Maternal Outcome in Teenage Pregnancy (16-19 Years)

Dr. Anjani Shrivastav¹, Dr. Aarti Jiyani², Dr. Nilam Prajapati³

¹Associate Professor, Department of Obstetrics and Gynecology, New civil Hospital, Surat, India

²2nd year resident, Department of Obstetrics and Gynecology, New civil Hospital, Surat, India

³Assistant Professor, Department of Obstetrics and Gynecology, New civil Hospital, Surat, India

Abstract: <u>Introduction</u>: Adolescent pregnancy is widely recognized as one of the most complex and serious social, economic and health related problems throughout the world. Adolescent pregnancy is a high risk pregnancy. Outcome is less satisfactory than of a pregnancy in general population. <u>Aims and Objective</u>: This study aimed to find the maternal outcome in teenage pregnancy (16-19 years). <u>Material and Method</u>: Cases of teenage pregnancies (16-19 years) admitted in labour room of New Civil Hospital, Surat during the study period of April 2014 to March 2015. Data was collected through interviews and by observations using the predesigned proforma. The first contact with the subject for data collection began immediately after delivery of baby. <u>Result</u>: In this study 69 % of subjects were associated with complication. The major maternal complications were anaemia 60.00 %, hypertensive disorder of pregnancy 37.00 %, Preterm labour 45%. <u>Conclusion</u>: From present study we found that there are maternal complications like anaemia, eclampsia, pre-eclampsia were higher in teenage pregnancy as compared to general population. For pregnant adolescent attending the antenatal clinic, extra care should be taken to ensure that the minimum number of antenatal visits is made. Appropriate and adequate counseling on different antenatal services are to be offered to them.

Keywords: Adolescent, Teenage pregnancy, observational study, maternal outcomes.

1. Introduction

Adolescent pregnancy is widely recognized as one of the most complex and serious social, economic and health related problems throughout the world. Adolescent pregnancy is a high risk pregnancy. Outcome is less satisfactory than of a pregnancy in general population.

Adolescent pregnancy can have adverse consequences both for mother and child.

A wide range of issue and concerns faced by adolescent of India include nutritional deficiencies, reproductive health problems, STIs, and mental and physical stress related problems.

Obstetric risks like PIH, preeclampsia, eclampsia, preterm labour and perinatal morbidity, mortality are more common in adolescent pregnancies.Knowledge of contraception for adolescent needs to be highly effective for prevention of psychological problems and adolescent pregnancy complications.

About 16 million adolescent girls give birth every year, most in low and middle income countries⁴. Still birth and new born death are 50% higher among infants of adolescent mothers than among infants of women aged 20-29years⁵.Girls and women from low socioeconomic class are at approximately ten times at risk of becoming teenage mother as compared with high socioeconomic class⁶.

2. Aims And Objectives

1. To evaluate the effect of pregnancy in teenage girls (16-19 years).

2. To evaluate maternal outcomes in teenage pregnancy (16-19 years).

SUBJECTS AND METHODS

Source of data

Cases of teenage pregnancies (16-19 years) admitted in labour room of New Civil Hospital, Surat during the study period of April 2014 to March 2015.

Methods of collection of data

subjects with teenage (16-19 years) pregnancy of 24 to 40 weeks admitted to labour room of New Civil Hospital, Surat. Data was collected through interviews and by observations using the predesigned proforma. The first contact with the subject for data collection began immediately after delivery of baby.

3. Observation and Discussion

Distribution of subjects according to maternal age:

Age	NO. of subjects (n-100)	Percentage%
16 years	4	04.0%
17 years	5	05.0%
18 years	39	39.0%
19 years	52	52.0%

- The above table shows that 91% of subjects had completed 18 years.
- 5% of subjects had completed 17 years and 4% of subjects had completed 16 years of age.
- Mean age of my study was 18.4 ± 1.06 years.

Comparison of our study with general population for term and preterm delivery:

	Term Delivery	Preterm Delivery
Teenage pregnancy(n-100)	55(55%)	45(45%)
General population(n-7697)	7256(94.27%)	441(5.73%)

• On comparison with general population rate of preterm delivery was higher than term delivery which was statistically significant (p-value <0.05)

Distribution of subjects according to associated complications on admission:

Associated Complications	No. of Subject (n-100)	
Anaemia	45	
Preterm labour	35	
Eclampsia	19	
Preeclampsia	14	
PROM	13	
Chorioamnionitis	01	

• The above table shows that most common associated complication was anaemia. Second most common complication was preterm labour and third most common complication was eclampsia.

Distribution of subjects according to mode of delivery in teenage pregnancy:

Mode of Delivery	No. of subjects (n-100)	Genarel Population (n-7570)	P-Value	
Vaginal delivery	69(69%)	5645(74.57%)	< 0.05	1
LSCS	28(28%)	1832(24.20%)	< 0.05	
Instrumental delivery	3(3%)	93(1.23%)	>0.05	

- The above table shows that 69% of subjects were delivered vaginaly, either full term or preterm delivery.
- 28% subjects were delivered by LSCS and 3% subjects were delivered instrumentally.
- On comparison, rate of vaginal delivery was lower in teenage subjects than general population which was statistically significant (<0.05).

Distribution of subjects according to indication of LSCS in teenage pregnancy:

Indication of LSCS	NO.OF	Genarel	P-
	Subbjects	Population	Value
	(n-28)	(n-1308)	
CPD	09(32.15%)	384(29.35%)	>0.05
Eclampsia with	05(17.86 %%)	60(4.60%)	< 0.05
unfavorable cervix			
MSL with unfavorable	05(17.86%)	264(20.29%)	>0.05
cervix			
Foetal distress in 1 st stage	03(10.71%)	288(22.01%)	
of labour			
Non progress of labour	03(10.71%)	132(10.01%)	>0.05
Severe oligohydramnios	02(07.14%)	33(2.52%)	>0.05
with IUGR			
Breech	01(3.57%)	147(11.23%)	

- The above table shows that most common indication of LSCS in our subjects was CPD that was 32% the possible explanation could be underdevelopment of pelvis in younger mothers.
- Second most common indication was eclampsia with unfavorable cervix, which was 21%.

Distribution of maternal complications in subjects (overall):

Maternal Complication	No. of Subjects (n-100)	General Population (n-7811)	P-Value
Anaemia	60(60%)	1851(23.7%)	< 0.05
Preterm labour pain	45(45%)	441(05.6%)	< 0.01
Preeclampsia	14(14%)	499(06.4%)	>0.07
Eclampsia	12(12%)	90(01.6%)	< 0.05
Hypertension	11(11%)	289(03.7%)	< 0.05
Chorioamnionitis	01(01%)	05(0.06%)	>0.08
Mortality	00	47(0.6%)	

- The most common complication in subjects was anaemia that was 49%. Second most common complication was preterm labour that was 35%.
- On comparison with general population rate of anaemia was significantly higher in our study (p value-<0.05)

<u>Comparison of our study to another study:</u>

Mode of	Our	RN	A K Sharma	IMR
delivery	study	chaudhri et	et al (2003)	Goodnewardene
	/	al (2007)		et al (2005)
Vaginal delivery	69%	85.7%	95.3%	94.4%
LSCS	28%	08.3%	04.9%	06.3%
Instrumental delivery	03%	06.0%		02.4%
Maternal Complications	//	2		
Anaemia	49%	28.5%	34.7%	50.5%
Preterm delivery	43%	27.7%	03.2%	10.7%
Preeclampsia	14%	19.4%	25.0%	11.8%
Eclampsia	12%	04.8%	05.4%	06.8%

4. Discussion

The incidence of teenage pregnancy shows marked variation in developed and developing countries¹¹. As per DLHS¹² 3(District level Household and Facility Survey), in India, over all incidence of adolescent pregnancy is 5.6% (rural 6.4% and urban 3.5%), there is wide rangeof variation among states.Gujrat has 3.4% of adolescent pregnancy. There are some extrinsic factors such as inadequate prenatal care, illiteracy, and poor socioeconomic conditions that affect the outcome of pregnancy in teenage girls⁷⁻⁹. Several medical complications like preterm birth, poor maternal weight gain, pregnancy induced hypertension, anaemia and sexually transmitted diseases are strongly associated with teenage pregnancy.

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In our study 52% of subjects were 19 years of age and 48 % of subjects were 18 to 16 years of age. 96% of subjects were primi gravida and 4 % of subjects were second gravida.

Early marriage in our society are associated with low level of schooling and education as well as early pregnancies. Attainment of higher education is associated with better awareness and wisdom, and consequently an urge for professional pursuit and desire for economic independence. This in turn to leads to late marriage and late conception preventing unintended adolescent pregnancies.

In our study 52% of subjects were emergency admission who had not taken single ANC visit, 23% subjects were registered subjects and 25% were referred from rural area.

In our study 69% of subjects were delivered vaginaly, either full term or preterm delivery. 28% subjects were delivered by LSCS and 3% subjects were delivered instrumentally. On comparison, rate of vaginal delivery was lower in teenage subjects than general population which was statistically significant (<0.05). most common indication of LSCS in our subjects was CPD that was 32% the possible explanation could be underdevelopment of pelvis in younger mothers.Second most common indication was eclampsia with unfavorable cervix, which was 21%.

Maternal complication like anaemia and preeclampsia were comparable with other study while rates of preterm delivery and eclampsia were higher in our study. In India **Aznar et** al^{10} had observed incidence of 10% eclampsia in their adolescent group and the frequency was more in girls less than 15 years (ACOG, 1998; National Health Statistics, 1997). He had also reported increase in primary cesarean section by 28% in patients of 15 years or below.

5. Conclusion

From present study we found that there are maternal complications like anaemia, eclampsia, pre-eclampsia were higher in teenage pregnancy as compared to general population. Also we found that neonatal complications like low birth weight, prematurity, IUGR were higher as compared to general population. The adverse outcome of teenage pregnancy could be attributed not only to lower maternal age but also to their relatively disadvantaged socioeconomic background. Efforts need to be directed towards strict enforcement of laws prohibiting teenage marriage in India. Access to quality health services that are gender - sensitive and adolescent – friendly should be ensured.

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