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Current status and management of teenage pregnancy in a south indian teaching hospital

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Abstract

Background: Pregnancy in teenagers is a risk factor as they are still incomplete in their growth, development and mental maturity, with complications and additional family responsibilties..
Objectives: To determine the factors that are significant in the clinical outcome of teenage pregnancy and to know the incidence of maternal medical and obstetric complications an fetal outcome.
Methods: 100 teenage pregnant women attending government General Hospital (GGH) attached to RMC, Kakinada were studies from May 2014-April 2015 in a prospective case control study.
Results: About 72% of teenage pregnancies do not have proper antenatal care because of illiteracy, ignorance, poverty, lack of transport facilities. Majority (62%) belonged to low socio-economic status and education. 42% of teen age pregnancies are in group of 18 years. 43% of teen age pregnancies are anemic. Incidence of preeclampsia is 21%. The incidence of caesarean section is 35%. Complications occurred in 48%. 38% of neonates are low birth weight (<2.5kgs). Perinatal mortality was 7.6% due to low birth weight babies resulting from prematurity or IUGR.
Conclusions: Teenage pregnancy is associated with increased antenatal complications like anemia, preeclampsia, eclampsia, intrauterine growth restriction. Operative interventions like caesarean section and forceps are high. Perinatal mortality was high due to low birth weight babies resulting from prematurity or IUGR .In conclusion, teenage pregnancy poses a problem to both the mother and fetus. It concerns not only the obstetrician but also the pediatrician and psychiatrist and in fact the whole family and the society.
Keywords: Teenage pregnancy, antenatal care, fetomaternal complications

INTRODUCTION

Dr. Edmundo Escomel in Journal La PresseMedicale first reported a case of pregnancy in a 5 years, 7 months and 21 days girl, Lina Medina (born September 27, 1933)in Peru asthe youngest confirmed mother in medical history who gave birth to 2.7 kg male baby on May 14, 1939(1). The child survived for forty years.

Pregnancy in adolescents,younger than 17 years is a risk factor as teenagers are still incomplete in their growth, development and mental maturity, with additional responsibility of being a mother, to take care of her child and family.Teenage pregnancy has a higher incidence of medical complications involving mother and child than do adult women.1

Lack of awareness for good antenatal care, is responsible for many complications, like, hyper emesisgravidarum, anemia, pre-eclampsia, antepartum haemorhage, hypertensive disorders of pregnancy, sexually transmitted infections abnormal position and malpresentations, premature delivery,low birth weight, increased neo-natal mortality, cephalopelvic disproportion, high incidence of operative deliveries, intrapartum complications, PPH and puerperal sepsis, maternal mortality (2-7).

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The objective of this study is, to determine the factors that are significant in the clinical outcome of teenage pregnancy and to know the incidence of maternal medical and obstetric complications and fetal outcome.

MATERIALS AND METHODS

100 teenage pregnant women attending Government General Hospital attached to RMC, Kakinada were studied from May2014-April2015 in a prospective case control study. Booked cases included antenatal OPD registrations, Non-booked antenatal and labour ward admissions. MTPs were excluded. Obstetric history and associated complications were recorded.

Careful obstetric examination was done. Pelvic evaluation was done at 38 weeks Routine haematological and urine investigations, blood sugar, VDRL, HbsAG, and HIV tests were done. The gestational age and expected date of confinement was recorded and advised to have regular antenatal check-ups. They received iron and folic acid, calcium and multivitamin tablets and immunised with tetanus toxoid. Admissions were done for any complications and for delivery All cases were monitored during labour .Clinical course of labour and interventions were noted. New born baby particulars Apgar score, weight gestational age, sex and any malformations if present were noted. Premature babies, growth restricted babies and sick babies were under paediatric care postnatal follow up for general condition, follow up of medical cases was done. Breast-feeding of the new born was encouraged. Maternal morbidity mortality and perinatal mortality record was maintained. Follow up was after 6 weeks up. They were also advised regarding breast feeding, birth spacing, contraception, small family norm, and immunization of the newborn.

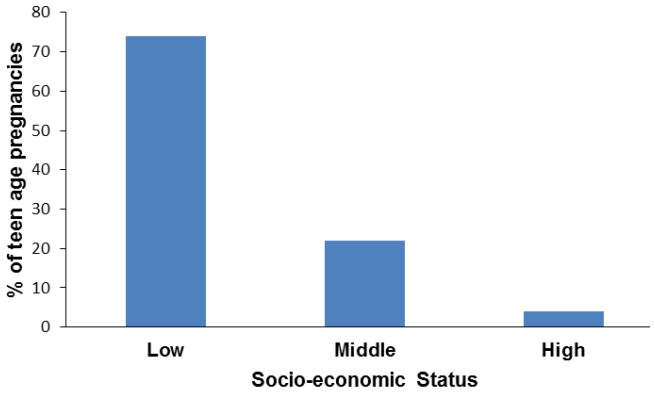
OBSERVATIONS AND RESULTS

The present study shows the obstetric outcome of 100 cases of teenage pregnancies. About 72 % of teenage pregnancies are unbooked ,do not have proper antenatal care because of illiteracy, ignorance, poverty, lack of transport facilities as shown in figure1. Majority [62%] belonged to low socioeconomic status 22% of women are illiterate. 72% are having only primary education.42% of teen age pregnancies are in group of 18 years as shown in table1. 74% of teen age pregnancies belong to low socio economic status. [graph1].

Table-1. Number of pregnancies in different age groups

S.No	Age in yrs	No of pregnancies	percentage
1.	14	–	–
2.	15	–	–
3.	16	–	–
4.	17	19	19%
5.	18	42	42%
6.	19	39	39%

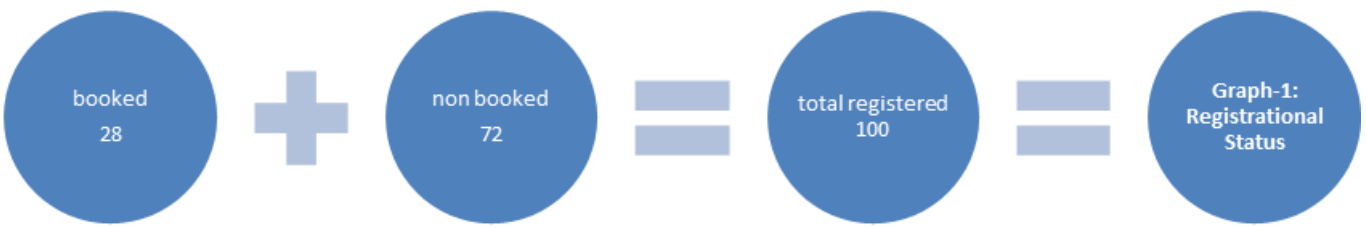
Figure-2. Age-wise Socio-economic status



43% of teen age pregnancies are anemic, shown in figure-2. Incidence of preeclampsia is 21% as shown in graph-2. Labour duration was 12hrs in 48%. Prolonged labour was in28 % .Causes are mainly incoordinate uterine action. The incidence of caesarean section is 35% shown in table-3. Cephalopelvic disproportion is most common indication of caesarean section in teenage pregnancy. Second most common cause is fetal distress.

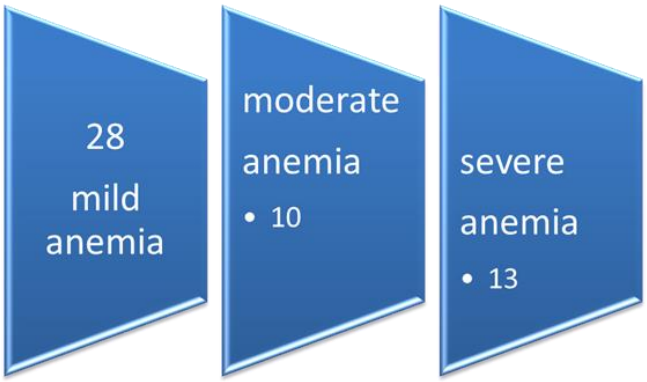
38% of neonates are low birth weight (<2.5kgs) as shown in figure-3. Incidence of preterm babies is about 1/3 rd of total teenage pregnancies.

Figure-1. Booked and non-booked registrations



Incidence of outlet forceps and caesarean section is higher in teenage

Figure-3. Anemic teen age pregnancies

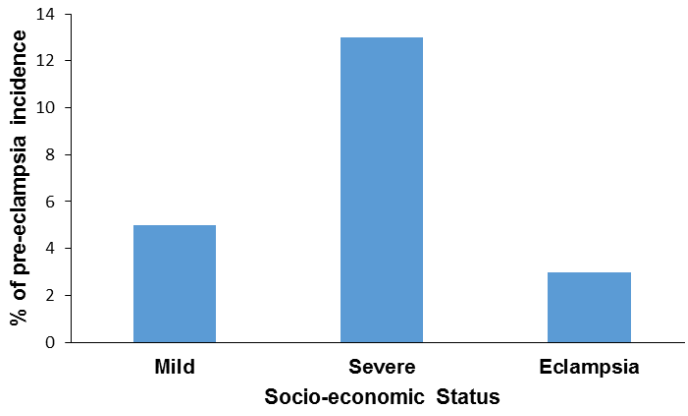


DISCUSSION

Teenage pregnancy and child bearing in women has adverse health, demographic and social implications with greater risk compared to pregnancy in a non-teenage woman. About 16 million girls aged 15 to 19 and 1 million girls under 15 give birth every year—most in low- and middle-income countries. Complications during pregnancy and childbirth are the second cause of death for 15-19 year-old girls globally. Babies born to adolescent mothers face a substantially higher risk of dying than those born to women aged 20 to 24 as per WHO Facts Sheet on Adolescent pregnancy September 2014 (8).

In present study 62% belong to rural area. About 2/3rd of cases are unbooked due to lack of transport facilities and illiteracy. In a study of KavithaSingh(9)et al(2001) 65.3% are from rural population and 44.7% from urban population.

Figure-4. Incidence of pre-eclampsia



Anemia

The increase in plasma volume and the subsequent decrease in hemoglobin concentration and haematocrit in normal pregnancy complicate the assessment of anemia. WHO defines the minimum hemoglobin concentration in normal pregnant women as 11.0 g/dl (WHO, 1972); the minimum haematocrit level is 0.31 g/dl(Letzky et al.)10. In present study, the incidence of anemia is 43% and other studies VermaV (35.2%) (11)and Shravage JC (84.2%) (12).

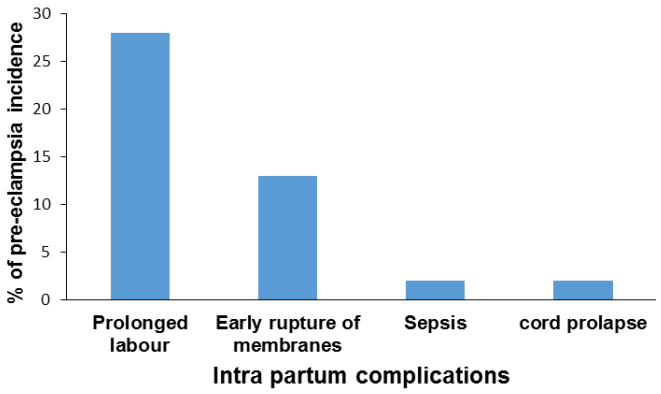
Table-2. Obstetric complicatioons

S.No	Complication	No of cases	percentage
1.	Placenta previa	4	4%
2	Preterm labour	21	21%
3.	Twins	3	3%
4.	Oligohydramnios	9	9%
5.	Pastdates	18	18%
6.	Rh negative	7	7%
7.	Uterine anomalies	1	1%
8.	IUGR	4	4%
9.	CPD	16	16%

Table-3. Indications for caesarean section

Indication	No of cases	Percentage
Fetal distress	10	26%
Cephalopelvicdisproprtion	14	36%
Severe preeclampsia	4	10%
Antepartum haemorrhage	3	8%
Past dates with failed induction	1	2%
twins	2	5%
malpresentation	4	10%
Cord prolapsed	1	3%

Figure-5. Intrapartum complications



The causes of anemia are increased demands, poor nutritional status, worm infestations like helminthiasis, illiteracy and ignorance to choose right type of nutritious diet and neglect to take the daily iron and multivitamin tablets. To counter this problem, more focused national programmes like FOGSI 12 by 12, where aim is to

achieve to achieve 12 gms of Hb% by the age of 12, are necessary

Figure-6. Birth weight of neonates

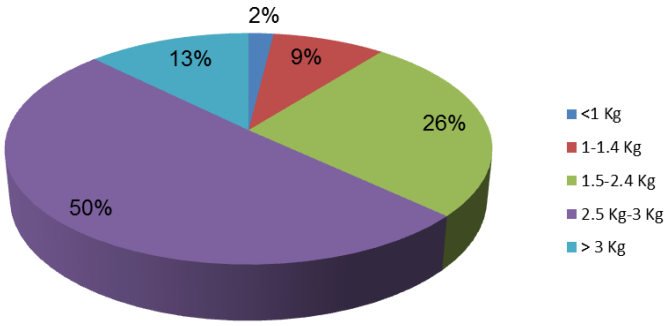


Table-4. Outcome in neonates

Outcome	No of cases	Percentage
Live births	95	92.2%
IUD	2	1.9%
stillbirth	1	0.9%
Neonatal death	5	4.8%
Total	103	100%

PIH :

Young teenage primigravid women from poor socio-economic status, malnutrition, anemia with negligible obstetric care are at risk for severe preeclampsia and eclampsia. The incidence of preeclampsia in our study is 21% comparable to various studies by Pal Amritha (13) et al 15%. Animabattacharya (14) et al 22.4%, Brigge (15) et al 29.2%, P.S.Phillips et al (16) as 22%.The overall incidence of eclampsia in our study was 3%. and in Anima (14) 2.2% S Singh, F.S. Phillips (16) 4.85%.

Cardiac Disease;

The incidence reported by various authors A.bhattacharya et al (14) 1.4%. F.S. Phillips (16) et al is 0.12%,In our study it was 2%. The commonest heart disease in childbearing age is mitral stenosis of rheumatic origin. During adolescent period the disease process is inactive and hence pregnancy is well tolerated.

Sexually transmitted diseases (STDs)

Incidence of STDs is significant among teenage pregnanciesWiesenfeldet al (18), studied the incidence of STI (Chlymadia, gonorrhoea, syphilis, trichomonasis) were shown to be 38.6%. Berger D K et al study had 3% HIV infection among pregnant adolescents.The incidence of STD (HIV) in our study was1%.Health and sex education about reproductive physiology, contraception must be provided. Sex education helps to reduce unwanted and unplanned pregnancy and sexually transmitted diseases like HIV.

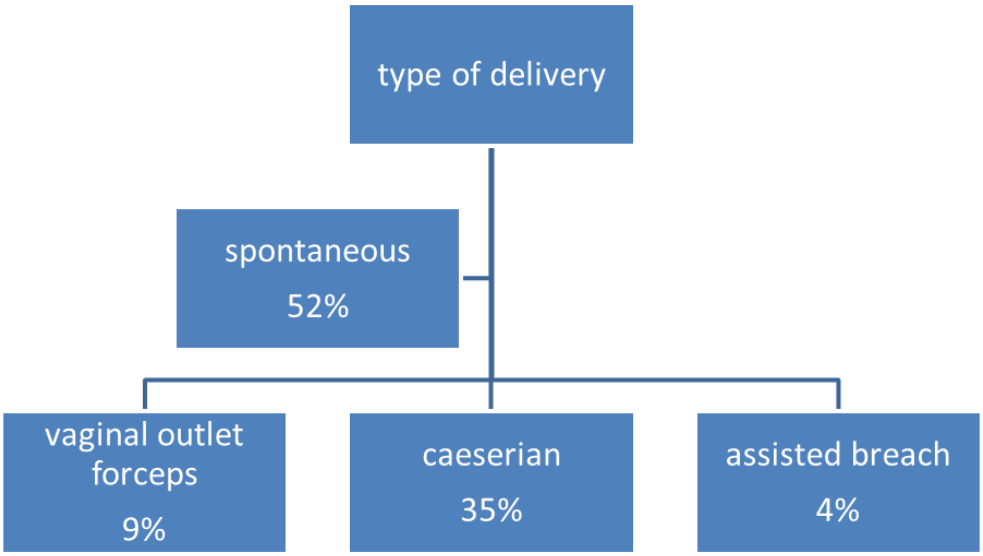
Parturition Problems

A high incidence of cephalopelvic disproportion was found in teenage mothers. Harrison(17) has shown that there is a high incidence of anteroposteriorly elongated round pelvis among those with adequate nutrition whereas high degree of anteroposterior flattening of pelvis is seen in those with malnutrition.

In the present study, preterm delivery is about 1/3rd of total teenage pregnancies.Bhaduria, Bhattacharya and Shravage JC studies showed high incidence of preterm delivery in teenage primigravidae. This could be due to high incidence of preeclampsia and anemia in teenage group.

The incidence of spontaneous vaginal delivery was 52%. Forceps delivery in our study was 9%. The

Figure-7. Type of Delivery



reasons for more number of forceps delivery are prolonged labour,uterine inertia,PIH, anemia, and to allay the anxiety and apprehension of teenage women. The incidence of normal delivery as quoted by different authors, Shravage JC study 21.4% (10), Bhattacharya et al 85% (14) F.S.Phillips and Sivakamasundari(16) 59%.

The caesarean section rate was 35% in the present study. The common indication for caesarean section was CPD 14% followed by fetal distress in 10% comparable. to studies of Shravage study 25% 12) Verma3%(11), 29.3%(12)Bhattacharya et al, Nayak et al 17.56%(19), Chabra study 21%(20), Aznar et al21 28%.CPD incidence could be bone immaturity.

The incidence of low birth weight babies, 2500g among teenage mothers is high. In the present study the incidence of low birth weight babies is 38%. The incidence of LBW as quoted by different authors; F.SPhillipsetalis 30%, Verma 35%,Shravage JC 71.4%, Ashok kumar (22) 50.4%. It is not clear whether the LBW is as a result of biological process because of not receiving adequate antenatal care and nutrition. It is possible that the uterine vasculature is less well developed in these young women. Among neonatal morbidities, incidences of birth asphyxia, RDS and neonatal hyper-bilirubinaemia were significantly more in the teenager group.

The present study, perinatal mortality was found to be 7.6%.with 2%IUDs and 3%anamolies. Prematurity, IUGR.were main causes of perinatal mortality. The incidence of perinatal mortality as reported by different authors is Anima biswas 6%, F.S.Phillips and Sivakamasundari 11.5%, (12,14,24).

Studies have confirmed that death rates among babies of young mothers are higher . British perinatal mortality survey(23)analysed and found that toxaemia, congenital defects and prematurity were more frequent. Goldberg(24)et al Lilienfald link low birth weight with later development of epilepsy, cerebralpalsy and mental retardation and greater risk of blindness and deafness, poor motor development and to depression of child's IQ. These long term studies are particularly significant where low birth weight is a problem.

Management Of Teenage Pregnancy

Teenage pregnancy is treated as a high risk pregnancy which needs multi speciality approach and worked up as such after antenatal booking and admission.. In the present study difficulty occurred regarding follow up of the teenage pregnant women .They were motivated to come for regular antenatal checkups and were explained regarding the problems and maternal and perinatal outcome regarding teenage pregnancy.

Management firstly includes preventive aspects .Health and sex education about menstruation, reproductive physiology, birth control measures and small family norm must be provided. Role of society is to create increased social awareness on sex education, and contraception, through media and also by health education at schools and colleges, in rural areas through health personnel.

Government initiatives on safe motherhood are to be practised effectively. Apart from MCH care, better transportation, and referral system, improvement in socioeconomic and educational status of the individual of our country should be the fundamental objective to achieve successful safe motherhood. Though prevention is our goal once teenage pregnancy occurs regular antenatal care, extra care in view of high risk pregnancy, and emphasis on good nutrition, Ensuring that the women's well-being was taken care of after their deliveries, by providing proper nutrition, education, early detection and treatment of complications and emphasis on hospital delivery, instating of family planning programmes to prevent further pregnancies (by Post-partum IUCD). Contraception can substantially reduce the mortality and complications from teenage pregnancy and child birth.

CONCLUSIONS

In conclusion, teenage pregnancy poses a problem to both the mother and foetus. It is associated with increased antenatal complications like anemia, preeclampsia, eclampsia, intrauterine growth restriction. Operative interventions like caesarean section and forceps are high. Perinatal mortality was high due to low birth weight babies resulting from prematurity or IUGR. It concerns not only the obstetrician but also the pediatrician and psychiatrist and in fact the whole family and the society.

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Competing interests

The authors have declared that no competing interests exist.

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