

Obstetric outcome of teenage pregnancy

H C Savitha¹, Sanjay Kumar C^{2*}, Deepthi H R³

¹Associate Professor, ²Assistant Professor, ³Resident, Department of OBG, MIMS, Mandya, 571401, Karnataka, INDIA.

Email: drsanjayobg1802@gmail.com

Abstract

Background: Teenage pregnancy is a social problem worldwide with a serious implication on maternal and child health. The objective of this study is to compare the maternal and perinatal outcomes between teenage girls (age between 13 to 19 years) and pregnant adults (age between 20-29 years). **Methods:** We performed a retrospective analysis of case records on teenage pregnancies from January 2013 to June 2013 in the department of Obstetrics and Gynaecology, Mandya Institute Of Medical Sciences, Mandya, Karnataka, India, a referral tertiary care centre and teaching hospital with over 6000 deliveries annually. Pregnancy outcomes in girls aged 13-19 years were compared with those in women aged 20-29 years. **Results:** The incidence of teenage pregnancy was 6.56%, majority of teenagers were primigravida. The study showed that teenage mothers are at increased risk of having abortions, preeclampsia, low birth weight babies and perinatal mortality. **Conclusion:** Our study showed that risk of obstetric complication was no higher in adolescents than in adult women, but adolescent tended to have higher incidence of abortion, pre-eclampsia, low birth weight babies and perinatal mortality. Early booking and good antenatal care should improve the obstetric and perinatal outcome in teenage pregnancies.

Keywords: Teenage Pregnancy, Complications, Obstetric and Perinatal outcome.

*Address for Correspondence:

Dr Sanjay Kumar C, Assistant Professor, Department of OBG, MIMS, Mandya, 571401, Karnataka, INDIA.

Email: drsanjayobg1802@gmail.com

Received Date: 13/04/2018 Accepted Date: 28/06/2018

Access this article online	
Quick Response Code:	Website: www.statperson.com
	Volume 8 Issue 3

INTRODUCTION

Adolescent or teen is defined as women when aged 10-19 years by WHO definition which called adolescents as aged 15-19 years and younger adolescents when aged 10-14 years.¹ Teenage pregnancy is a worldwide social problem: an estimated 16 million girls between the ages 15-19 yrs give birth every year, with 95% of these births occurring in developing countries. This number represents 11% of all births worldwide. Seven countries account for half of all adolescent births: India, Bangladesh, Brazil, the Democratic republic of the Congo, Ethiopia, Nigeria and the United States of America.² Teenage pregnancy represents a high risk group in reproductive terms because of the double burden of reproduction and growth.³ Teenagers make up more than one billion i.e., nearly one fifth of the world population.⁴ Pregnancy in this transitional stage is a common public health problem and social phenomenon

with medical consequences worldwide. In this context adolescent pregnancy has longly been a problem with adverse obstetric and neonatal outcomes being influenced by biological immaturity, unintended pregnancy, inadequate perinatal care, poor maternal nutrition and stress. Socioeconomic, cultural, geographic and racial factors are also associated with teenage pregnancy and poor pregnancy outcome.

MATERIAL AND METHODS

We conducted a retrospective study on obstetric outcome of teenage pregnancy (13-19 years) from January 2013 to June 2013 (6 months duration) in the department of obstetrics and gynaecology, Mandya Institute of Medical Sciences, Mandya, Karnataka, India, a referral tertiary care centre and teaching hospital with over 6000 deliveries annually. The following variables were extracted from medical records: maternal age, marital status, socio-economic status, number of antenatal visits, gestational age at delivery, mode of delivery, obstetric and perinatal complications. 230 cases of teenage girls (13-19 yrs) delivered during this particular period were studied and compared with same number of cases in the adult age group (20-29 yrs). Age between 20-29 yrs was taken as control group because this age group is generally regarded as safe for childbirth. Women with pre-existing medical diseases like congenital and rheumatic heart disease, chronic hypertension, overt diabetes mellitus, hypothyroidism etc., are excluded. Statistical analysis was

done using SPSS software. Data were analysed using descriptive studies and chi square test. P value<0.005 is considered as significant.

OBSERVATION AND RESULTS

Total no. of cases in study group (13-19yrs): 230

Total no. of cases in control group (20-29yrs): 230

- Mean age of study population was 18.5 years and that of control group was 23.5 years.
- Mean age at marriage in teenage group was 15 years and in control group was 22years.

- Majority of the teenage group belonged to low socioeconomic status (86%).
- Majority of teenage mothers were primigravida (87.8%), we had one case of gravida 4 in teen age group who had two abortions and one caesarean section previously (85%) of teenage pregnancies were booked.
- The incidence of anaemia was same in both the groups (62%), but severe anaemia was less common in teenage group (5.6%) as compared to control group (10.8%). Other complications are listed below (Table-1)

Table 1: Maternal Complications

Complications	Study group (%) 13- 19 Years	Control Group (%) 20-29 Years	Chi- Square Value (P value)	Statistical significance
Severe Anaemia	13(5.6)	25(10.8)	4.130 (0.042)	S
Preterm delivery	14(6)	19(8.2)	0.816 (0.366)	NS
PROM	19(8.2)	32(13.9)	3.11 (0.077)	NS
PPROM	5(2.1)	3(1.3)	0.508 (0.475)	NS
Preeclampsia	23(10)	10(4.3)	5.517 (0.018)	S
Malpresentation	6(2.6)	10(4.3)	10.036 (0.308)	NS
Multiple pregnancy	1(0.4)	2(0.8)	0.335 (0.564)	NS
APH	1(0.4)	2(0.8)	0.335 (0.564)	NS
Congenital anomaly	00	2(0.8)	2.008 (0.156)	NS
Abortion	18(7.8)	5(2.1)	7.73 (0.0054)	S
Oligohydramnios	22(9.5)	21(9.1)	0.0257 (0.872)	NS
IUGR	6(2.6)	7(3)	0.079 (0.77)	NS
PPH	2(0.8)	00	2.008 (0.156)	NS

Table 2: Indications for Caesarean Section: Total no. of LSCS in study group (13-19yrs): 53(23.04%) total no. of LSCS in control group (20-29yrs): 82(35.65%)

Indication	Study Group (%) 13- 19 Years	Control Group (%) 20-29 Years	Chi- Square Value (P value)	Statistical significance
CPD	11(21)	12(14.6)	0.8532(0.355)	NS
Fetal distress	26(49)	16(18.5)	13.11 (0.000294)	S
APH	1(1.9)	1(1.2)	0.098 (0.753)	NS
Malpresentation	4(7.5)	10(12.2)	0.74 (0.387)	NS
Previous LSCS	3(5.6)	24(29.2)	11.21 (0.000812)	S
Failed induction	5(9.4)	2(2.4)	3.20 (0.073)	NS
IUGR	1(1.9)	3(3.6)	0.35 (0.55)	NS
DTA	2(3.8)	1(1.2)	0.96 (0.325)	NS
Oligohyramnios	00	13(15.8)	9.29 (0.00229)	S

Table 3: Foetal and Neonatal outcomes

	Study Group 13-9yrs (%)	Control Group 20-9yrs (%)	Chi-square value (p Value)	Statistical significance
Abortion	18(7.8%)	5(2.1%)	0.0054	S
Prematurity	14(6%)	19(8.2%)	0.366	NS
LBW	62(27%)	36(15.6%)	0.00024	S
Perinatal mortality	7(3%)	1(0.4%)	0.032	S

DISCUSSION

Incidence of teenage pregnancy in the present study is 6.56% whereas the other studies showed incidence ranging from 8.3 to 23.5% ^{5, 6, 9, 11, 14}. In our study mean age is 18.5 years in teenage group and that of control is 23.5 years. Incidence of abortion was about 7.8% in teenage group as compared to 2.1% in control group

which was statistically significant. There were two cases of unmarried teenage pregnancy of which one underwent abortion and other had full term normal delivery. We did not come across any unmarried mother in control group. It is common practice for unmarried mothers to go for termination of pregnancy.⁵ Incidence of pre-eclampsia was significantly higher in study group. This is in

accordance with other studies.^{4,5,7,8,9,10,13,14} Even though the incidence of anaemia was same in both the groups which is in accordance with many studies^{6,9}, the incidence of severe anaemia was significantly low in teenage group as compared to control group. Regarding the mode of delivery, incidence of caesarean section was significantly less in teenage group which is in accordance with previous studies^{3,4,7,11,13,15} and contrast to other studies^{3,5,7,9,11}. This can be attributed to higher proportion of smaller babies and lower incidence of oligoamnios in teenage group. Opinion on modes of delivery by operative interventions in teenage pregnancy differed widely. Some authors have reported higher rate of instrumental deliveries in case of teenage pregnancies. The possible explanation could be under development of pelvis in teenage mothers. Others have shown no significant difference in the mode of delivery between the two groups^{3,5,6,7,8,15}. The common indications for caesarean section in our study is foetal distress (50%), followed by cephalopelvic disproportion (21.1%). This study correlates with the study of Dutta I where the incidence of foetal distress was (68.5%)¹⁶. There was no significant statistical difference in preterm delivery between the two groups which is in accordance with many studies^{6,9, 11,12} and contrast to other studies where preterm delivery was significantly high in teenage group.^{4,5,7,8,10,12,13,14,15} Many studies have reported poor perinatal outcome in the form of low birth weight and increased perinatal mortality which is in accordance with our study^{3,4,5,10,13,14,15} whereas others found no statistical significance between two groups.^{6,8,9,11,12}

LIMITATIONS

Since study was done in a tertiary care hospital, it may not truly reflect the prevailing situation in the community. Adverse perinatal outcome of teenage pregnancy could have been confounded by the different socio-demographic characteristics in the two groups.

CONCLUSION

Teenage pregnancy is an unresolved problem in developing countries like India. Our findings suggest that long held beliefs about the risk related to teenage pregnancy are not all justified. Obstetric complication was no higher in adolescents than in adult women, but adolescent tended to have high incidence of abortion, pre-eclampsia, low birth weight and perinatal mortality. Early booking and good antenatal care should improve the obstetric and perinatal outcome in teenage pregnancies.

REFERENCES

1. WHO. Adolescent pregnancy: issues in adolescent health and development. Geneva: WHO, 2004.

2. Cibula D women's contraceptive practices and sexual behavior in Europe. *Eur J Contracept Reprod Health Care*. 2008 Dec;13(4):362-75
3. Prianka Mukhopadhyay, R.N. Chaudhuri, Bhaskar Paul. Hospital-based Perinatal Outcomes and Complications in Teenage Pregnancy in India. *J Health Popul Nutr* 2010 Oct; 28(5):494-500.
4. KD, Chauhan M. Outcomes of Adolescent Pregnancy at Kathmandu University Hospital, Dhulikhel Hospital. *Kathmandu Univ Med J* 2011; 33(1):50-3.
5. Supanan Chairaj, Kasorn Tosang, Suvanna Asavapiryanont, Uraivan Chotigeat. Outcome of Teenage Pregnancy in Rajavithi Hospital. *J Med Assoc Thai* 2010; 93(1):1-8.
6. Suwal A. Obstetric and Perinatal Outcome of Teenage Pregnancy. *J Nepal Health Res Counc* 2012 Jan; 10(20):52-6.
7. Vorapong Phupong, Keng Suebnukarn. Obstetric Outcome in Nulliparous Young Adolescents. *Southeast Asian J Trop Med Public Health* 2007 Jan; 38(1):141-145.
8. M.C. Jolly, N. Sebire, J. Harris, S. Robinson, L. Regan. Obstetric Risks of Pregnancy in Women Less Than 18 Years Old. *Obstetric Gynecol* 2000; 96(6):962-6.
9. Sabry M. Hammad, Reda Q. Al-Enazi. Does teenage pregnancy affect obstetric outcomes. *The Egyptian Journal of Community Medicine*. 2010 July; 26(3):25-35.
10. Chutatip Tantayakom, Japarath Prechapanich. Risk of Low Birth Weight Infants from Adolescent Mothers: Review Case Study in Siriraj Hospital. *Thai Journal of Obstetrics and Gynecology* April 2008; 16(2):103-106.
11. Nusrat Shah, Dileep Kumar Rohra, Samia Shuja, Nagina Fatima Liaqat, Nazir Ahmad Solangi, Kelash Kumar et al. Comparison of obstetric outcome among teenage and non-teenage mothers from three tertiary care hospitals of Sindh, Pakistan. *J Pak Med Assoc* 2011; 61(10):963-967.
12. Nathalie A, Fleming, Xiaowen Tu, Amanda Y. Black. Improved Obstetrical Outcomes for Adolescents in a Community-Based Outreach Program: A Matched Cohort Study. *J Obstet Gynaecol Can* 2012; 34(12):1134-1140.
13. Candan Iltemir DUVAN, Nilgun Ozturk TURHAN, Ilknur Inegol GUMUS, Hilal YUVACI, Elif GOZDEMIR. Adolescent Pregnancies: Maternal and Fetal Outcomes. *The New Journal of Medicine* 2010; 27:113-116.
14. Bhalerao AR, Desai SV, Dastur NA, Daftary SN. Outcome of teenage pregnancy. *J Postgrad Med* 1990; 36:136-9.
15. Siddhartha Yadav, Dilip Choudhary, Narayan K.C., Rajesh Kumar Mandal, Achyut Sharma, Siddharth Singh Chauhan et al. Adverse Reproductive Outcomes Associated With Teenage Pregnancy. *McGill journal of medicine* 2008; 11(2):141-1
16. Dutta I, et al. Maternal and perinatal outcome in teenage vs. vicenarian primigravidae- a clinical study. *J Clin Diagn Res*. 2013 Dec; 7(12): 2881-4.

Source of Support: None Declared
Conflict of Interest: None Declared