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A study evaluating the perinatal outcomes in teenage pregnancy

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ABSTRACT

Teenage pregnancy is one of the important social problems faced worldwide. It increases the risk of neonatal mortality and also significantly deteriorates the health of the mother. The most common complication in teenage pregnancy includes anemia, preterm delivery, intrauterine growth restriction, preeclampsia and depression in the mother and increased risk of congenital malformation, sepsis inadequate weight gain and failure to thrive due to lack of maternal care in the neonate. This study evaluates the postnatal complications in teenage pregnancy (less than or equal to19 years). Lack of awareness, attainment of early puberty and early marriage are the important causes for prevalence of teenage pregnancy in India. A cohort retrospective study was done in the Obstetrics and Gynaecology Department at Saveetha Medical College and Hospital during the period January-July 2020; which involved collection of data from 2011-2019. This study shows among the teenage pregnancies 82% of cases had normal vaginal delivery,14% were delivered by cesarean section and 4% by forceps delivery. But there was no significant association between mode of delivery and teenage pregnancy. Moreover, teenage pregnancies had higher incidence of vaginal delivery. Also, Immediate Complications such as anemia, postpartum hemorrhage, Premture rupture of membranes, placenta previa, abruption, neonatal death and IUGR were seen in 27% cases and late complications such as inadequate weight again and failure to thrive were present in 43%. Although most patients delivered through normal vaginal delivery the complications in teenage pregnancy was found to be relatively more than pregnancy in an adult. The study showed that teenage pregnancy is a high risk pregnancy and can be promoted by sex education and emphasizing the importance of contraception.

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INTRODUCTION

Teenage pregnancy is a public health problem with both maternal and fetal complications. Although the incidence has decreased over the years it still remains to be a major contributor for maternal and fetal mortality and morbidity. In India many factors contribute to teenage pregnancy that include declining age in menarche and early marriages. According to the data obtained from National Family Health Survey, 16% of women have already started bearing children (Klein, 2005). The numbers are more

in the rural areas [20.5%] than the urbanized areas. The complications for adolescent pregnancies are substantially more than adult pregnancies (As-Sanie *et al.*, 2004). The lack of knowledge on complete antenatal visits, perinatal care have found to affect the quality of postnatal life of the foetus and the mother. Early sexual activity can also result in sexually transmitted diseases and unwanted pregnancies that may result in abortion (Mollborn, 2017). Most studies conducted suggests that although there is increased risk of teenage pregnancy in developing countries they have also been constantly reported in developed countries as well. The risks observed in this study population of 100 pregnancies included; mothers complications: anemia, Postpartum haemorrhage, urinary tract infections, preclampsia, abrution placenta, placenta previa and fetal complications : preterm delivery, Low birth weight babies and poor weight gain in the postnatal life.

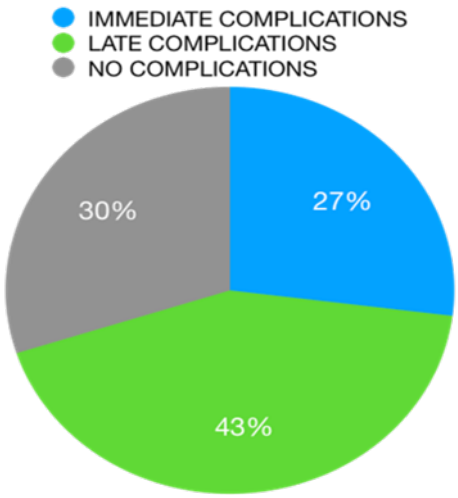

Figure 1: Representation of prevalence of complications in teenage pregnancy.

Counseling teenagers regarding responsible sexual behavior is important in avoiding unwanted pregnancies and abortions. The male partners must also be counseled and advised by a health care worker on the adverse effect of teenage conception and should therefore promote safe family practices (Lao and Ho, 1997). A recent study revealed that 16% of women have already started bearing children and this possesses negative effect on the family and in turn the society where government schemes contribute to the upbringing of child leading to high range of loss of revenue (Paranjothy *et al.*, 2009). This is a retrospective study which evaluates the complications of teenage pregnancy in tertiary health care center.

MATERIALS AND METHODS

A retrospective cohort study included the analysis of data from the year 2015-2019 including pregnant women less than 19 years of age with Maternal age defined as the number of completed years at the time of delivery. The study was performed at Saveetha Medical College, Chennai. Demographic details including educational qualifications socioeconomic status and parity were considered and factors such as alcohol and tobacco use during pregnancy were excluded.

Table 1: Outcomes and Measurement.

Demographics	Number
Mean Age	
18 years	100
Gravida	
Primigravida	89
Multigravida	11
Educational Qualification	
Educated (+2 completed)	35
Uneducated	65
Socioeconomic Class	
Rural:Urban	2:1
Antenatal Visits	
>4	65
<4	35

Following delivery the mode of delivery the complications and weight of the new born were taken into consideration. For the collected data there was no significant variation in the APGAR scoring and teenage pregnancy. The results were tabulated and chi square values were obtained for each to establish correlation between the two parameters.

RESULTS AND DISCUSSION

In this study the mean age is 18 years. The parameters such as number of pregnancy (gravida), education qualification, socioeconomic class, adequacy of antenatal visits were considered and tabulated in Table 1.

Table 2: Grading of Anaemia

Degree of Anaemia	No. of Cases
Mild	38
Moderate	7
Severe	10

The results were tabulated and p values were obtained. The p value showed significant associa-

Table 3: Following delivery; the parameters assessed were,

Delivery	Parameters
Mean gestational age	37 weeks and 3 days
Mode of delivery	82 : Normal 14 : cesarean section 04 : forceps delivery
Mean weight of the new born	2.5 kgs
Immediate complications	27
Late complications	43

Table 4: Complications in accordance with Maternal age.

Variables	Maternal age 18-19 [no.of cases 60]	Maternal age 17-18 [no.of.cases 25]	Maternal age <16 [no.of cases 15]
Preterm labour	7	11	8
Placenta previa	7	1	2
IUGR	3	7	4
Neonatal death	-	1	4
Preeclampsia	8	1	5

tion between teenage pregnancy and perinatal complications (p value-0.01). Also, association between educational qualification and postnatal outcome. Those educated had better outcomes (p value-0.05). These shows educated women and proper Counseling improved the capabilities of young mothers in taking good care, taking aseptic measures and adequate feeding of the newborn. The cases of anemia and severity of anemia were also increased in teenage conception and results are reported in Table 2. Although various study showed adverse effects in those with good socioeconomic class; In this study those from urban areas had better compliance (p value-0.001) in the outcome making it a confounding variable in this study.

Following delivery, it was observed that there was no significant association between preterm, low birth weight, nature of delivery with teenage pregnancy it was also noted that the number of cesarean and forceps assisted delivery had lower incidence in teenage pregnancy in accordance with Table 3. This study shows that teenage pregnancy may have risks for the foetus and the mother, it also showed that lesser the age more pronounced were the complications with respect to Table 4. Figure 1 represents the prevalence of complications in teenage pregnancy. The other compounding variables include the lifestyle of the mother; which has an important role to improve the outcome in such pregnancies. Proper education of the mother with good mental and physical well-being and appropriate antenatal visits, scans and immunization also to a certain extent (p value:0.05) contributes to the outcome of the pregnancy. United Nations stated that early child bearing is a high risk for both maternal and foetal health and well-being (National Research Council (US), 1987). In this study it was found that 27% had immediate complications and 43% had late complication accounting for a total of 70%.

Thereby making teenage pregnancy a high risk pregnancy. Moreover, it also shows that complications like anemia, maternal negligence, inadequate medical attention prevail Inspite of delivering vaginally;revealing no significant association between mode of delivery and complications. A study conducted by shravage also proved that anemia was more pronounced in such teenage pregnancies (Irvine *et al.*, 1997). The perinatal outcome of a teenage mother to some extent depends on quality of service provided by the tertiary health care center. The family support and social class also plays a role in nurturing the mother and the foetus.

In a research article published (Chen *et al.*, 2007) it states the teenage pregnancy also leads to poor educational problem in the offspring contributing to their morbidity. This is attributed to the fact that there's lack of an individualized approach in management of child health care among adolescent women. Although there's decrease in incidence of teenage pregnancy in the past few years it still remains an important cause for maternal death (Mcgill J Med. 2008 Nov). This is because of a lack of steps by step community level approach in spreading awareness about the adverse effects of early sex-

ual life. Other risks such as carcinoma cervix and HPV infections also prevail in those who are sexually active below the age of 18 years.

Though the primary risk factor is the age of the mother various confounding variables including social status, educational qualifications, support from families and adequate antenatal visits have been identified in this study. This study also shows positive association between age and outcome. As the age progressed the risk of unfavorable outcome had been significantly reduced establishing a strong correlation between the maternal age and pregnancy. There is no significant association between mode of delivery, small for age babies, low APGAR sore in 1&5 minutes to teenage pregnancy. Other factors have not been evaluated due to reduced sample size which is one of the limitations of this study.

The present scenario regarding teenage pregnancy aims at promoting social awareness, availability of contraceptive methods (Siniša, 2018). (Secura *et al.*, 2014) also revealed that there was drastic decrease in pregnancies after educating the mothers about the various contraceptive methods (LARC) available to them, discussing reproductive health and its importance among the adolescents to prevent unwanted pregnancy and promote healthy living for both the mother and the foetus.

CONCLUSIONS

Based on the above findings it's evident that teenage pregnancies are still very much prevalent and remain a high risk pregnancy affecting the maternal and fetal life. Teenage pregnancy at times could also be unwanted pregnancy which can lead to abortions which can further impair future pregnancies in the women. To prevent teenage pregnancy and to promote adulthood pregnancy sex education plays an important role which should be emphasized in schools. The use of contraception and ill benefits of adolescent pregnancy should be established in rural areas via setting up camps. Effective Prevention could be promoted only through the society.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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