ORIGINAL STUDY

Teenage Pregnancy: Too Much Too Soon

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Abstract

Teenage pregnancy is a major cause of concern to health professionals.

They are high-risk groups because of the pervasive effects of early motherhood on physical and mental health. It is intended in the present study to discuss the obstetric and neonatal outcome in teenage pregnancies vis-a-vis primigravidae aged between 20-29 years. It is undeniable that teenage mothers do not understand the social reality of early pregnancy and do not realize that biologic maturity does not license activating this capacity at will. Responsibility is immense. A concerted effort is needed on the part of the doctors, family and society as a whole to counsel them and to bring down the incidence of this social menace.

Keywords: Teenage pregnancy, primigravidae.

INTRODUCTION

Teenage pregnancy is a major cause of concern to health professionals because of it's impact on maternal and child health and on the social and economic well-being of the nation. A report by Save the Children found that, annually, 13 million children are born to women under age 20 worldwide, more than 90% in developing countries. The highest rate of teenage pregnancy in the world is in sub-Saharan Africa, where women tend to marry at an early age.[1] In India 50% marriages used to take place before the age of 18 years leading to 30% adolescent pregnancies. But, currently levels of early marriage have decreased by 25% leading to decrease in adolescent pregnancy.[2] According to the national family health survey of India 1998-1999, 16.4% of all women in the age 15-19 years have at least one child ever born.[3]

Teenage mothers are high risk groups because of the pervasive effects of early motherhood on physical and mental health, education, economic independence and social relationships. It is unclear whether biologic or social inadequacies best explain the reproductive disadvantages in this age group. Hence, present cross-sectional study was conducted to compare the obstetric and fetal outcomes of teenage primigravida (13-19 years) and primigravida of age 20-29 years.

MATERIAL AND METHODS

The study was conducted at Civil Hospital, Belgaum, Karnataka over a 1 year period from January 1999 to January 2000. In order to eliminate the influence of parity and multiple pregnancy on birth weight of newborn, only primigravidas with singleton pregnancies were included in the study as index cases.In the present cross-sectional study,a total of 70 cases of teen primigravidae were included as index cases (group A) and 210 cases of primigravidae between 20-29 years were taken as controls (group B).

Exclusion Criteria

Primigravidae admitted for induced and spontaneous abortions (fetus weighing <1 kg), gestational age <28 weeks and all cases of molar gestation were excluded from the study.

Statistical Analysis

After doing power analysis, it was calculated that the sample size of 70 cases in group A and 210 cases in group B was sufficient for conducting the study. A P value of < 0.05 was considered as significant.

RESULTS

Table 1 shows that maximum number of teenage mothers were of 19 years (n = 20; 28.5%) followed by 18 years and 17 years. No case was reported between 13-14 years. 34.2% were booked in group A as compared to 80% in group B (Table 2). Complications like anemia (84.2% *vs* 34.2%; $p < 0.05$), pre-eclampsia (37.1% *vs* 25.7%; $p < 0.05$), eclampsia (10% *vs* 2.3%; $p < 0.05$), preterm labor (28.5% *vs* 24.2%; $p > 0.05\%$) occurred more commonly in group A as compared to group B (Table 3). Teenage mothers also had statistically significant increase in operative interference (78.5% *vs* 48%; $p < 0.001$). Maximum number of patients underwent lower segment cesarean section (LSCS) for fetal distress (47.3% *vs* 51.0 %; p. > 0.05). Cephalopelvic disproportion (CPD) as an indication for LSCS was seen in 21% patients in group A as compared to 12.7% in

Table 1: Number of teenage primigravidae in various age groups

Age (yrs)	*No.(n=70)*	*%*
13	0	0
14	0	0
15	8	11.4
16	9	12.8
17	15	21.4
18	18	25.7
19	20	28.5

Table 2: Number of patients who were booked or unbooked in both groups*

Antenatal care	*Group A*		*Group B*	
	No. of patients	*%*	*No. of patients*	*%*
Booked	24	34.2	168	80
Unbooked	46	65.7	42	20

* For groups see material and methods

Table 3: Complications in mother at admission in both groups

	Group A		*Group B*	
	No. of patients	*%*	*No. of patients*	*%*
Pre-eclampsia	26	37.1	54	25.7
Anaemia	59	84.2	72	34.2
PROM	10	14.2	29	13.8
Preterm Labor	20	28.5	51	24.2
CPD	4	5.7	6	2.85
Abruptio placentae	6	8.5	6	2.8
Placenta praevia	1	1.4	15	7.1
Eclampsia	7	10	5	2.3

group B (Table 4). Fetal outcome in teenage pregnancy shows that 60% of babies in group B had fetal birth weight 2.5 kg as against 28.57% in group A (Table 5). Intrauterine growth restriction (IUGR) in fetuses is higher in group A (25.7% *vs* 8.5%). Similarly, preterm appropriate for gestational age (AGA) neonates delivery rate is also higher in group A (20% *vs* 18.5%) as compared to group B (Table 5).

Table 4: Mode of delivery and indications of cesarean section

Type of delivery	*Group A*		*Group B*	
	No. of patients	*%*	*No. of patients*	*%*
Normal delivery	15	21.4	109	51.9
With operative interference	55	78.5	101	48.0
Forceps	36	51.4	54	25.7
LSCS	19	27.1	47	22.3
Indications of cesarean section				
CPD	4	21.0	6	12.7
Fetal distress	9	47.3	24	51.0
Eclampsia	3	15.7	0	0
Failure to progress	1	5.2	9	19.1
Precious pregnancy	0	0	3	6.3
Breech presentation	2	10.5	5	10.6

Table 5: Neonatal outcome in both groups*

Weight (gm)	*Group A*		*Group B*	
	No. of patients (n = 70)	*%*	*No. of patients*	*%*
1000-1499	2	2.8	3	1.4
1500-1999	8	11.4	33	15.7
2000-2499	40	57.1	48	22.8
2500 & above	20	28.57	126	60
	Group A		*Group B*	
	No. of patients	*%*	*No. of patients*	*%*
Preterm (AGA)	14	20	39	18.5
Preterm IUGR	6	8.57	12	5.7
Term (AGA)	32	45.7	141	67.1
Term IUGR	18	25.7	18	8.5

AGA – Appropriate gestational age
*For groups see material and methods.

DISCUSSION AND COMMENTS

In India, adolescent marriages are rampant despite being cognizable offence. Early marriages, social taboos, relative sexual freedom, poverty, ignorance about contraception, impact of media, television and literature which are sex oriented and rape of minors, all contribute to this ever growing social burden. It is intended in the present study to discuss the obstetric and neonatal outcome in teenage pregnancies vis-à-vis primigravidae aged between 20-29 years.

Barriers limiting access to antenatal care have a long standing history and greatly contribute to the risk of poor health during pregnancy and childbirth. Poor antenatal supervision continues unabated over the years as is seen in the present study as well.[4] Nearly 32% of pregnant mothers < 20 years did not have any antenatal check-up according to NFHS report (1998-99).[3] A teenage mother is at greater risk than women over age 20 for pregnancy complications, such as premature labor, anemia and pre-eclampsia these risks are even greater for teens who are under 15 years.[5] Most common antenatal complication identified was anemia shown in other studies as well.[6-8] Poor nutritional status and poor dietary habits are contributing factors. High incidence of iron deficiency anemia can lead to preterm labor, postpartum hemorrhage, sepsis and pre-eclampsia which untreated can lead to eclampsia. There is increased incidence of pre-eclampsia in group A (37.1%) as against group B (25.7%). Similar observations have been reported in other studies as well.[9,10] Inadequate or lack of prenatal care is most common attributable factor for pre-eclampsia. It is also hypothesized that underdeveloped endocrinal system may be a cause of hypertensive disorders of pregnancy.

It is a common belief that teenage mothers are more likely to experience fetopelvic disproportion as a result of incomplete development of bony pelvis. However, it appears to be a misconcept as indicated in various studies.[11,12] The present study also observes that only 21% of lower segment cesarean section (LSCS) were done for cephalopelvic disproportion (CPD) in teenage primigravidas as compared to 12.7% in primigravidas between 20-29 years. We hypothesize that the female pelvis will attain it's full size by the time girls are physiologically old enough to become pregnant and hence, do not expect an increase in CPD. Our study shows that maximum cesarean sections were performed for fetal distress. The forceps rate was however, significantly more in the control group ($p < 0.001$), although indications were similar. Anxiety, fright and lack of cooperation in the second stage of labor may attribute to this difference.

Mounting evidence suggests that low birth weight and preterm births are higher in teenage mothers.[13] We observed in our study that 57.1% babies were between 2000-2499 gm in group A as against 22.8% babies weighing < 2500 gm in group B. In a separate study on a semiurban population in Gorakhpur, India, high incidence of low birth weight babies (67.3%) was found.[14] Similar results are reported in a separate study at Nagpur, India (1999).[15]

Teenage pregnancy is a multifaceted problem and both biologic and social factors contribute to the misery. Poverty, depression, social isolation are frequent accompaniments. Resulting stress on the teenage mothers may also lead to adverse fetal outcome as has been discussed by Hobel in his theory of stress biology.[16] It is undeniable that teenage mothers do not understand the social reality of early pregnancy and do not realize that biologic maturity does not license activating this capacity at will. Responsibility is immense and the physician should appraise the adolescent about birth control as a part of adolescent health care. Involving parents and teaching them how to communicate with them can be extremely helpful. Sex education should be made an integral part of school curriculum. Timely medical intervention to terminate pregnancy should not be denied. Those desirous of continuing the pregnancy should receive special prenatal care to improve obstetric and fetal outcome and should necessarily be followed postpartum to motivate contraceptive compliance. Return to education and counseling will go a long way in preventing subsequent pregnancies.

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