



A CLINICAL STUDY OF TEENAGE PREGNANCY –MATERNAL AND FETAL OUTCOME

KEY WORDS

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INTRODUCTION

Throughout the history of the world until the modern era, teen Pregnancies were the norm. When a young girl becomes sexually mature, She was married off and was expected to accomplish what she was biologically designed for i.e. giving birth to the next generation.

With modernization, teenage pregnancy rate is rapidly declining in developed countries, but it is still high in developing countries like India. The scenario of teenage pregnancy in developed countries is quite different from that of the developing countries and have distinctly different rates of pregnancy as well.

In India, teenage pregnancy constitutes 8-14% of total pregnancies.¹ Complications of pregnancy and childbirth in women between 13-19 years of age are the leading cause of mortality among women in India.1 Hence teenage pregnancy is a serious problem today all over the world and more so in developing countries like India.

According to the National Campaign to Prevent Teenage Pregnancy, nearly 1 in 4 teen mothers will experience another pregnancy within two years of having their first Pregnancy and giving birth significantly increases the chance that these mothers will become high school dropouts.

A report by "Save the children" found that annually 13 million children are born to women under 20 years, world wide. More than 90% of these births occur in developing countries.²

Influence of age on complications:

Various studies show that teenagers encounter more maternal and fetal complications but the complications are more among the 15 - 17 age groups. Bhalerao A.R. et al (1990) compared the outcome of pregnancy in the 15 -17 age group with that of girls in the 17- 19 age group.³ In his study, he found out.

According to Ballard and Gold, complications are more in women less than 15 yrs and the adolescent above the age of 15 who escapes toxemia, anemia and premature labor, seems to enjoy a relatively benign obstetric course.⁴

Incidence of teenage pregnancy varies widely among various studies. Study made by T. Thekkekara and J. Vennu (2006) shows a very high incidence of 52% which might have been due to illiteracy and social customs in the area where the study was conducted.

The incidence of CPD was 1.5% according to Bhalerao (1990) and 2.6% as reported by Phillips and Sivakamasundari²⁰ (1978). Kumar Ashok (2006) reported that frequencies of PIH, eclampsia and preterm labor were significantly increased in teenage pregnancy. At the same time, there was no difference in the incidence of gestational diabetes, oligohydramnios, polyhydramnios, and APH between cases and controls.

All studies show statistically significant difference in the rate of low birth weight infants, still births and perinatal mortality rate between the teenage group and the control group.

Pratinidhi (1990) commented that perinatal mortality rate was 7 -16 times greater when associated risk factor except anemia were present.⁵ Late neonatal mortality was 2.2 times higher among infants with mothers under 18 yrs old.

Kumar Ashok (2006) found that neonatal mortality was found to be almost 3 times more common in babies born to teenage mothers compared to the controls and the difference was statistically significant.⁷ The most common cause of neonatal mortality in both cases and controls was prematurity followed by perinatal asphyxia.

All authors reported an increased incidence of low birth weight among babies born to teenagers. According to Bhalerao's (1990) study, 44.1% of the babies were low birth weight; 50.4% of teenage mothers gave birth to low birth weight babies according to Pratinidhi¹⁹ (1990) and 87.2% of teenage mothers had low birth weight babies in Kumar Ashok's study.⁷ Kumar Ashok (2006) showed increased incidence of other neonatal complications such as perinatal asphyxia, Jaundice and respiratory distress syndrome.⁷ Incidence of meconium aspiration syndrome, congenital anomalies and sepsis were similar in both the groups.

M.K. Malviya (2003) recorded anthropometric measurement such as birth weight, crown heel length, head circumference, chest circumference and midarm circumference within 24 hrs in all newborns and were significantly reduced in children born to teenagers.⁸

In Jharkand, a 16 hour course prepared by UNESCO, named 'Learning for life' 'Jeevan ke liye shiksha' has been made compulsory for class 11 and class 12 students which educates about HIV, STDs, teenage pregnancy and ways to prevent it.

All over India, 2 programs have been initiated by FOGSI. 'Growing Up' program initiated by FOGSI in partnership with Johnson and Johnson educates schoolgirls on menstruation, its myths and hygiene, anatomy and functioning of the reproductive system, value of good nutrition and exercises, problems of drugs, alcohol and smoking and about sexual abuse. Another program 'Let's talk' initiated by FOGSI in association with Organo educates college going women about various forms of contraception. 'Teenage girl clinic', set up in various Government hospitals tackles various problems encountered by teenage girls and distributes iron tablets to teenage girls to improve adolescent health.

Maternal and perinatal complications are definitely increased in teenage pregnancy for the following reasons:

- Physical immaturity
- Lack of health care knowledge
- Poor diet

- Inadequate antenatal care
- High levels of emotional distress
- Dropping of education

A teenage mother is both physically and mentally immature to deal with pregnancy, labor and child rearing. First and foremost is the emotional stress when encountered by an unplanned pregnancy. Because of the gynecological immaturity, she develops all sorts of complications during pregnancy and labor like anaemia, pregnancy induced hypertension, nutritional deficiencies, preterm labor, cephalopelvic disproportion, intrauterine death, prolonged labor and malpresentation and obstructed labor leads to increased operative intervention. Following delivery, she has to take care of a demanding baby, day and night which often leads to tiredness and frustration. Moreover, financial difficulties too put additional stress on her. To add to that, she is likely to have successive pregnancies which makes her whole life miserable.

The present approach is to provide general health education about the risks of teenage pregnancy, strictly enforce the minimum age of marriage is 18 yrs in girls and 21 yrs in boys as per law of marriage, screen all pregnant mothers for risk factors and provide at risk mothers with education about childbearing and rearing and referral to a tertiary hospital for safe delivery. A multidisciplinary approach involving educationists, health workers, social workers and obstetrician and gynecologists is required to improve the adolescent's reproductive health.

AIM OF THE STUDY:

1. To find out the percentage of teenage pregnancy.
2. To know the maternal outcome of teenage pregnancy
3. To know the perinatal outcome of teenage pregnancy

7.1 Source of Data:

The study group will comprise all teenage pregnancies from the Basaveshwar Teaching and General Hospital and Sangameshwar Teaching and General hospital attached to Mahadevappa Rampure Medical College, Kalaburagi.

7.2 Methods of collection of Data:

A prospective study of pregnancies and its outcome in all teenage pregnant women attending –MAHADEVAPPA RAMPURE MEDICAL COLLEGE(OBG DEPARTMENT)

Is to be carried out during the period November 2014 to November 2016.

- Pregnant women attending obg opd are taken for study.
- Gravid women of age 13 to 19 yrs are taken for study
- Information regarding age, educational status, occupation, marital status, age at marriage, health awareness, knowledge about pregnancy and delivery, antenatal visits are obtained from history.
- Basic checkup like Height and Weight of the patient, Hemoglobin and B.P checkup are obtained informational data.
- Pregnancy which ended in ectopic pregnancy were followed till discharge
- Complications during antenatal period, delivery and postpartum period are noted.
- Details regarding mode of delivery and birth weight of the baby are noted.
- Baby details are noted

Sample size: 109 cases

Duration of Study: Two years of prospective study have been carried out from november 2014 to november 2016

Inclusion Criteria:

1. Study Group: 13- 19yrs.
2. Primigravidae are taken in to account for the study, to eliminate

- influence of parity on maternal complication and birth weight of the newborn.
3. Only primigravidae with singleton or multiple pregnancy are taken in to account.
 4. only pregnancies that have crossed the period of viability are taken into consideration as this study mainly focuses on the neonatal outcome of teenage pregnancy.

Exclusion criteria:

1. Multigravidae
2. Primigravidae undergoing abortions
3. Pre-existing medical disorders like congenital heart diseases, are excluded.

Study type: Hospital based prospective type of study

RESULTS

TABLE 1- AGE DISTRIBUTION

AGE DISRIBUTION	13	14	15	16	17	18	19
NO OF CASES	1	10	11	12	24	21	30

Out of 109 cases studied maximum no of pregnancies were distributed between the age group of 17,18,19

TABLE 2-DURATION OF PREGNANCY AT DELIVERY

1. PRETERM DELIVERY- 32-36WEEKS	30
<32 WEEKS	8
2. TERM	65
3. POST TERM	3

Preterm delivery-34.86%,term delivery-59.63%,post term delivery-2.75%

TABLE 3-INCIDENCE OF OBSTETRIC COMPLICATIONS

1.PRETERM PRELABOUR RUPTURE OF LABOR	7
2.GESTATIONAL HYPERTENSION	10
3. PRE-ECLAMPSIA	11
4.ECLAMPSIA	9
5.POST PARTUM HAEMORRHAGE	2
6.OLIGOHYDRAMNIOS	7
7.ANAEMIA	27

There is high incidence of anaemia (25%) It is due to low store of iron in teenage women before conception increases the risk of developing anaemia during pregnancy. It is also seen that complications like PROM are high in teenage pregnancy which is due to biological immaturity of uterus leading to short cervix and increase chance of ascending infection which may bedue to poor hygiene in this group of women (9). There is also a high incidence of Gestational hypertension (9%),pre- eclampsia (10.02%) , eclampsia (8.25%) The incidence of oligohydramnios is 6.4%,

TABLE 4 – INCIDENCE OF ECTOPIC PREGNANCY

ECTOPIC PREGNANCY	3
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incidence of ectopic pregnancy is 2.75%,(among which one was due to bicornuate uterus)

TABLE5- INCIDENCE OF MODE OF DELIVERY

I MODE OF DELIVERY	
SPONTANEOUS VAGINAL DELIVERY	46
INSTRUMENTAL (FORCEPS AND VACCUM DELIVERY)	5
CAESEREAN DELIVERY	55

Mode of delivery

Spontaneous mode of delivery (43.39%), instrumental delivery(4.7%)

Caesarean section (51.88%)

UNBOOKED CASE	30
BOOKED CASE	79

Booked case are 72.47%, unbooked case are 27.52%

TABLE 6-BIRTH WEIGHT OF BABIES BORN TO TEENAGERS

LOW BIRTH WEIGHT (1.5-2.5KGS)	48
NORMAL (2.5-3.5KGS)	53
VERY LOW (<1.5KGS)	9

There is high incidence of low birth weight in teenage pregnancy i.e.43.63% ,very low birth weight(8.1%), normal weight 48.18%

TABLE 7-APGAR SCORE (<7) OF BABIES BORN TO TEENAGE MOTHERS

5-MIN APGAR SCORE(<7)	24
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Incidence of baby having less than 7 APGAR score is21.81%

TABLE 8-INCIDENCE OF CONGENITAL MALFORMATIONS

CONGENITAL MALFORMATIONS	1
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One baby is found to have congenital malformation (congenital heart disease).

TABLE 9-INCIDENCE OF ADMISSION OF BABIES BORN TEENAGEMOTHERS TO NICU

ADMISSION TO NICU	29
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There is a high incidence of admission to NICU 26.36%

TABLE-10 INCIDENCE OF STILL BIRTH

STILL BIRTHS	6
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Incidence of still birth is 5.4%

TABLE-11 INCIDENCE OF TWIN PREGNANCIES AMONG TEENAGEMOTHERS

TWINS	4
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Incidence of twins is 3.6%

CONCLUSION

Out of 109 cases of study group caesarean section rates are high about 51.88% and many teenagers had preterm delivery about 34.86% and incidence of low birth weight are about 43.63% are high incidence of admission to NICU are high, so it is important to create awareness among the public about teenage pregnancy and complications of the same

REFERENCES:

- Philips FS, Sivakama Sundari S, Teenage Pregnancy, Journal of Obstetrics & Gynaecology of India 1978;28-576-581.
- www.wikipedia.org/wiki/Global-incidence-of-teenage-pregnancy.
- Bhalerao A R, Desai S V, Dastur N A, Daftary S N. Outcome of teenage pregnancy - Journal of Postgraduate Medicine (1990) Vol 36, Issue 3, pg. 136-139.
- Ballard W M, Gold E M. Medical & health aspects of reproduction in the Adolescent - Clinical obstetrics & Gynaecology 1971;14:338-366.
- T. Thekkekara, J. Veenu Factors associated with teenage pregnancy India Journal of community medicine, Vol. 31, No2, Apr-June, 2006.
- Pratinidhi A, Shrotri A, Shah V, Risk of teenage pregnancy in a rural community in

- India Indian Journal of Maternal & Child health 1990, Oct-Dec; 1(4): 134-8.
- Kumar Ashok, Singh Tej, Basu Sripani, Pandey Sulekha, Bhargava V. Outcome of teenage pregnancy- Indian Journal of paediatrics 2007, Vol:74, Issue :10, pg. 927-931.
- M.K. Malviya, V.K. Bharadwaj, M. Chanson & S.Khare - Anthropometric Profile & Perinatal outcome of babies born to young women Indian Paediatrics 203;40: 971- 976