TEENAGE PREGNANCY AND ITS OBSTETRIC OUTCOME

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ABSTRACT

BACKGROUND

Teenage pregnancy is upcoming as one of the most important social and public health problem all over the world. In the present study, we have evaluated the maternal and foetal outcomes of teenage pregnancy in a tertiary teaching hospital over a period of one year.

The objective of the study is to evaluate the maternal, foetal and neonatal outcomes of teenage pregnancy in a tertiary care teaching hospital.

MATERIALS AND METHODS

A retrospective study was undertaken for a period of one year at KIMS, a tertiary care teaching hospital in a rural area, where on an average 3000 deliveries per year take place. Data was retrieved from hospital records. All teenage mothers aged 13-19 years were included in the study.

RESULTS

In this study, 626 (18.79%) cases of teenage mothers were recorded out of 3330 antenatal cases. Majority of teenagers were primigravida (79.23%) and multigravida 20.76%. Antenatal care was nil or inadequate in 32% of cases. Majority of the mothers were of low socioeconomic status. Complications like pregnancy-induced hypertension (11.5%), premature onset of labour (5.75%), anaemia (23.64%), others like gestational diabetes mellitus, etc. (2.56%) were noted. 25.88% underwent lower segment caesarean section, the most common indication was cephalopelvic disproportion (45.68%). 5% of babies delivered to teenage mothers had higher risk of low Apgar at 5 minutes. Neonatal morbidities like asphyxia, jaundice, respiratory distress were recorded in 14% of neonates and babies were more prone to neonatal intensive care unit admissions.

CONCLUSION

Teenage pregnancy was associated with high risk of pregnancy-induced hypertension, eclampsia, premature onset of labour and foetal deaths. High risk of neonatal morbidity and mortality were also seen. Adequate antenatal care reduces the adverse pregnancy outcome in these mothers.

KEYWORDS

Teenage Pregnancy, Socioeconomic Status, Sex Education, Antenatal Care, Low Birth Weight, Preterm Labour Apgar, Neonatal Morbidity.

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BACKGROUND

The transition from childhood to adulthood is 'adolescence' or 'teenage', which has been defined by the World Health Organization as the period between 10-19 years.[1] This is the period when structural, functional and psychosocial developments occur in a child to prepare herself for assuming the responsibility of motherhood.

Child marriage and early confinement is a long established custom in India with poverty and ignorance magnifying the problem.[2] Teenage girls are physically and psychologically immature for reproduction and some extrinsic factors like inadequate prenatal care, illiteracy, poor socioeconomic conditions add upon the adverse outcome of pregnancy in teenage girls.[3-5] Most studies from developed and developing countries have consistently reported that several complications like poor maternal weight gain,

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pregnancy-induced hypertension, anaemia and STDs are strongly associated with teenage pregnancy. There is an increased risk of preterm delivery, having low birth weight babies and neonatal mortality among infants born to them. Knowing the burden of pregnancy in teenagers will go a long way in advocacy and devising appropriate intervention measures.

Teenage pregnancy is upcoming as one of the most important social and public health problem all over the world with varying prevalence rate, being influenced by some important factors in recent decades. The first factor is the declining age at menarche[6] attributed mostly to improved health and nutrition. The second factor is the younger age at first sexual activity. Globally, the knowledge and use of contraception has been increasing, but still many teenagers have a very low usage of contraception. This may be related to lack of awareness and low access to contraceptives. Adolescents who conceive may not seek proper antenatal care resulting in an increased risk for medical complications. Pregnant teenagers require special care and education particularly about nutrition, infections, substance abuse and complications of pregnancy. All pregnant teenagers should have medical care beginning early in their pregnancy.[7]

In the present study, we have evaluated the maternal and foetal outcomes of teenage pregnancy in a tertiary teaching hospital over a period of one year from March 1, 2014, to March 31, 2015. Maternal age was not an independent risk factor for adverse birth outcomes. The increased risk probably was attributable to other factors that were related to teenage pregnancy such as low socioeconomic status and inadequate antenatal care.

MATERIALS AND METHODS

A retrospective study was conducted at a tertiary care teaching hospital in a rural set up of Konaseema Institute of Medical Sciences and Research Foundation at Amalapuram over a period of one year. Data was retrieved from hospital records. It was a descriptive study and no intervention was done. The objective was to evaluate the obstetric outcome of teenage pregnancy. Teenage pregnancy is defined as pregnancy occurring between the maternal ages of 13-19 completed years. All teenage mothers who attended the hospital were taken as cases. Detailed medical, obstetric and neonatal information was recorded. Adequate antenatal care was defined as presence of all the following criteria viz., (1) More than 3 adequate antenatal care by qualified medical personnel; (2) Receipt of 2 doses of tetanus toxoid, iron and folic acid supplementation during pregnancy. Mothers with major illness existing from pre-pregnancy state, which could have adversely affected the outcome of pregnancy were excluded. Complications like pregnancy-induced hypertension, eclampsia, anaemia, gestational diabetes mellitus, premature onset of labour, antepartum haemorrhage were noted. Details of the delivery like mode of the delivery and time of delivery were noted. Neonatal weight, Apgar and morbidities like asphyxia, neonatal hyperbilirubinaemia and respiratory distress were assessed. Data was recorded and results were analysed.

RESULTS

The total number of deliveries during the study period was 3330, of which 631 (18.94%) were teenage pregnancies. After following the exclusion criteria, 626 (18.79%) teenage mothers remained in the study. Reasons for exclusion were pre-existing medical disorders (n=5). Maximum number of teenage mothers were of age group 17-19 years (81.6%), followed by age group 14-16 years (18.4%). Majority of teenagers were primigravida (79.23%) and multigravida (20.76%). Majority of mothers were of low socio-economic status. Antenatal care was nil or inadequate in (32.1%).

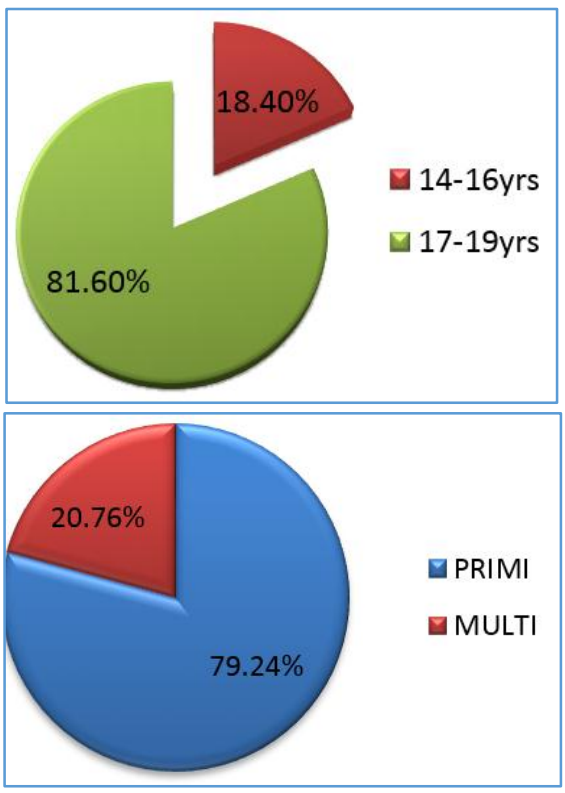


Figure 1. The Age Distribution Among Teenage Gravida

Anaemia was found to be 23.64%, pregnancy-induced hypertension and eclampsia to be 11.5%, other disorders like gestational diabetes mellitus, antepartum haemorrhage and chorioamnionitis 2.56%.

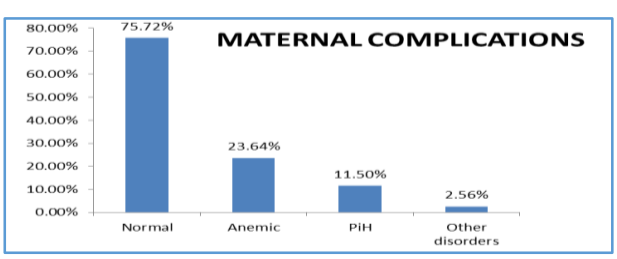
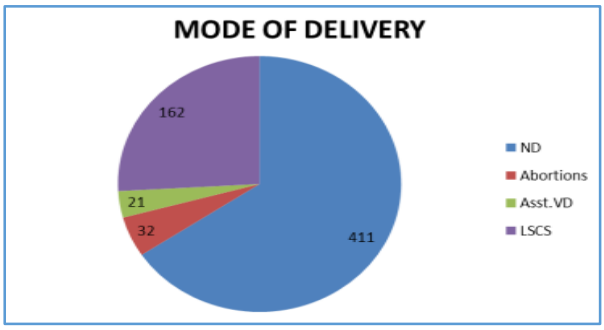


Figure 1. Maternal Complications

Mode of delivery and indications were shown in Figure 3 with 65.65% of mothers had normal delivery followed by 3.35% assisted vaginal delivery, 25.88% lower segment caesarean section. Most common cause for lower segment caesarean section found to be cephalopelvic disproportion

(45.68%) followed by previous lower segment caesarean section (16.05%), malpresentation (6.79%), foetal distress (14.20%) and other causes (17.28%).



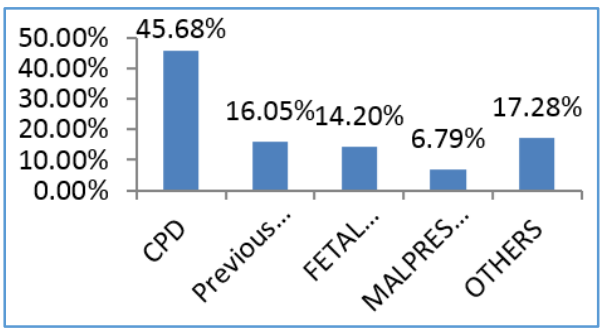


Figure 3. Mode of Delivery

Pregnancy outcome is shown in Figure 4 with 540 (86.26%) of teenage mothers gave birth to normal full-term babies followed by 36 (5.75%) preterms, 12 (1.76%) having intrauterine growth restriction, 7 (1.28%) stillbirths and 31 (4.95%) abortions.

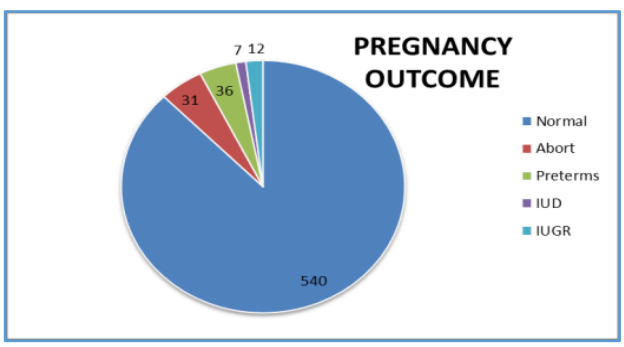


Figure 2. Pregnancy Outcome

Impact of teenage pregnancy on foetal growth was studied and majority of the babies born to teenage mothers were of low birth weight (<2500 g) (66.2%), followed by birth weight <2000 g (19.9%), <1500 g (12.6%), <1000 g (1.3%) and the Apgar at 1 min. and 5 mins. is shown in Figure 5. 473 (80.58%) had normal Apgar, 89 (15.16%) low Apgar @ 1 min., 25 (4.26%) had low Apgar @ 5 mins.

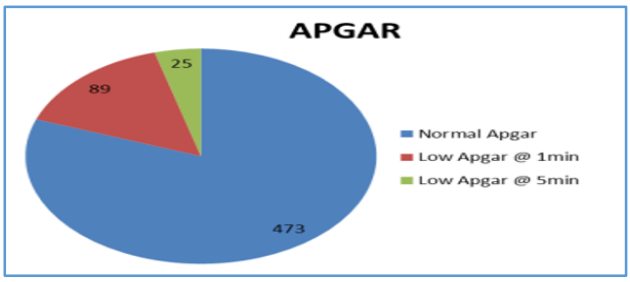


Figure 5. Apgar

Neonatal morbidity and mortality was noted as birth asphyxia in (9.4%), neonatal hyperbilirubinaemia (3.2%), respiratory distress (2.7%), congenital anomalies in (0.5%) and neonatal mortality in (4%). The most common cause for neonatal mortality was prematurity. Babies born to teenage mothers were more prone to neonatal intensive care unit admissions.

DISCUSSION

Incidence of teenage pregnancy was 18.79% in the present study, which lies within the range observed in India, which varies from 3% to 52%.[3,8,9] It was surprising to find that nearly 20.60% of teenage mothers were carrying their second or third pregnancy. This shows that teenage women have no control over fertility in our country and are exposed to repeated pregnancies at short intervals with all its inherent dangers. Most of the teenage mothers in our study were of low education status and of low socioeconomic status similar to other studies and had even poor adequate antenatal care.

In our study, 23.64% of teenage mothers had anaemia and several studies showed anaemia was found to be more common in teenage mothers with a little higher incidence. Chahande et al reported the incidence as 72.6%.[10] Osbourne et al observed a significant increase in the incidence of anaemia as 11.1% compared with 5.2% in the 20-24 years old age group.[11] In our study, the finding was similar, though the incidence as a whole was higher than that observed by Osbourne.[11] The incidence of stillbirth, preterm delivery, low birth weight, complications during pregnancy and labour-like toxaemia of pregnancy, eclampsia and cephalopelvic disproportion were more in teenagers.[10,12] Our study has reflected poor perinatal outcome in the form of LBW, preterm deliveries, increased perinatal morbidity and mortality, which is in accordance with many studies. Some of the explanations proposed for these adverse birth outcomes are biological immaturity, anaemia, malnutrition, pregnancy-induced hypertension or lack of antenatal care.[13,14,15] Foreign authors also observed similarly.[16,13,17] Two features of biological immaturity are young gynaecological age (conception within 2 years of menarche) and effect of a girl becoming pregnant even before her own growth has ceased, thus competing with the developing foetus for nutrients adding to its detriment.[18] Due to the immaturity of the uterine or cervical blood supply, teenage mothers are at risk of subclinical infection, thereby resulting in an increase in the prostaglandin production and subsequent increase in the incidence of preterm labour.

Psychological factors may also be involved since many adolescent pregnancies are unplanned, unwanted or discovered late.

The limitation of this study is that it is a hospital-based study and it may not be a true reflection of the situation in the community. It is possible that some teenage mothers did not come to hospital because of poverty, ignorance and social reasons. All the mothers attending the hospital were married. We did not come across any unmarried teenage mothers as it is common for unmarried mothers to go for termination of pregnancy or to quacks for delivery because of strong social taboos preventing them for attending a large public hospital, so there could be even higher incidence of teenage pregnancy in the community.

As our country is fast approaching to be the most populous country in the world and increasing teenage pregnancy is an important aggravating factor for the population rise unless there is improvement in general socioeconomic status, female literacy, public awareness, easy access to contraceptive services, proper sex education in schools, etc. No long-term benefit can be expected. If early marriages cannot be discouraged as the situation still prevails in rural areas of India. Three steps can be taken for prevention of complications of adolescent pregnancy through enhanced family welfare measures- Delay marriage as much as possible, Delay the first pregnancy, Delay subsequent pregnancies. Not only there should be efforts to improve the sociodemographic environment of pregnant mothers, but also decrease the incidence of teenage pregnancy.

CONCLUSION

Current study revealed that teenage pregnancy was more between the age group 17-19 yrs. Various factors like age, education, occupation and socioeconomic status influenced the outcome of teenage pregnancy. Hence, the present study recommends that in order to improve the health, periodic information, education and communication activities have to be held at schools, villages regarding education, nutritional support, family planning, importance of delaying marriage and reproductive health. People, particularly elders need to be counselled about the complications and ill effects of teenage pregnancy. Child marriage act must be stringently imposed to restrain child marriages. The young teenage groups are more vulnerable and maximum attention should be delivered to them. The time has come to focus on this problem. This will definitely help in transforming today's adolescent girls into healthy and responsible women giving birth to a healthy future generation.

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