A Clinical Study of Outcome of Teenage Pregnancy and Labour

Sudha R[1], Roopa Prakash[2]

ABSTRACT

Introduction: A pregnant teenager ''A child in child" as to meet the growing demands of fetus in addition to her own growing needs, thus putting her in a stressful situation. She is at high risk and more vulnerable for complication. Study was done with objectives to find out the situation of teenage pregnancy at JSS hospital, during the study period, to identify in various demographic factors such as habitat, religion, socio-economic and educational status in the materno fetal outcome, to study the antenatal, intranatal and postnatal complication in teenage pregnancy group and comparing them with the adult group and to study the incidence of perinatal mortality and morbidity in teenage group and comparing them with the adult group.

Material and Methods: A randomized clinical trial was conducted in the department of OBG. JSS Hospital, Mysore, study period from 1st April 2002 and 31st July 2003, to study included 250 teenage pregnant girls. The obstetric outcome of 250 teenage pregnancies (13-19 years) was compared with the 250 adult pregnancies.

Result: The incidence of teenage pregnancies was observed to be 13.92%. Majority of the teenage age group of 18- 19 years (223) were from the rural areas that is 169(67.6%)

Conclusion: Majority of teenage pregnant girl were from rural areas with poor educational standards and low socioeconomic standards and they are unaware of the importance of the antenatal visits. Hence teenage pregnancy should be considered as an high risk pregnancy and they are in need of extra medical care, close antenatal checkups for early detection and appropriate management of the complications.

Keywords: Teenage Pregnancy, child

INTRODUCTION

Pregnancies among adolescents is on the increase both in the developed as well as developing countries.[1] A pregnant teenager ''A child in child" as to meet the growing demands of fetus in addition to her own growing needs, thus putting her in a stressful situation.[2-5] It is a topic of increase concern to obstetrician, pediatrician and other physician as well as other health workers and community as whole.

Adolescence is a period of high nutritional needs due to rapid growth and development of growing body. Due to biologic immaturity of the adolescent, the body is often ill prepared to sustain a pregnancy and provide safe delivery to the fetus. Hence teenage pregnancies constitute a high risk group requiring high priority services. From the obstetrics stand point the properly managed teenage pregnancy presents a few problem and comes to definite conclusion. Worldwide pregnancy related deaths are the main causes of death in 15-19 years old females and death rate from causes related to pregnancy are particularly high in girls less than 18 years (WHO technical report series 1977). In view of the above facts it was thought necessary to analyses statistically the obstetric problems in teenage pregnancy from our institution. The study comprises of supervised group of teenage pregnancy of 19 years or younger in our institution.

Aim and objectives of the study were to to find out the situation f teenage pregnancy at JSS hospital, during the study period, to identify in various demographic factors such as habitat, religion, socio-economic and educational status in the materno fetal outcome, to study the antenatal, intranatal and postnatal complication in teenage pregnancy group and comparing them with the adult group and to study the incidence of perinatal mortality and morbidity in teenage group and comparing them with the adult group.

Special problem in teenage pregnancies

- Anemia
- Pregnancy induced hypertension (PIH), Preeclampsia and Eclampsia
- Preterm labour
- Abortions
- Antepartum hemorrhage
- Congenital malformation
- Intrauterine growth retardation
- Low birth weight babies
- Perinatal mortality
- Maternal mortality
- Infants of adolescent mothers

MATERIAL AND METHODS

A randomized comparative study was conducted in the department of Obstetrics and Gynecology. JSS Hospital, Mysore, during the study period from 1st April 2002 and 31st July 2003 were 1795 of which 250 pregnant girls comprised of study group of teenage pregnancies, to study the obstetric outcome of teenage pregnancy and labour in that 250 teenage pregnant girls, i.e. age less than or equal to 19 years. The study protocol was approved by the local research ethics committee. In the same period the rest of the obstetric case i.e., more than or equal to 20 years was taken as control. This was a comparative study involving 250 pregnant girls and 250 pregnant women. The cases were selected on the basis of the simple random sampling method.

Inclusion criteria: The pregnant girls between 15-19 years were taken for the study.

Exclusion criteria: Pregnant women more than 20 years were excluded from the study.

[1]Associate Professor, Department of OBG, [2]Consultant, Department of obstetrician and Gynecologist, MMCRI, Mysore, India

Corresponding author: Dr. Sudha R, No 12, 3rd Block 2nd stage, SBM Colony, Srirampura, Mysore 570023, India

How to cite this article: Sudha R, Roopa Prakash. A clinical study of outcome of teenage pregnancy and labour. International Journal of Contemporary Medical Research 2017;4(1):201-204.

STATISTICAL ANALYSIS

Data was analyzed by using percentages, mean values, standard deviation and proportion or chi-square tests of significances. The values calculated were compared with the table values (readily available or prepared) at 0.05 and 0.01 levels of significances for the corresponding degrees of freedom. P <0.05 was considered as significant and P>0.05 was considered as not significant.

RESULTS

The total number of pregnant women admitted in JSS hospital in the study period were 1795 of which 250 pregnant girls comprised of study group of teenage pregnancies. Analysis of the incidence of teenage pregnancies retrospectively for the last 2 years f 2001 and 2000 in our hospital was done. The percentage was 10.86 and 10.65% respectively. In present study, the incidence was 13.92%.

In the present study, the percentage of teenage pregnancy in teenage girls are 15years (1, 0.4%), 16years (21,8.4%) 17years (21, 8.4%), 18 years (101, 40.4%) and 19years (127,48.8%). The average age was 18.3 years with a standard deviation of 0.8 years. The youngest mother in the present study was 15 years. The age related incidence of the teenage pregnancies revealed on higher incidence of increasing age, which is common tendency observed in all other studies.

215 (86%) belonged to Hindu religion, 17 (10.8%) to Muslim religion and only 8 (3.2%) were Christian. 69 (67.6%) of pregnant teenage girls were from rural areas and the remaining 81 (32.4%) were from urban areas. Majority of the pregnant teenagers were illiterates i.e., 105 (42%). This was because most of them were from rural areas (67.6%) where the general literacy rate is very poor. 87 (34.8%) belonged to low socio-economic status, 107 (42.8%) to middle socio-economic status and only 6 (2.4%) belonged to high socio-economic group. 142(56.8%) were booked cases, 36 (14.4%) were unbooked cases

The majority of teenage girls were primigravidae. Among the gravida –II 7 (2.8%) had previous spontaneous abortion, 3 (12%) had previous perinatal deaths. Among 5 gravida –III, 3 had perinatal deaths, 2 had spontaneous abortion. Among 3 multigravida one had all the 1st trimister spontaneous abortions among and other 2 had history of 1 perinatal death and abortion and in 1, The present pregnancy also ended up in spontaneous first trimester abortion.

The average height study group was 150.5cms with a standard deviation 4.4 cm. The majority of teenagers were seen in the height group of 146-150cms (138, 55.2%).

The table 1 and 2 shows various ante natal complications and complications during labor observed in the study group of teenage pregnancy girls compared with the control group of pregnant women.

Sl No	Antenatal complication	Teenage group		Adult group		P – value	Inference
		Number	%	Number	%		
1	Anemia	85	34.0	49	19.6	<0.05	S
2	PIH (Gestational Hypertenstion)	25	10.00	12	4.8	<0.05	S
3	Preeclampsia	11	4.4	3	1.2	<0.05	S
4	Eclampsia	4	1.6	2	0.4	<0.05	S
5	Preterm Labour	23	9.2	11	4.4	<0.05	S
6	Abortion	14	5.6	6	2.4	<0.05	S
7	Molar Pregnancy	1	0.4	0	0	0	0
8	Hyperemesis	10	4.0	5	2.0	<0.05	S
9	Malpresentation	8	3.2	7	2.8	>0.05	NS
10	Multiple pregnancy	3	1.2	3	1.2	>0.05	NS
11	Abruptio Placenta	1	0.4	0	0	0	0
12	Placenta Previa	1	0.4	5	2.0	0	0
13	PROM	14	5.6	9	3.6	<0.05	S
14	IUGR	9	3.6	4	1	>0.05	NS
15	IUFD	6	2.4	6	2.4	<0.05	S
16	Rh negative	7	2.8	9	3.6	>0.05	NS
17	Cardiac disease	4	6.6	2	0.8	>0.05	NS
P >0.05 not significant (NS); P<0.05 Significant (S)							

Table-1: Antenatal complications

Sl no	Complications during labour	Teenage group		Adult group		P value	Inference
		Number	%	Number	%		
1	CPD	24	9.6	19	7.6	>0.05	NS
2	Contracted pelvis	7	2.8	10	4	>0.05	NS
3	Prolonged labour	5	2	2	0.8	>0.05	NS
4	Malprsentation	8	3.2	7	2.84	>0.05	NS
5	Fetal distress	34	13.6	16	6.4	<0.05	S
6	Cord presentation	1	0.4	0	0	-	-
7	Retained placenta	2	0.8	1	0.4	>0.05	NS
8	PPH	1	0.4	5	2	<0.05	S
P >0.05 not significant (NS), P<0.05 Significant (S)							

Table-2: Complications during labour

Sl no	Modes	Teenage group		Adult group		P value	Inference
		Number	%	Number	%		
1	FTND	96	38.4	154	61.6	<0.05	S
2	PTND	23	9.2	11	4.4	<0.05	S
3	ABD	2	0.8	Nil	Nil	<0.05	S
4	Instrumental delivery	29	11.6	22	8.8	<0.05	S
5	LSCS	89	35.6	55	22	<0.05	S
P >0.05 not significant (NS) P<0.05 Significant (S)							

Table-3: Mode of delivery

Sl no	Complications	Teenage group		Adult group		P value	Inference
		Number	%	Number	%		
1	Prematurity	23	9.2	11	4.4	<0.05	S
2	Low birth weight	69	28.8	41	16.5	<0.05	S
3	Post maturity	1	0.4	0	0	-	-
4	Birth asphyxia	26	10.4	14	5.6	<0.05	S
5	Congenital anomalies	8	3.2	2	0.8	<0.05	S
6	Perinatal fetal loss	15	6.5	6	2.4	<0.05	S
P >0.05 not significant (NS) P<0.05 Significant (S).							

Table-4: Fetal outcome

Indication for cesarean section

The indications for cesarean section were Fetal distress 34 (13.6%), CPD 24 (9.6%), Malpresentation, Contracted pelvis and Previous LSCS (table-3).

Indication for outlet forceps delivery

The various indications for outlet forceps delivery in teenagers were Fetal distress (4.4%), Failure to secondary forceps (1.6%), Preterm (0.8%), Cardiac disease, Anemia, Eclampsia and preclamsia had 0.4% (table-4).

In majority there were 93 (43.6%) babies in teenagers vs 94 (39.8%) in adults weighed between 2500-2999 gms in term babies. In preterm babies there were 14 (53.8%) babies in teenagers compared to 3 (27.2%) in adults weighed between 1500-1999gms. The perinatal fetal mortality rate in teenage group was observed to be almost 3 times higher in teenage group i.e., 15 (6.5%) Vs adult group 6 (2.4%).

DISCUSSION

The obstetric outcome of 250 teenage pregnancies (13-19 years) was compared with the 250 adult pregnancies (20 years and above) in JSS institution during the period of 1-4-2002 to 30-7-2003. Majority of the teenage study group belonged to the age group of 18- 19 years (223) and 122(48.8%) of the teenagers were at the 19 years. Average age was 18.3 years. The youngest mother was 15 years of age. There was a sharp increase in the teenage pregnancies with the increasing age. The incidence of teenage pregnancies as quoted by different authors in various literature ranges between 3.63%- 42% and present study shows 13.92%.[5,8]

The wide variation in the percentage of the unbooked cases from 14.4% -80% may be again due to the different population catered by the hospital, present study documented 14.4% unbooked cases which is compared to 18.23% by Arun H nayak.[2] All unbooked cases were anemic in the present study, where as other literature showed variability between 5.6%-47%.[2] In the present study incidence of anemia was 34% which is compared to 47% by Kachawa (1979). The young and growing girls places increased nutritional burden on the preexisting and nutritional status. The incidence of PIH and preeclampsia in various literatures varied from 9.8% to 35% and overwhelming evidence from the literature is of a greater risk of PIH and preeclampsia in young and teenage pregnancies. On the other hand, Hulka and Schaff, Osbourne and Zacker found no difference in the incidence in PIH and preeclampsia was 14.4% which is compared to 11.32% and 13.05% by Arun H Nayak and Kedar Padte respctively.[8]

The incidence (9.2%) of preterm labour in teenagers may be due the fact that there was a increased incidence of anemia, PIH, preeclampsia, malnutrition and also due to the biological immaturity of these teenagers whereas incidence in various literature ranging from 15%- 37%.[2,3,6] The incidence of abortion in various literatures varied from 5.5%- 17.9%.[4] The incidence of abortion in the present was 5.6% which can be comparable 5.5% and 6.2% by Semmens and Anzar respectively. Several authors reported induced abortion among teenagers especially in unmarried girls, in the present study the induced abortion was due to congenital anomalies in 3 cases and MTP done for 2 unmarried teenage girls. The incidence of the caesarean section as quoted in the various literatures ranging from 6.8% to 18%.[1,2,4,8] In the present study (35.6%), incidence of caesarean section was more compared various literature. Hassan and Falls (1964) pointed out that the incidence of caesarean delivery for CPD tends to rise in very young patients and reported an incidence of 7.6%. Anima, Bhattacharya (1985) reported a higher prematurity rate of 34.6% and Philips 30.8.[5,6] In present study incidence of prematurity was 23 (9.2%) compared to 11 (4.4%) in adult group.

The literature shows the perinatal mortality rate /1000 live births in various literature ranging from 42% to 144%[3,4,6,8] however in the present study it was 64.9%.

CONCLUSION

It is clearly evident from the present study the incidence of teenage pregnancy amounting to 13.92%.Majority of teenage pregnant girl were from rural areas with poor educational standards and low socioeconomic standards and they are unaware of the importance of the antenatal visits. Though the

minimum age at marriage is fixed at 18 years by legislation, the average age of the marriage in our study group was 17.3 years. In regard of fetal outcome, prematurity was 2 times high in teenagers and perinatal fetal loss was 3 times higher and also the incidence of LBW babies. Hence teenage pregnancy should be considered as an high risk pregnancy and they are in need of extra medical care, close antenatal checkups for early detection and appropriate management of the complications.

REFERENCES

1. Dutta D.C. Significance of age in primiparae. J. Obstet Gynaec. India. 1972;22:272- 277.
2. Duenholter J.H. Juan M. Jimenez and Gabriele Baumann. Am. J. Obstet Gynaec. 1975;46:49-52.
3. Goswami B.K. and B. Goswami. Teenage pregnancy in rural area. J. Obstet Gynaec. India. 1989;39:457-477.
4. Srinivasan C., John Srinivasan and Radha Bai Prabhu. Clinical study of teenage pregnancy (1883 cases). J. Obstet. Gynaec. India. 1985;35:666-669.
5. Amini S.B. et al. Births to teenagers. Trends and obstetric outcomes. Obstet and Gynec. 1996;87:668-674.
6. Bhattacharya A, Nandita Chowdhar. Teenage primigravidae. 1962;269-271.
7. Cunningham et al: William Obstetrics: 21st Edition, Prentice-Hall International INC. 569-577.
8. Behera. R.C. and Kedar Padte. Unmaried teenage Pregnancy : A multifactorial and multidimentinal medico-social problem': J. Obstetric Gynaec. India. 1989;39:130-4.
9. Whitfield et al. Dewhurst's text book of Obstetrics and Gynecology for Postgraduates. 5th edition: Balckwell Sciences: 312-13.
10. K. Park et al `Parks textbook of preventive and social medicine -17th edition.

Source of Support: Nil; **Conflict of Interest:** None

Submitted: 26-12-2016; **Published online**: 05-02-2017