

Teenage Pregnancy: Foeto-Maternal Outcome in a Tertiary Care Centre of Rural Bihar

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ABSTRACT

Background: Teenage pregnancy is a major social and public health issue associated with many adverse fetal, maternal and neonatal outcomes, still each year 13 million birth is attributed to the teenage pregnancy. The incidence of teenage pregnancy shows a wide variation from developing countries to developed world. This study is designed to find out the incidence of teenage pregnancy in a rural tertiary care centre and to evaluate the various complications associated with teenage pregnancy. **Methods:** This is a prospective observational study done over the time period of one year in the department of Obstetrics and Gynaecology. A pre-structured porforma was used to collect data over the specified time period and later on analysed accordingly. **Results:** The incidence of teenage pregnancy in present study was found 6.02% and among this 51.5% of teenage mothers experienced complications and adverse outcomes. The most common complication being anaemia in pregnancy (29.1%). The foetal outcomes were measured on the basis of LBW, NICU admission and stillbirth. **Conclusion:** Teenage pregnancy should be considered as a 'high risk' or 'pregnancy at risk' which is preventable if a wholesome and holistic approach can be taken. But, still, teenage pregnancy is a common occurrence. Public forms, media, NGOs and social workers should come together to fight against underage marriage and promote contraception.

Keywords: Teenage pregnancy, foeto-maternal outcome, prospective observational study, Preterm labor.

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INTRODUCTION

Teenage Pregnancy is defined 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] The incidence of teenage pregnancy varies worldwide, from 2.9 per 1000 in South-Korea to 143 per 1000 in sub-saharan African countries.^[2] According to UNICEF, worldwide every 5th child is born to teenage mother but Approximately 90% of the teenage births occur in developing countries.^[3,4] Teenage pregnancy is a major social and public health issue associated with many adverse fetal, maternal and neonatal outcomes, still each year 13 million birth is attributed to the teenage pregnancy. The adolescent women shares 23% of overall burden of disease due to pregnancy and childbirth among women of all ages, whereas they are accounted for only 11% of birth worldwide.^[5]

Teenage pregnancy is associated with adverse Maternal outcomes like anemia, abortion, Preterm labour, Gestational Hypertension, Pre-eclampsia, IUGR, Urinary Tract Infection, Sexually Transmitted Diseases, HIV, malaria, obstetric fistulas, puerperial sepsis, mental illness and high

rate of Cesaerean Sections for cephalopelvic disproportion and fetal distress. Adverse fetal outcomes include preterm births, Low Birth Weight infants, birth asphyxia, Respiratory Distress Syndrome, stillbirth and birth trauma or injury.^[6-9]

So, the present study is designed to find out the incidence and to evaluate the various complications associated with teenage pregnancy in the rural population of India. As, an another study stated that a teenage antenatal clinic would result in better outcomes among teenage pregnancies.^[10] So a holistic approach can be defined for better management of teenage pregnancy.

Aims and Objectives

This study aims to find out the incidence of teenage pregnancy in a rural tertiary care centre and to evaluate the various complications associated with teenage pregnancy.

MATERIALS & METHODS

This was a prospective observational study done in the department of Obstetrics and Gynaecology of Katihar Medical College and Hospital, Bihar over the time period of one year.

Inclusion criteria

All pregnant women of age-group below 20 years and with singleton pregnancy.

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Exclusion criteria

Age 20 years or more, period of gestation less than 28 weeks, multifetal gestation, any pre-existing medical or surgical complications, Rh-negative pregnancy, foetal congenital defects.

A pre-structured proforma was filled once patient was found to fulfil the inclusion criteria and admitted through emergency or OPD. The information was collected on demographic variables, antenatal events and outcome of pregnancy.

The maternal anaemia was defined on the basis of the criteria set by the Centres for Disease Control (CDC) with a cut-off value of 11 mg/dl for haemoglobin. Preeclampsia was diagnosed if the mothers had systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg on two occasions 6 hours apart and proteinuria ≥ 300 mg per 24 hours or +1 using a dipstick test. Severe preeclampsia was established, when the mothers had systolic blood pressure > 160 mm Hg or diastolic blood pressure > 110 mm Hg measured at least twice 6 hours apart, proteinuria > 5 g per 24 hours or $\geq +2$ using the dipstick test, had persistent platelet count $< 100,000/\text{mm}^3$, and had serum transaminases of more than twice normal. Eclampsia was diagnosed, if a pre-eclamptic mother had any seizure. SGA (small for gestational age) was defined as below the 10th percentile for a completed week of gestational age based on the local percentile standards. The WHO Global Reference for Fetal/Birth weight Percentiles Calculator was used to obtain the percentile of each neonate's birth weight.^[11] LBW (Low Birth Weight) was established in neonates below 2,500 grams of birth weight. Intrauterine growth restriction is defined as an SGA foetus with Doppler measurement abnormality regarding to obstetricians. Postpartum haemorrhage was diagnosed fulfilling standard definition of clinical practices.

RESULTS

In the present study there were 264 teenage mother, admitted during the study period amongst the total obstetric admissions of 4380, indicating incidence of 6.02% of teenage pregnancy. Amongst these 264 teenage mothers, 136 were associated with complications (51.5%) and the rest 128 were without any complication (48.4%). Out of 136 teenage pregnancies which were associated with complications, 90 were associated with single complication (66.1%), and there were 46 mothers associated with multiple complications (33.8%).

The most common complication associated with teenage pregnancy was Anaemia observed in 40 mothers, the second common complication was preterm labor in 28 pregnant patients. Hypertensive Disorders was seen in 25 teenage mothers, amongst these 25, 12 had Gestational Hypertension, 8 had Pre-eclampsia and 5 had eclampsia. Malpresentation

was observed in 17 patients, whereas, 11 were diagnosed with IUGR and 8 with PPRM.

Table 1: showing complications associated with teenage pregnancy

Complications	Number of Patients	Percentage
Anemia	40	29.4%
Preterm Labor	28	20.5%
Hypertensive Disorder	25	18.3%
Malpresentation	17	12.5%
IUGR	11	8%
PPROM	8	5.8%

Amongst 264 patients, admitted with teenage pregnancy, 225 delivered by vaginal and 39 patients underwent LSCS. The indications for LSCS was also noted and the most common indication was foetal distress (20) followed by CPD (8) and Malpresentation (6). The other indications were Previous LSCS (4), Obstructed Labor (5) and contracted pelvis (4). Placenta-previa (2) and abruptio-placentae (3) was also observed as indications for cesarean section.

Table 2: Showing distribution of Mode Of Delivery

Mode of delivery	Number of patients	Percentage
VAGINAL	225	85.2%
LSCS	39	14.7%

Table 3: Showing Indications of LSCS

Indication for LSCS	Number of patients	Percentage
Foetal distress	20	51.2%
CPD	8	20.5%
Malpresentation	6	15.3%
Obstructed labor	5	12.8%
Previous LSCS	4	10.2%
Contracted pelvis	4	10.2%
Abruptio-placenta	3	7.6%
Placenta previa	2	5.1%

The foetal outcomes were measured on the basis of Low birth weight, NICU admission, stillbirth. Amongst 264 teenage mothers, 198 (75%) healthy babies were delivered and 15.1% were affected from Low birth weight, 9.84% were admitted in NICU and rate of stillbirth was 4.5%.

Table 4: Showing Foetal Outcome

Foetal outcome	Number	Percentage
Healthy	198	75%
LBW	40	15.1%
NICU Admission	26	9.8%
Stiibirth	12	4.5%

DISCUSSION

In the present study, incidence of teenage pregnancy was found 6.02%, supported by many Indian studies.^[12-14] We found that the percentages of anaemia, preterm labor, eclampsia, postpartum haemorrhage, and LBW were significantly higher among teenagers than average age mothers. The higher incidence of preterm birth among teenagers in

our study was supported by Pergialiotis et al.'s study.^[6]

Incidence of anaemia was significantly higher among teenage mothers in our study. We found that a number of studies showed teenage pregnancy was significantly associated with anaemia.^[15,16]

In our study, we found that risk of gestational hypertension was higher among teenagers in our study (18.3%). But, in contrast to our study, reported 14.2% by Sharma et al, 10.6% by Sarkar et al and more than 13.05% by Padte et al.^[17-19]

The incidence of LSCS among teenage mothers in our study was reported 14.7%, whereas, 34% by Mukhopadhyay P,^[20] 6% by Bhalerao et al,^[14] and 26% by Dubashi SS.^[13] These studies also report Fetal distress, CPD and Contracted Pelvis to be leading causes for Cesarean Section amongst teenage mothers.

The foetal outcome in our study, 15.1% newborn were LBW, 9.8% were admitted in NICU and 4.5% of stillbirth was reported. Other Indian studies found the incidence of LBW babies between 33 and 39% and the incidence of Stillbirth around 4-5%.^[12,14,21]

The study undertaken by Swati Mahajan in the Asia Pacific Island reported an incidence of LBW to be 19%.^[22]

Hence, the adverse outcomes associated with teenage pregnancy is almost same but distribution is found different for outcomes. Most of the complications and adverse outcomes are generally preventable, in addition, poor antenatal care, low nutritional status, and lack of paternal involvement among teenagers were also considered as the risk factors of adverse pregnancy outcomes.

CONCLUSION

Teenage pregnancy was clearly associated with adverse maternal and foetal complications. Hence, teenage pregnancy should be considered as a 'high risk' or 'pregnancy at risk' which is preventable if a wholesome and holistic approach can be taken. We need to make people aware of complications of the teenage pregnancy and this fight needs to fought on different fronts like socio-economic status, education, proper and frequent antenatal visits, any risk factor identified and taken care before hands.

Public forms, media, NGOs and social workers should come together to fight against underage marriage and promote contraception.

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