



## TEENAGE PREGNANCY AND ITS IMPACT ON MATERNAL AND FETAL OUTCOME

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**ABSTRACT** **Background:** Teenage pregnancies are seen mostly in poorer and less educated sections of the society. In developed countries majority of teenage pregnancies occur to unmarried girls unlike developing countries including India where teenage pregnancies occur to married girls (early marriages). **Aims & Objectives:** This study aims to find the incidence and to evaluate the foeto-maternal outcome of teenage pregnancies. **Material & Methods:** Retrospective study of all teenage pregnant females admitted to a tertiary care centre. **Results:** Teenage pregnancy comprised 8.33% of the total obstetric admissions. The major maternal complications were Preterm labour 25.78% and Hypertensive Disorders of Pregnancy 19.92% while Low Birth Weight 20.51%, NICU admission 11.02% and stillbirths 1.53% were major adverse fetal outcomes. **Conclusion:** Teenage pregnancy has adverse impact on the health of teenage mothers.

**KEYWORDS :** Teenage pregnancy, Adolescent pregnancy

### INTRODUCTION

World Health Organization defines Teenage Pregnancy as "any pregnancy from a girl who is 10-19 years of age", the age being defined as her age at the time the baby is born(1). Often the terms "Teenage pregnancy" and "Adolescent pregnancy" are used as synonyms.

According to UNICEF, worldwide every 5th child is born to teenage mother(2).

The incidence of teenage pregnancies varies dramatically between the different countries.

Approximately 90% of the teenage births occur in developing countries(3).

Teenage pregnancy is an important public health problem in both developed and developing country, as it is a 'high risk' or 'at-risk' pregnancy due to its association with various adverse maternal and fetal outcomes which results in increased mortality and morbidity of the mother and the child.

Early childbearing is associated with various health risks for both mother and child. Teenage mothers are more likely to experience pregnancy related complications which often lead to maternal morbidity and mortality.

Hence, the present study aims to find out the incidence and to evaluate the various complications associated with teenage pregnancy.

### MATERIALS AND METHODS

This was a 6 month retrospective study carried out in OBGY department from May 2019 to October 2019 in B.J . GMC and SGH Pune .

All pregnant women admitted to hospital in age group 13 to 19 years were included in the study . The required details were obtained by history taking and follow up of patients till delivery from the medical record section .

### RESULT AND OBSERVATION

In the present study there were 415 teenage mothers admitted during the study period amongst the total obstetric admissions of 4978, giving an incidence of 8.33% of teenage pregnancy.

#### Age distribution

Out of total 415 pregnancies , 5 patients were in the age group of 13 – 15 years , 12 patients were in the age group 16-17 years and the rest

were in the age group of 18-19 years.

**Table 1. Age distribution of Teenage mothers**

Age group	No of patients
13-15	5
16-17	12
18	78
19	320

In India, although the legal age at marriage is 18 for females and 21 for males, early marriage continues to be the norm. So the low age at marriage automatically links to early onset of sexual activity, and thereby fertility.

#### Educational qualification

Only 79 patients had completed S S C and 27 patients had completed H S C . The rest had only undergone primary schooling.

**Table 2. Educational qualification of Teenage mothers**

S S C	79	19.03%
H S C	27	6.5%
Primary education	309	74.45%

#### Complications in present pregnancy

Out of the 415 teenage pregnancies, 256 were associated with complications (61.68%) and the remaining 159 were without any complication (38.32%). Out of 256 teenage pregnancies which were associated with complications, 155 were associated with single complication (60.54%), whereas 101 were associated with multiple complications (39.46%).

Amongst the 25 teenagers admitted during the first trimester, abortion (18) was the most common complication seen accounting for 72% of first trimester complication, out of which 12 were spontaneous and 6 were induced abortions.

**Table 3. First trimester complications in Teenage mothers**

First trimester complication	Number	Percentage
Abortion	18	72%
Hyperemesis Gravidarum	4	16%
Ectopic Pregnancy	2	8%
Vesicular Mole	1	4%
Total	25	100%

The most common complication associated with teenage pregnancy during third trimester was Preterm Labour (66). Amongst 51 mothers

who had Hypertensive Disorders, 12 had Gestational Hypertension, 31 had Preclampsia and 8 had eclampsia. 16 pregnant teenagers were found to be anemic, of which 2 had mild, 8 had moderate and 6 had severe anemia.

**Table 4. Third Trimester Complications In Teenage Mothers**

Complication	Number	Percentage
Preterm labour	66	25.78%
Hypertensive Disorders	51	19.92%
PROM	45	17.57%
Fetal Distress	25	9.76%
IUGR	24	9.37%
IUFD	22	8.59%
Anemia	16	6.25%
Antepartum haemorrhage	9	3.51%
Medical disorders	6	2.34%
Oligohydraminos	7	2.73%
Multiple Pregnancy	2	0.78%

#### Mode of delivery

Out of the 390 teenage mothers who delivered, 302 patients had normal vaginal delivery, 84 patients delivered by Caesarean section (LSCS) and 4 patients delivered by Instrumental Vaginal Delivery.

**Table 5. Mode Of Delivery In Teenage Mothers**

Mode of delivery	Number	Percentage
Vaginal delivery	302	77.43%
LSCS	84	21.53%
Instrumental Vaginal Delivery	4	1.02%
Total	390	100%

#### Indication of Caesarean section

Out of the 84 teenage mothers delivered by Caesarean Section, 35 patients underwent Caesarean section due to Fetal distress. It was followed by Malpresentation (24) of which 20 were for Breech presentation and two each for face and brow presentation. The other indications for C-Section in teenage mothers were Contracted Pelvis, Previous C-Section, CPD and Obstructed Labour.

**Table 6. Indication Of Caesarean Section In Teenage Mothers**

Indication	Number	Percentage
Fetal distress	35	41.66%
Malpresentation	24	28.57%
Contracted Pelvis	7	8.33%
Previous C section	2	2.38%
Cephalopelvic disproportion	13	15.47%
Obstructed labour	2	2.38%
Deep transverse arrest	1	1.19%

#### Maternal Mortality

In the present study there were two maternal deaths out of 415 teenager mothers. One was due to direct cause of death as hypovolemic shock due to postpartum haemorrhage while the other was a case of Hepatitis who died due to hepatic encephalopathy.

**Table 7. Maternal deaths in teenage pregnancy**

Total teenage pregnancies	Maternal death
415	2

#### Fetal Outcome

Majority of the babies (304) born out were healthy babies. The most common adverse fetal outcome noted in the study was Low Birth Weight babies (80 babies). Amongst 43 babies who needed NICU admissions, 19 were Low Birth Weight babies. There were 6 Still born babies, out of which 2 were Fresh and 4 were Macerated.

**Table 8. Fetal outcome in teenage mothers**

Fetal outcome	Number	Percentage
Alive and healthy	304	77.94%
Low birth weight	80	20.51%
NICU admission	43	11.02%
Still birth	6	1.53%

#### DISCUSSION

In the present study, 8.33% of the study population were teenage pregnancies. Comparison with incidences of other studies are shown in the table below.

**Table 9. Table showing comparison with other studies**

Sr No	Heading	Present study (in %)	Other studies (in %)
1	Incidence	8.33%	5.10% Gazala et al(4) 3-10% Bhalerao et al(5)
2	Maternal complications		
	Preterm labor	25.78%	16% Bhalerao et al 48% Mahajan S(6)
	HDP	19.92%	10.6% Sarkar et al(7) 20.17% Gazala et al
	Anaemia	6.25%	>25% Bhalerao et al
	Abortion	6.02%	14.57% Gazala et al
3	Delivery outcome		
	Caesarean Section	21.53%	11.62% Gazala et al 34% Mukhopadhyay P(8)
4	Fetal outcome		
	LBW	20.5%	16.86% Gazala et al
	Stillbirth	1.53%	4-5% Bhalerao et al

Various studies conducted in different regions of the world revealed preterm labour to be the most common complication as reported to be 16% by Bhalerao et al(5) and 48% by Mahajan S(6). The present study revealed it to be 25.78%. The second most common complication was observed to be Hypertensive Disorders as reported 20.17% by Gazala et al(4) and 10.6% by Sarkar et al(7). The present study showed an incidence (19.92%).

In most developed countries (including the USA) 30–60% of adolescent pregnancies end in abortion.

While in developing countries including India abortion rate was found to be 6.02% among teenage mothers. In contrast, abortion rate was 14.75% by Gazala et al.

#### Caesarean Section

Incidence of C-Section in the present study was 21.53%. Majority of Caesarean Sections were due to Fetal Distress. It was followed by Malpresentation, Contracted Pelvis, Previous C-Section, CPD and Obstructed Labour. The incidence of caesarean section among teenage mothers were reported 11.6% by Gazala et al, and 34% by Mukhopadhyay P(8).

#### Fetal Outcome

In the present study 80 (20.51%) were Low Birth Weight Babies, 43 (11.02%) needed NICU admission and 6 (1.53%) were stillbirths. Gazala et al found the incidence of LBW babies 16.86% and Bhalerao et al found the incidence of Stillbirth around 4-5%.

#### CONCLUSION

The present study aimed to evaluate the fetomaternal outcome of teenage pregnancy. It was concluded from the present study that Preterm labour, Hypertensive Disorders of Pregnancy, Premature Rupture of Membrane, abortion, anemia, malpresentations, IUGR, IUFD were major maternal complications; Low Birth Weight and Still Births were major adverse fetal outcomes. These obstetrical problems can be managed by modern medicine and so the risk of teenage pregnancy can be diminished. The health care provider should consider teenage pregnancy as a 'high risk' pregnancy and should educate the pregnant teenagers to have more number of antenatal visits so that the signs and symptoms of various complications of teenage pregnancy could be recognized at the earliest. Attention should be given to the use of various screening and diagnostic tests and to the interventions needed if any complication does occur during the course of pregnancy or labour. Proper monitoring of the progress of labour is important to prevent prolonged labour.

The effect of education in the development of modern adolescence has made the adolescent less dependent upon parents and family, and has postponed the age at marriage, and thereby the age of socially sanctioned sexual relations.

There is a need to promote the use of Contraceptives amongst the married teenagers and ensuring the availability of contraceptives at a wider scale. Access to contraceptives is the cornerstone in preventing teenage pregnancies while access to abortion services is crucial for managing them.

Good antenatal ,intranatal, neonatal , contraceptive and abortion services, together can minimize the various risks associated with teenage pregnancies to a large extent. With all these measures, we can hope for a world-wide decline in the trend of teenage pregnancy rates and complications in the years to come.

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