



## Neonatal Management and Outcome in Teenage Pregnancy of Caesarean Delivery-A Study in Rajshahi Medical College Hospital, Rajshahi, Bangladesh

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**Abstract:** **Introduction:** In recent decade, adolescent pregnancy has become important health issue in a great number of countries, both developed and developing. Adolescent pregnancy rate is on rise, emerging as serious problem all over the world and more so in developing countries like Bangladesh. **Objective:** In this study our main aim is to evaluate Neonatal Outcome of Caesarean Delivery in Teenage Pregnancy. **Methods:** This Cross-sectional study was done at Rajshahi Medical College Hospital, Rajshahi, Bangladesh from August 2019 to July 2020. 100 Teenage pregnant ladies between 18 to 20 years were taken up as a case group for the study. 108 control group pregnant women of 21 to 35 years age, without any preexisting co-morbidities and history of previous caesarean section. **Results:** In the study, 23% had vaginal deliveries whereas 77% cases had caesarean deliveries. Failed induction was common in case and control group, 14.5% and 9.25%. Also, in case group 12.8% neonates were suffered from fetal distress, where as in control group it was 9.2%. **Conclusion:** From our study we can say that, in order to improve the teenage health periodic information, education, community activities, and ANC camps to be held at primary health care centers. Further study is needed for better outcome.

**Keywords:** Maternal Outcome, Teenage Pregnancy, Caesaren Deliveries.

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## INTRODUCTION

In recent decade, adolescent pregnancy has become important health issue in a great number of countries, both developed and developing [1]. Adolescent pregnancy rate is on rise, emerging as serious problem all over the world and more so in developing countries like Bangladesh. WHO defines teenage pregnancy as any pregnancy from a girl who is 10 to 19 years of age, age being defined as her age at the time of delivery [2]. It constitutes 11 percent of all the births worldwide and 23 percent of overall disease burden due to pregnancy and child birth due

to improper prenatal care needed for monitoring of maternal and fetal development. The incidence of teenage pregnancy varies dramatically between the different countries, of which 90 percent is contributed by developing countries [3]. Nevertheless teenage pregnancy and delivery rate is significantly less in developed countries compared to developing countries [4]. Incidence of teenage pregnancy in India is 2 women out of every 1000 pregnancies [5]. Teenage pregnancy is associated with series of maternal and fetal complications. Anaemia, pre-eclampsia, eclampsia, preterm

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delivery, instrumental delivery, increased LSCS rate due to cephalopelvic disproportion and fetal distress are strongly associated maternal complications in teenage pregnancy.

**METHODS**

This Cross-sectional study was done at Rajshahi Medical College Hospital, Rajshahi, Bangladesh from August 2019 to July 2020. 100 Teenage pregnant ladies between 18 to 20 years were taken up as a case group for the study. 108 control group pregnant women of 21 to 35 years age, without any preexisting co-morbidities and history of previous caesarean section. In the study, detail history of the patient has been taken in a prescribed data sheet with the informed consent of the patient or from the patient’s guardian. Data collected regarding mode of delivery, whether vaginal delivery or caesarean delivery, full term

vaginal delivery or preterm delivery, if LSCS then indication for LSCS, fetal outcome in terms of prematurity, RDS, low birth weight, still birth, anomalous fetus, NICU admission.

**Data Analysis**

Statistical analysis was performed using the Statistical package for social science SPSS version 20.0. A descriptive analysis was performed for clinical features and results were presented as mean ± standard deviation for quantitative variables and numbers (percentages) for qualitative variables.

**RESULTS**

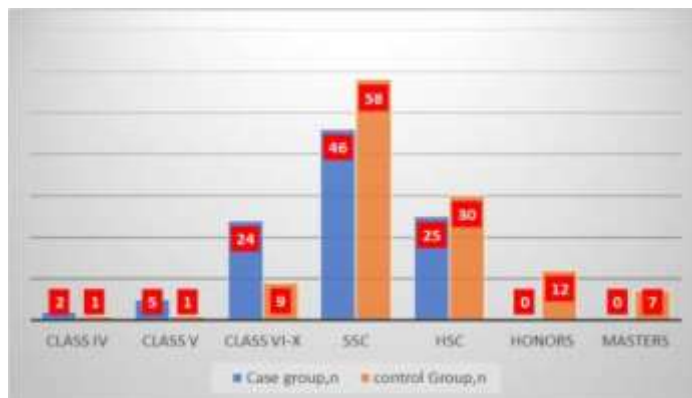
In Table-1 shows total number of deliveries where number of total baby’s delivered-892. Where teenage pregnancy was 100 (11.21%). The following table is given below in detail:

**Table-1: Total number of deliveries.**

Total Number of deliveries	Teenage pregnancy	More than 20 years pregnancy
892	100 (11.21%).	118(88.79%)

In Figure-1 shows educational status of the study group where in case group most of the patients completed only their SSC, no one completed

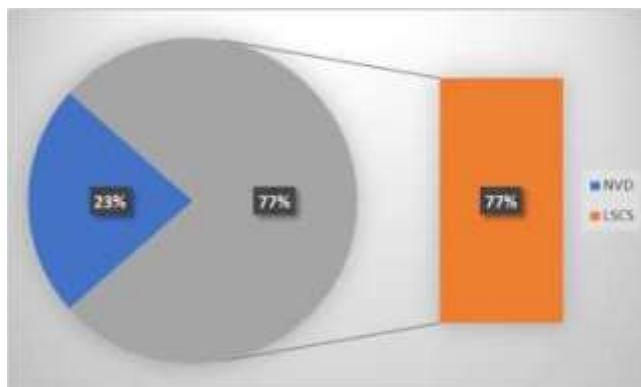
their masters where as in control group 7 people completed their masters. The following figure is given below in detail:



**Fig-1: Educational status of the study group**

In Figure-2 shows mode of delivery in case cases had caesarean deliveries. The following figure

is group where 23% had vaginal deliveries whereas 77% given below in detail:



**Fig-2: Mode of delivery in case group**

In Table-2 shows complications associated with teenage pregnancy, where failed induction was

common in case and control group, 14.5% and 9.25%. The following table is given below in detail:

**Table-2: Complications associated with teenage pregnancy**

Variable	Case (n=100)	Control (n=118)	P value
GDM	3(1.4%)	16(7.3%)	0.007
PIH	8(3.7%)	12(5.5%)	0.643
Eclampsia	1(0.5%)	0	0.459
Pre-term labour	9(4.1%)	5(2.3%)	0.175
Postdated pg	6(3.3%)	16(7.3%)	0.630
Failed induction	31(14.5%)	20(9.2%)	<0.001

In Table-3 shows neonatal outcome where in case group 12.8% neonates were suffered from

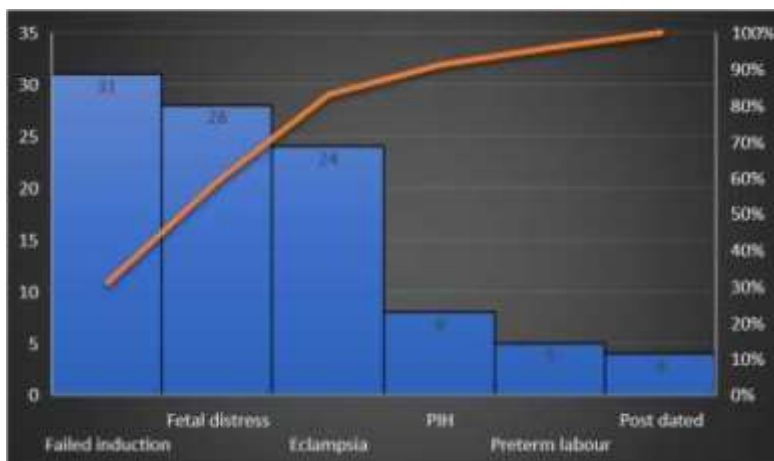
fetal distress, where as in control group it was 9.2%. The following table is given below in detail:

**Table-3: Neonatal outcome**

Neonatal outcome	Case	Control	P value
Fetal distress	28(12.8%)	20(9.2%)	0.071
Perinatal death	2(0.9%)	3 (1.4%)	0.578
Fetal weight	2.83±0.385	3.27±0.337	<0.001
NICU admission	18 (8.3%)	14(6.4%)	0.250

In Figure-3 shows indications of caesarean delivery in teenage pregnancy where failed induction is in teenage pregnancy with 31 cases and

eclampsia and fetal distress contributing to 24 and 28 cases each. The following figure is given below in detail:



**Fig-3: Indications of caesarean delivery in teenage pregnancy**

**DISCUSSION**

In our study we found that, adverse outcome of teenage pregnancy arises not only from physical and medical causes associated but also depends on individual, family, social, cultural, economic factors besides lack of access to health care resources, contraception, education. Increased incidence of LSCS in teenage pregnancies and medical complications associated with it like anemia, PIH, and fetal complications being, prematurity, IUGR, Low birth weight are preventable factors [6]. In one study reported that, teenage pregnancy exposes mothers to many health-related complications and newborns to poor birth outcome. Adverse outcome of teenage pregnancy arises not only from physical and medical causes associated

but also depends on individual, family, social, cultural, economic factors besides lack of access to health care, contraception, resources, education [7]. In our study we noted that, in case group most of the patients completed only their SSC, no one completed their masters where as in control group 7 people completed their masters. This implies that teenage mothers are less careful about their pregnancy probably secondary to lack of awareness, maturity and other social factors. In one study reported that, increased incidence of LSCS in teenage pregnancies and medical complications associated with it like anemia, PIH, and fetal complications being, prematurity, IUGR, Low birth weight are preventable factors [8]. In our study we found that, 23% had vaginal deliveries whereas 77% cases had caesarean

deliveries. Which similar to other studies. Teenage pregnancy remains major health issue in our country due to prevailing social dogmas, age old traditions and poor access to health care in remote rural areas, illiteracy leads to lack of knowledge about family planning and puts the adolescents at risk for early pregnancy. Education play major role in decreasing the incidence of teenage pregnancy and its attendant health risks and psychological issues. Rate of caesarean delivery was high, predominant indication being cephalo pelvic disproportion, fetal distress, medical disorders associated like preeclampsia, and eclampsia. Vaginal delivery was seen in cases with low birth weight baby's secondary to growth restriction or prematurity [9]. In our study we found that, in case group 12.8% neonates were suffered from fetal distress, where as in control group it was 9.2%. In teenage pregnancy where failed induction is in teenage pregnancy with 31 cases and eclampsia and fetal distress contributing to 24 and 28 cases each. Significant number of neonates born to teenage mothers had low birth weight, probably due to malnutrition, medical diseases associated with pregnancy leading to intrauterine growth restriction and prematurity [9].

## CONCLUSION

From our study we can say that, in order to improve the teenage health periodic information, education, community activities, and ANC camps to be held at primary health care centers. Further study is needed for better outcome.

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