

Comparison of Outcome of Teenage Pregnancy with Non- teenage pregnancy

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ABSTRACT

Aims: To analyze the maternal and fetal outcome in teenage pregnancy (≤ 19 years) with that of pregnancy at optimal childbearing age group (20- 34 years).

Methodology: This was a hospital based observational analytical study conducted at Paropakar Maternity and Women's Hospital in Kathmandu from August 2016 to February 2017. Results were analyzed using SPSS 21 taking p -value ≤ 0.05 as statistically significant.

Results: There were 200 cases in each group (≤ 19 and 20-34 years). Anemia ($p=0.001$), hypertensive disorder of pregnancy ($p=0.001$), preterm delivery ($p=0.001$), Cesarean Section rate ($p=0.006$), 5-minute Apgar score ($p=0.035$), low birth weight ($p=0.017$) and neonatal admission rates ($p=0.018$) were significantly high in teenage pregnancy.

Conclusions: Both maternal and neonatal complications are increased in teenage pregnancy in comparison to the optimal reproductive age group.

Key words: complications, pregnancy, teenage

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INTRODUCTION

The term 'Teenage pregnancy' refers to the individual between 13-19 years becoming pregnant. Teenage pregnancy is an important social and public health problem all over the world.¹ Adolescence is a period of transition from childhood to adulthood. These are the formative years where maximum amount of physical, psychological and behavioral changes takes place in person's life.² Teenage pregnancy is a public health concern both in developed and developing world.^{3,4} It is estimated that globally about 13 million infant born to adolescents and of which more than 90% occur in developing countries, especially in sub-Saharan Africa.⁵ Worldwide rates of teenage pregnancy range from 2.9 per 1000 in South Korea to 143 per 1000 in some sub-Saharan African countries.⁶ South Asian countries (India, Pakistan, Sri Lanka, Nepal, Maldives, Bhutan and Bangladesh) have high proportions of teenage pregnancies, since early marriage is common and there is a social expectation to

have a child soon after marriage.^{7,8} Teenage pregnancy is associated with grave consequences for the mother, fetus/ neonate and the community.⁹ Adverse maternal outcomes of teenage pregnancy includes preterm labour, anaemia, hypertensive disorders of pregnancy, obstetric fistulas, mental illness and high rate of caesarean sections for cephalo-pelvic disproportion and fetal distress. Adverse fetal outcomes include preterm births, low birth weight infants, still births, birth asphyxia, respiratory distress syndrome and birth trauma or injury. Teenage delivery rate is 13% at study site. Thus this study would be helpful to assess the age related pregnancy outcome especially in teenage pregnancy at the study site.

METHODS

This is comparative study of teenage pregnancy of 19 years or less with at least 22 weeks of singleton pregnancy and control group was from 20-34 years of age irrespective of parity. Written informed consent

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was taken after institutional approval. Study variables were obstetric complications, mode of delivery, Apgar score, weight and NICU stay. Case management was according to the hospital protocol. Data entry analysis was done using SPSS 22 spreadsheet.

RESULTS

Total number of deliveries within the study period at this hospital was 9464, among them 1230 were teenage deliveries (13%). There were 200 cases enrolled in each study arm- teenage pregnancy group (≤ 19 years) and control group (20-34 years); 198 (99%) were at age 16-19 years whereas 183 (91%) were at 20-29 years of control group [Figure-1].

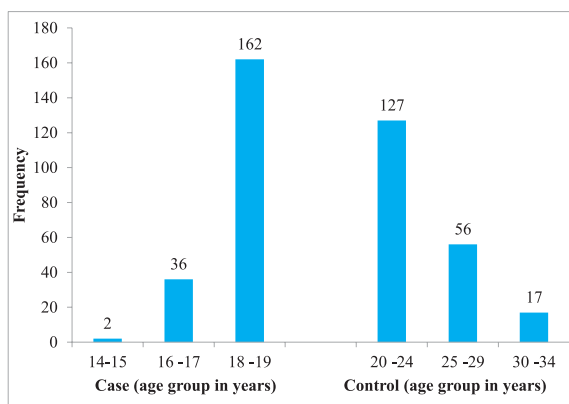


Figure-1: Age group distribution

Anemia, hypertensive disorder of pregnancy (HDP), preterm delivery and Cesarean Section (CS) rate were significantly higher in teenage pregnancy. PPH was also higher in teenage group but was not statistically significant. GDM, APH and PROM were not statistically significant [Table-1].

Table-1: Complications during pregnancy

| Variables | Case (%) | Control (%) | p-value |
|-----------|-----------|-------------|---------|
| Anemia | 13 (6.5) | 1 (0.5) | 0.001 |
| HDP | 62 (31) | 34 (17) | 0.001 |
| Preterm | 31 (15.5) | 11 (5.5) | 0.001 |
| CS | 69 (34.5) | 38 (19) | 0.006 |
| PPH | 8 (4) | 1 (0.5) | 0.126 |
| GDM | 0 (0) | 2 (1) | 0.156 |
| APH | 3 (1.5) | 1 (0.5) | 0.321 |
| PROM | 7 (3.5) | 10 (5) | 0.457 |

Likewise Apgar score of 3 or less at 5 minutes (5% vs 1%, $p=0.035$) [Table-2], low birth weight (18% vs 9.5%, $p=0.017$) [Figure-2] and NICU admission rate

(15% vs 7.5%, $p=0.018$) were significantly higher in teenage group.

| Apgar score at 5 minute | Case | Control | p-value |
|-------------------------|------|---------|---------|
| 0 | 4 | 0 | 0.035 |
| 1-3 | 6 | 2 | |
| 4-6 | 16 | 9 | |
| 7- 10 | 174 | 189 | |

Table-2: Apgar score at 5-minute

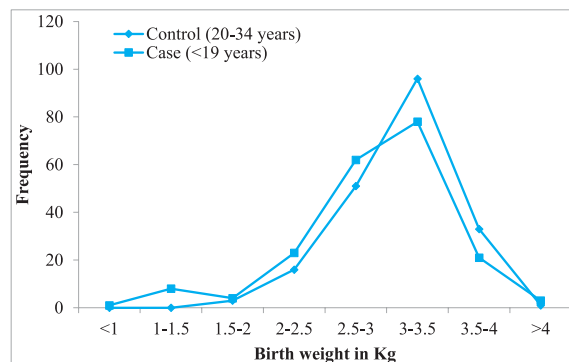


Figure-2: Birth weight distribution in Kg

DISCUSSION

Teenage pregnancy is associated with grave consequences for the mother, fetus/neonate and the community.⁹ Despite accounting for only 11% births worldwide, adolescent women carry 23% of overall burden of disease (in terms of disability adjusted life years) due to pregnancy and childbirth among women of all ages.¹⁰ Total number of deliveries within the study period at our hospital was 9464, among which 1230 were teenage deliveries that comprised of 13% of total deliveries. A study done by Lama et al¹¹ in 2005-2009 in Nepal found that the prevalence of teenage pregnancy was 11.1% of total 3144 deliveries studied which is similar to my study that is 13%.

Eighty-one percent (81%) of the teenage pregnancies belonged to 18-19 years. The maximum age in the control group was seen in 20-24 years (63.5%). Study done by Mukhopadhyay P et al⁹ found that maximum number of teenage mothers ($n=312$; 89%) belonged to 18-19 years' age which was similar to my study ($n=162$; 81%).

Anemia, hypertensive disorder of pregnancy, preterm deliveries and Cesarean Section rate were significantly common complications in teenage group that is comparable with the studies done by

Ayuba II et al.¹² In contrast to it, Hoque M. et al¹³ found significantly higher rate of caesarean delivery in adult mothers. Postpartum hemorrhage was higher but not significant in contrast to the report of Ayuba II et al.¹²

Similarly significantly higher low birth weight rate and 5-minute Apgar less than 4 like this study was also reported by Egbe TO et al.¹⁴ NICU admission was significant (p=0.018) in contrast to the study

done by Al-Haddabi R et al¹⁵ (p=0.18).

CONCLUSIONS

Teenage pregnancy was associated with anemia, hypertensive disorder and preterm delivery; and low birth weight babies along with APGAR score <4 at 5 min. Non-teenage mothers were more likely to have vaginal delivery. No significant difference was found in postpartum maternal morbidity and mortality.

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