of girls aged 15-19 years are married and the result of which is girls are becoming mothers in their teens². Adolescent pregnancy is associated with higher rates of mortality and morbidity. The NFHS III 2005-2006 estimates that the overall teenage pregnancy in India is 16% and the pregnancy related complications are highest among the adolescent mothers.³ Against this background the present study was done to compare the maternal and perinatal outcome of pregnancy between the adolescent primigravidae and the primigravidae in the age group of 20-29 years.

MATERIALS AND METHODS

It was a hospital based comparative study done during the period of July 2011 to Dec 2011. The study was conducted in the department of OBG of King George Hospital, a Tertiary care teaching hospital in Visakhapatnam which is the referral hospital for north coastal districts of Andhra Pradesh. 100 primiparous women less than 20 yrs of age who delivered in the above period were included in the study. 200 primiparous women in the age group of 20 – 29 yrs who delivered in the same hospital during the same period formed the comparison group. Women with multiple pregnancies were excluded. Both the groups were compared to assess the differentials in outcome. The data was collected using pretested semi-structured questionnaire and additional information from the parturition register was also entered. Data was analyzed using MS excel sheet and relevant statistical tests like ‘Z’ test, ‘T’ test were applied and P < 0.05 was considered as statistically significant.

RESULTS

Among the adolescent mothers, majority (91%) belong to the age group of 17-19 yrs and the rest 9 girls were in the age group of 15-17 yrs. The mean
age of study population was 18.2 yrs (±0.8). In the comparison group, 89% were in the age group of 22-24 yrs and their mean age was 22.3 yrs (±1.6). All the women in the comparison group and 98% of study group were married. The mean age at marriage was 16.2 yrs in the study group as compared to 19.4 yrs in the comparison group. Literacy status was lesser among adolescents as 33% of teen mothers were illiterates as compared to 24% in the adult group. 78% of the study population and 86% in the comparison group had 3 or more antenatal checkups and this difference is not statistically significant (p>0.05). Haemoglobin status was not available for all women. Among those Haemoglobin status was recorded, 63% of women in the study group (n=76) and 48% in the comparison group (n=168) were found to be anaemic (Hb <11gm) and this difference was found to be statistically significant ( Z= 6.84 P = 0.001). Consumption of Iron & Folic acid tablets during pregnancy was not satisfactory among adolescents. 100 tablets of Iron Folic Acid were consumed by 45% of study group and 67% in the comparison group and this difference was found to be statistically significant (Z=3.67 p<0.01). 53% of mothers in study group had normal vaginal deliveries as compared to 66 % in the comparison group. 23% of study group and 25% of comparison group have undergone LSCS. Table I shows that Complications during pregnancy and child birth like Gestational hypertension, Eclampsia, Preterm deliveries, Antepartum haemorrhage and CPD were higher among teenage mothers as compared to adult mothers. The difference in occurrence of Gestational hypertension and Preterm deliveries was statistically significant. As shown in table II the occurrence of low birth weight babies was higher (29%) among teen mothers as compared to comparison group (18%) and this difference was statistically significant (p<0.05). The average birth weight among adolescent mothers was 2.3kgs (±0.96) and 2.8 kgs (±0.8)in the comparison group and this difference was statistically significant(t=4.5,d.f298,p<0.001). Birth asphyxia and still births were reported high in the adolescent group.

### Table 1: Distribution of study population according to maternal complication

<table>
<thead>
<tr>
<th>Maternal complications</th>
<th>Adolescent mothers (n=100)</th>
<th>Women 20-29yrs (n=200)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gestational hypertension</td>
<td>15 (15%)</td>
<td>12 (6%)</td>
<td>&lt; 0.05</td>
</tr>
<tr>
<td>Eclampsia</td>
<td>4 (4%)</td>
<td>2 (1%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>APH</td>
<td>2 (2%)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Preterm delivery</td>
<td>15 (15%)</td>
<td>10 (5%)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Cephalo pelvic disproportion</td>
<td>9 (9%)</td>
<td>4 (2%)</td>
<td>&lt;0.05</td>
</tr>
</tbody>
</table>

### Table 2: Distribution of study population according to perinatal outcome

<table>
<thead>
<tr>
<th>Fetal outcome</th>
<th>Adolescent mothers (n=100)</th>
<th>Women 20-29yrs (n=200)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Birth Weight</td>
<td>29 (29%)</td>
<td>36 (18%)</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Still births</td>
<td>8 (8%)</td>
<td>6 (3%)</td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>Birth asphyxia (APGAR score&lt;7)</td>
<td>9 (9%)</td>
<td>10 (5%)</td>
<td>&gt;0.05</td>
</tr>
</tbody>
</table>

### DISCUSSION

Teenage pregnancy occurs when women aged less than 20yrs become pregnant and is considered as at risk/high risk pregnancy. As per the available literature the contributing factors for early pregnancy and child bearing are- early marriages, poverty, gender discrimination, lack of information about pregnancy risks at too young an age, inability to negotiate contraceptive use, lack of reproductive rights. Consistent with previous studies, lipid rate was lower among adolescent mothers in our study. According to the UNICEF 2011 report, 27% of the girls aged 15-19 years are married and early marriages are an established custom in India resulting in teenage pregnancy. In our study, 98% of the adolescent mothers were married and it indicates that premarital sex is not an important contributing factor for teenage pregnancies. Having babies during adolescence has serious consequences for the health of the girl and her infant. Anaemia was found to be more among teenage mothers and maternal complications like Gestational hypertension, preterm deliveries, APH and CPD were also reported high in our study. Several authors from India reported similar findings. The frequency of low birth weight was higher among the study group and the average birth weight (2.3 kgs ± 0.6) was lower in the study group than the comparison group. (2.8 kgs ± 0.8). Prianka Mukhopadhyaya et al in their hospital based study reported similar findings. The present study is in concurrence with the findings of similar studies in showing that adolescent mothers experience higher risk of maternal and perinatal complications.

### CONCLUSION

In our study, preterm delivery, gestational hypertension, CPD, LBW and anaemia were reported high among adolescent mothers. Hence, encouraging girl child education, discouraging early marriages, delaying first pregnancy will definitely help innocent adolescent girls and also helps to give birth to healthy babies. Adolescent Reproductive & Sexual Health (ARSH) which has been approved as part of RCH II National Program Implementation Plan should be implemented effectively to meet the service needs of adolescents.
REFERENCES


