MATERIAL AND PERINATAL OUTCOME IN TEENAGE PREGNANCY

ABSTRACT

Teenage pregnancy, Adverse Obstetrical & Perinatal outcome.

INTRODUCTION

According to WHO, an estimated 21 million girls aged (15-19) yrs in developing regions become pregnant and approximately 12 million of them give birth and around 777,000 girls under 15 years give birth each year in developing countries. At least 10 million unintended pregnancies occur each year among adolescent girls in the developing world. Complications during pregnancy and childbirth are the leading cause of death among adolescent girls globally. Adolescent mothers face higher risk of Eclampsia, puerperal endometritis and systemic infection than women aged (20-30) yrs. Additionally unsafe abortion is more prevalent among adolescents. Babies of adolescent mothers face higher risk of Low birth weight, perinatal death.

Adolescent pregnancy is a global problem occurring in high, medium and low income countries. However it is more likely to occur in less developed countries driven by poverty & lack of education. Several factors contribute to adolescent pregnancies & birth. In our society marriage at lower age (18 yrs) is still prevalent and there is pressure from family and society to bear children early. Adolescents who want to avoid pregnancies are not able to do so due to lack of knowledge and misconceptions about contraceptives and non easy availability of them. An additional cause of unintended pregnancy is sexual violence which is also widespread.

Adolescent pregnancy has major health consequences on mothers as well as babies. Adolescent pregnancy often leads girls to drop out of school which may jeopardise girls further education and employment opportunities. In the present study teenage pregnancy was evaluated for maternal & perinatal outcome.

AIMS & OBJECTIVE

This study was done to evaluate the maternal and perinatal outcome of teenage pregnancy.

MATERIAL AND METHOD

This was a prospective study conducted during June 2019 to December 2020 on patients admitted in labour room emergency of Patna Medical College & Hospital, Patna, India to evaluate the maternal & perinatal outcome. This was a prospective study conducted during June 2019 to December 2020 on patients admitted in labour room emergency of Patna Medical College & Hospital, Patna, India to evaluate the maternal & perinatal outcome.

This was a prospective study conducted during June 2019 to December 2020 on patients admitted in labour room emergency of PMCH, Patna, Bihar, India. 200 teenage pregnancy with singleton pregnancy were selected for study. Another 1000 pregnant women with singleton pregnancy, in the age group (20-30) yrs were taken as control.

RESULT – Incidence of teenage delivery was 6.01%. 20% of teenage mothers were of age 17 yr or less. 18% of teenage mothers were 2nd or more. Pregnancy induced hypertension was 13% in teenage group as compared to 3.5% in control. Preterm labour was 27.5% in teenage pregnancy compared to 15.6% in control. Mean birth weight was 2448 gms in teenage gp compared to 2695 gms in control. Low birth weight was 30.5% in teenage gp compared to 24.4% in control. Birth asphyxia, IUD & early neonatal death were also higher in teenage pregnancy.

Conclusion – In teenage pregnancy maternal complication like PIH, Eclampsia, preterm labour, maternal mortality were higher. Teenage pregnancy was associated with higher rate of IUD, LBW baby, birth asphyxia, early neonatal death. Age gp 17 yr or less were associated with worse obstetrical & perinatal outcome.

KEYWORDS

Detailed history of the selected patients regarding age, demographic profile, menstrual history, obstetrical history, family history, medical and surgical history was taken. Their general examination & obstetrical examination was done. Data was analyzed for obstetrical outcome according to age, gravid status, literacy, anaemia, pregnancy induced hypertension, Eclampsia, preterm labour, Antepartum haemorrhage, Polyhydramnios, oligohydramnios. Mode of delivery (vaginal or cesarean), maternal mortality. Perinatal outcome was analyzed for IUD, birth asphyxia, mean birth weight, low birth weight, respiratory distress syndrome, hyperbilirubinemia, early neonatal death.

USG and routine antenatal investigations were done. Special investigations like LFT, KFT, coagulation profile was done if needed.

RESULTS

Total delivery during study period was 8269 out of which 497 (6.01%) were teenage delivery. Among the teenage gp 112 (56%) were of 19 years age, 48 (24%) were of 18 year age and 40 (20%) were of 17 yr or less.

In the teenage gp 164 (82%) pt were primigravida, 32 (16%) pts were second gravid while 4 (2%) pts were even gravid 3 or more. In gp A 87.5% pt were primigravida but the remaining 12.5% pts were second gravid. In this gp no pt was gravid 3 and above.

Overall literacy rate in teenage gp was 52% compared to 69.4% in the control. Among the teenage literacy rate in gp A was lower 37.5% compared to 55.62% in gp B.

Mean birth weight in teenage was 2448 gms compared to 2695 gms in control.

Table 1 Obstetrical Outcome

<table>
<thead>
<tr>
<th></th>
<th>No of Cases</th>
<th>gpA 17yr or less</th>
<th>gpB (18-19yr)</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia</td>
<td>127 (63.5%)</td>
<td>25 (62.5%)</td>
<td>102 (63.75%)</td>
<td>646 (64.6%)</td>
</tr>
<tr>
<td>Pregnancy induced hypertension</td>
<td>26 (13%)</td>
<td>7 (17.5%)</td>
<td>19 (11.87%)</td>
<td>35 (3.5%)</td>
</tr>
<tr>
<td>Eclampsia</td>
<td>11 (5.5%)</td>
<td>3 (7.5%)</td>
<td>8 (5.0%)</td>
<td>11 (1.1%)</td>
</tr>
<tr>
<td>Preterm labour</td>
<td>55 (27.5%)</td>
<td>17 (42.5%)</td>
<td>38 (23.75%)</td>
<td>156 (15.6%)</td>
</tr>
<tr>
<td>Antepartum haemorrhage</td>
<td>8 (4%)</td>
<td>2 (5%)</td>
<td>6 (3.75%)</td>
<td>36 (3.6%)</td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>4 (2%)</td>
<td>1 (2.5%)</td>
<td>3 (1.87%)</td>
<td>21 (2.1%)</td>
</tr>
</tbody>
</table>

International Journal of Scientific Research
Oligohydramnios 3 1.5% 1 2.5% 2 1.25% 17 1.7%
Vaginal delivery Cesarean 128 64.4% 27 67.5% 105 65.6% 608 60.8%
Maternal mortality 2 1% 1 2.5% 2 0.62% 5 0.5%

Above table shows that pregnancy induced hypertension, eclampsia and preterm labour is higher in teenage group.

Table 2 Perinatal outcome

<table>
<thead>
<tr>
<th>Condition</th>
<th>No of cases</th>
<th>gPA (1 yr or less)</th>
<th>gPB (18 to 19 yr)</th>
<th>Control no 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBW &lt;2.5kg</td>
<td>61</td>
<td>30.5%</td>
<td>15</td>
<td>37.5%</td>
</tr>
<tr>
<td>VLBW (1.5kg or less)</td>
<td>16</td>
<td>8%</td>
<td>7</td>
<td>17.5%</td>
</tr>
<tr>
<td>ELBW (1kg or less)</td>
<td>3</td>
<td>1.5%</td>
<td>1</td>
<td>2.5%</td>
</tr>
<tr>
<td>Birth Asphyxia</td>
<td>6</td>
<td>3%</td>
<td>3</td>
<td>7.5%</td>
</tr>
<tr>
<td>Respiratory Distress Syndrome</td>
<td>18</td>
<td>4%</td>
<td>5</td>
<td>12.5%</td>
</tr>
<tr>
<td>Hyperbilirubinemia</td>
<td>12</td>
<td>6.5%</td>
<td>6</td>
<td>15%</td>
</tr>
</tbody>
</table>

Above table shows that in teenage group, incidence of low birth weight baby, birth asphyxia, respiratory distress syndrome, hyperbilirubinemia and early neonatal death is higher.

**DISCUSSION**

- Incidence of teenage pregnancy in this study was 6.01%. In other studies incidence was reported to be between 8 to 23.4%. Ashok et al reported the incidence to be 4.1%. The lower incidence in present study would be due to the fact that most of teenage pregnant women belong to low socioeconomic status, their literacy rate is low and many of them do not reach hospital for their delivery. Also, in this study all the mothers were married because due to social tabo unmarried women do not come to hospitals for deliveries, this could also be the reason for low incidence of teenage delivery in the present study.
- In this present study pregnant women who were more than 30 yr old were not included because this group has higher rate of complication as compared to the control.
- In this present study 44% of teenage mothers were either aged 18yrs or less which shows that early marriage (i.e. before 18yrs) is still prevalent in our society. NFHS-5 report also showed that 40.8% female get married before age of 18yrs.
- In the present study majority of teenage mothers were primigravida but 18% of them were having their second or third pregnancy. This shows that teenage girls have pressure from their family to conceive early and due to non availability of contraceptives they get pregnant at shorter intervals. In this study it was also seen that literacy rate was lower in teenage mothers compared to the control. Low literacy rate among teenage mothers was also reported by Ashok et al & Watchararaseen et al.
- In this study incidence of anaemia was almost same in teenage group & control. Ashok et al also got similar results. Brabin et al & Scholl et al reported higher incidence of anaemia in teenage mothers. It was seen that in teenage mothers, pregnancy induced hypertension, eclampsia & preterm labour was significantly higher than the control and it was the younger age which was worse affected. Higher rate of preterm delivery may be due to the immature development of genital organs. Higher rate of pregnancy induced hypertension is also responsible for increased rate of preterm delivery. Earlier studies by Kumbi et al, Ashok et al also reported similar results yet some other observers like Gortzak et al, Watchararaseen et al, Ziadeh et al reported no difference between two groups.
- In this study rate of caesarean section was similar in teenage group and control. Ashok et al also reported similar results. Gortzak et al, Kumbi et al reported increased operative deliveries in teenage group whereas Ziadeh et al reported less operative delivery. Maternal mortality was higher in teenage group results being similar to study done by Donoso et al.

- In this present study incidence of low birth weight baby was higher in teenage compared to control. Mean birth weight was lower (2448 gms) in teenage compared to 2695 gms in control. Higher rate of low birth weight baby could be due to the fact that incidence of preterm delivery is higher in teenage mothers and nutritional status of teenage mother is poor. Similar results were seen by Ashok et al & Gortzak et al.
- In this present study Birth Asphyxia, respiratory distress syndrome, hyperbilirubinemia was significantly high in babies born to teenage mothers. Younger the teenage mother, higher was the incidence of these neonatal morbidities. Reasons behind these morbidities could be low birth weight, prematurity. Gortzak et al, Scholl et al & Ashok et al also reported similar results.
- Overall intrauterine death was reported to be higher in teenage pregnancy results of which was similar to study done by Chang et al, Ashok et al. Rate of IUD was almost similar in gp B & control.
- Overall early neonatal death was higher in teenage girls compared to the control but result in the gp B & control were almost similar.

**CONCLUSION**

India already having the population of 1300 million and still higher rate of teenage pregnancy is making the situation of population explosion worse. Teenage pregnancy is dangerous both for mother and newborn. Low socioeconomic status, low female literacy rate, early marriage make the teenage girls vulnerable to different morbidities related to pregnancy. To minimize the teenage pregnancy rate, child marriage law should be strictly enforced, contraceptives should be easily available, socioeconomic status should be improved and above all every effort should be made to increase female literacy rate.

**REFERENCES**

1. Unicef-Ending child marriage/Progress and Prospects New York 2013
2. WHO global health estimates 2015
3. UNFPA-Girlhood not motherhood-Preventing adolescent pregnancy, New York 2015
4. NFHS(National family health survey)report 5
7. Kumbi et al Obstetric outcome in teenage pregnancy in North western Euthopia ;East Afr med J 1999;76
10. Ziadeh et al, outcome of teenage pregnancy in North Zordan; Arch Gynecol Obstet 2001;265
11. Scholl et al; Prenatal care and maternal health during adolescent pregnancy; Adolesc Health 1994;15
12. Donoso et al, Birth rate and adolescent risk in Chile 1990-1999; Rev Panam Salud Publica;2003;14
13. Chang et al,Characteristics and risk factors for adverse birth outcome in pregnant black adolescent; J Paediatr 2003;143