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MATERNAL AND FETAL OUTCOME IN TEENAGE PREGNANACY

Obstetrics and Gynaecology

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ABSTRACT

Background: Teenage pregnancy is an important public health concern and is associated with increased maternal and fetal complications. Adolescents are considered a high-risk group because of biological immaturity as well as social, cultural, economic, and healthcare-related factors. Common complications include anemia, preterm delivery, pregnancy-induced hypertension, preeclampsia, premature rupture of membranes, low birth weight, and neonatal morbidity. Objective: To determine the incidence of teenage pregnancy and assess the maternal and fetal outcomes and obstetric complications associated with teenage pregnancy in a tertiary care hospital. Methods: A retrospective observational study was conducted in the Department of Obstetrics and Gynecology at Guru Gobind Singh Government Hospital, Jamnagar, over a period from March 2025 to March 2026. Pregnant women aged 10–19 years with gestational age greater than 28 weeks were included. Women aged 20 years or more were excluded. Maternal and fetal outcome data were collected and summarized using an Excel-based analysis. **Results:** During the study period, 32 teenage deliveries were recorded among 7,886 total deliveries, giving a teenage delivery proportion of 0.4%. Primigravida constituted the majority of cases (93.75%). All patients delivered vaginally, with 75% full-term vaginal deliveries and 25% preterm vaginal deliveries. Among maternal antepartum complications, anemia was most common (37.5%), followed by premature rupture of membranes (12.5%). Postpartum hemorrhage occurred in 9.375% of cases. Regarding neonatal outcomes, low birth weight was observed in 25%, birth asphyxia in 18.75%, respiratory distress syndrome in 15.6%, meconium aspiration syndrome in 12.5%, and intrauterine growth restriction in 6.25% of neonates. Conclusion: Teenage pregnancy represented a relatively small proportion of deliveries in the studied tertiary care hospital; however, it was associated with important maternal and neonatal complications, particularly anemia, preterm delivery, low birth weight, and neonatal respiratory morbidity. Adolescents should be considered a high-risk group requiring appropriate antenatal surveillance, early identification of complications, adequate antenatal visits, and timely management. A multidisciplinary approach involving healthcare providers, obstetricians, gynecologists, and social and community health workers may help improve adolescent reproductive health and pregnancy outcomes.

KEYWORDS

Teenage Pregnancy; Adolescent Pregnancy; Maternal Outcome; Fetal Outcome; Preterm Delivery; Anemia; Low Birth Weight; Neonatal Outcome.

INTRODUCTION

- Who defines teenage pregnancy from a girl who is 10 to 19 year of age, age being defined as her age at the time of delivery?
- Socio-economic factors, early marriage, lack of sex education, low literacy rate, are factors contributing to teenage pregnancy in our country.
- Teenage pregnancy proportion was 16% during 2005- 2006, while in 2025-2026 is 6.7 to 7.2 %.
- Maternal complications associated with teenage pregnancy are preterm delivery, anemia, pre eclampsia, eclampsia, instrumental delivery, increase chances of LSCS due to CPD.
- Fetal complications associated with teenage pregnancy are prematurity, low birth weight, still birth, respiratory distress, birth asphyxia.
- Main objective of study to know about incidence, obstetric complications, perinatal outcome in teenage pregnancy in tertiary care.

Aim

- To study the **maternal and fetal outcomes of teenage pregnancy** in a tertiary care hospital.

Objectives

1. To determine the **incidence/proportion of teenage pregnancy** among total deliveries during the study period.
2. To assess the **maternal obstetric complications** associated with teenage pregnancy.
3. To assess the **mode and outcome of delivery**, including the incidence of preterm and full-term vaginal deliveries.
4. To evaluate **postpartum maternal complications**, particularly postpartum hemorrhage and postpartum eclampsia.
5. To assess **neonatal and perinatal outcomes** among babies born to teenage mothers.
6. To determine the occurrence of neonatal complications such as **low birth weight, respiratory distress syndrome, birth asphyxia, meconium aspiration syndrome, and IUGR**. paper ggh 3 (1)

METHODS

Retrospective study conducted in Guru Gobind Singh Government Hospital, Jamnagar in Obstetric & Gynecology Department over the period of year March 2025 to February 2026.

INCLUSION CRITERIA

- All pregnant women age between 10-19 years, Gestational age > 28 weeks.

EXCLUSION CRITERIA

- Patient above 20 years or more.

STATISTICALANALYSIS

- Collected information maternal & fetal outcome measures were entered in excel sheet and variables are summarized.

RESULTS

In our institute has 32 teenage delivery during period of March 2025 to February 2026. Total delivery done in our hospital from March 2025 to February 2026 is 7886, so proportion of teenage delivery is 0.4 %.

- Table no 1 shows parity status among our study objects.
- Table no 1 shows that majority our study objects are primi gravida 93.75 %.

Table no 1

Parameter	Frequency %
Gravida	
Primi Gravida	30
Second gravida	2
Third gravida	0

- Table no 2 shows mode of delivery in our study.
- Table no 2 shows our teenage pregnancy patients has 100 % vaginal delivery.
- There are more chances of preterm vaginal deliveries 25 %.

Table no 2

Mode of Delivery	Frequency
Vaginal Delivery	32 (100%)
FTVD	24 (75%)
PTVD	8 (25%)
Cesarean section	0 (0%)

- Table no 3 shows mode of delivery in our study.
- Table no 3 shows our teenage pregnancy patients has 100 % vaginal delivery.
- There are more chances of preterm vaginal deliveries 25 %.

Table no 3

Mode of Delivery	Frequency
Vaginal Delivery	32 (100%)
FTVD	24 (75%)
PTVD	8 (25%)
Cesarean section	0 (0%)

- Table no 4 shows antepartum complications associated with teenage pregnancy in our study objects.
- There are more chances of anemia 37.5% & PROM 12.5 % in our teenage pregnancy study objects.

Table no 4

Complications	Frequency
Anemia	12 (37.5%)
Gestational hypertension	1(3.125%)
Preeclampsia	1(3.125%)
Eclampsia	1(3.125%)
PROM	4(12.5%)
Abruptio placenta	0

- Table no 5 shows postpartum complications among our study.
- Post-partum Hemorrhage is manor complications seen postnatally in our study.

Table no 5

Complications	Frequency
Postpartum Hemorrhage	3(9.375%)
Postpartum eclampsia	1(3.125%)
Postpartum sepsis	0

- Table no 6 shows neonatal out come in teenage pregnancy.
- Table no 5 shows there are more chances if Respiratory distress syndrome 15.6 %, low birth weight 25 %.

Table no 6

Complications	Frequency
Respiratory distress syndrome	5 (15.6%)
Low birth weight	8 (25%)
IUGR	2(6.25%)
Meconium Aspiration syndrome	4 (12.5%)
Birth Asphyxia	6 (18.75 %)

DISCUSSION

- Teenage pregnancy lead to many health related complications & poor birth outcome.
- Incidence of teenage pregnancy in our hospital is 0.4 % which is very less compared to NFHS 4 data which was 6.8 %. Early marriage is one of the determinant of teenage pregnancy in our society.
- Teenage constitutes to " high risk group " in reproductive terms because of the assumed double burden of reproduction & growth.
- Adverse outcome of teenage pregnancy not arise from physical & medical causes but also arise from family, cultural, economic factors & lack of access to health care, contraception, education.
- In our study there are more chances of preterm delivery (25%) & low birth weight.
- Pregnant adolescents have greater risk of anemia. Higher iron take recommended for biological modification which are in Process.
- There are more chances of PROM in teenage pregnancy, because of immature uterine & cervical blood circulation making them more prone to infection leading to PROM.
- Neonatal complications in our study is respiratory distress syndrome prematurity, low birth weight. The biological immaturity of the young adolescent who is still developing can trigger fetal maternal rivalry for the nutrients as pregnancy proceeds, hence jeopardizing fetal growth, development and survival as pregnancy progresses.

CONCLUSION

- Prevalence of teenage pregnancy in our study is very less compared to NFHS 4 -6.8 %.
- Teenage mothers in rural & semi - urban area had significant numbers of complications including preterm labour, pre eclampsia compared to primi gravida more than 19 years.
- Health care provider must consider adolescent as high risk & teenager need to be educated for more number of antenatal visits for screening tests so that various complications to be assessed an earlier time for better management.
- A multidisciplinary approach involving health workers, social workers, obstetrician & gynecologist is required to improve the adolescent reproductive health.

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