Original Article

A study of various maternal outcomes with respect to teenage pregnancies

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Abstract

Introduction: Teenage pregnancy is a social problem distributed worldwide. It has serious implications on maternal and child health. Teenage pregnancy is defined as pregnancy in a woman less than 20 years of age **Aims and Objectives:** To Study Various Maternal Outcomes With respect To Teenage Pregnancies. **Methodology:** The present study was conducted in the Department of obstetrics and gynaecology of SMGS hospital of Government Medical College Jammu from October, 2012 to September, 2013. Teenage pregnant women (age<20yrs) were compared with pregnant adult women of 20-30 years of age in terms of obstetrical outcome and follow up was done for 7 days postpartum for perinatal outcome. Statistical analysis done by Chi-Square test. **Result:** Majority of the patients in teenage group were of 18 and 19 years (53.75% and 36.25% respectively). 83.7% of patients among cases had spontaneous onset of labour as compared to 73% among controls. Induction was done in 14.8% among cases as compared to 24.4% among controls Majority of patients i.e. 71.6% of teenage mothers and 73% of controls delivered vaginally LSCS was done in 21.6% of patients among cases and in 23% among controls.6.8% and 3.9% of patients had instrumental delivery among cases and controls respectively Anemia was the most common complication seen in both groups (42% vs. 30.7%) with a p-value of 0.15 which is not significant Preterm labour was seen in 20.7% of cases as compared to 6.4% among controls Fetal distress was seen in 22.97% of cases as compared to 16.6% among controls Preeclampsia and eclampsia were more common in teenage mothers as compared to controls (21.5% vs.11.5%) with a p-value of 0.09 which is not significant PPH was seen in 13.5% of cases and 5.1% among controls. Perineal tear was seen in 5.4% of cases and no case was seen among controls. No obstetrical complication was seen in 23% of teenage mothers as compared to 50% among controls with a p-value of 0.001 which is highly significant. **Conclusion:** All the bad outcome related to Obstetrics like Spontaneous Induced, LSCS, Instrumental Delivery were more common in Teenage pregnancies also obstetric complications like Eclampsia, IUGR, PROM, Preterm Labour, Fetal Distress, Perineal tear, PPH were also common in Teenage pregnancies.

Keywords: Teenage Pregnancies, PROM, Preterm Labour, Instrumental Delivery, Fetal Distress, PPH.

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INTRODUCTION

Teenage pregnancy is a social problem distributed worldwide. It has serious implications on maternal and child health. Teenage pregnancy is defined as pregnancy in a woman less than 20 years of age. In recent decades it has become an important health issue in a large number of countries, both developed and developing. However, pregnancy in adolescence is by no means a new phenomenon. In large regions of the world (e.g. South Asia, the Middle East and North Africa), age at marriage has traditionally been low. Most girls married soon after menarche, fertility was high, and consequently, many children were born from adolescent mothers. In contrast, in Europe during the 18th and 19th centuries, age at marriage was relatively high, and social control strongly discouraged premarital sex. Such social control by parents and family declined as economies developed and as the education and training of young people was extended. In many Western societies over the last century, the incidence of sexual intercourse among adolescents and the number of pregnancies has sharply

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increased. World Health Organization[1] defines Teenage Pregnancy as "any pregnancy from a girl who is 10-19 years of age", the age being defined as her age at the time the baby is born.[2] Often the terms "Teenage pregnancy" and "Adolescent pregnancy" are used as synonyms. According to UNICEF, worldwide every 5th child is born to teenage mother.[3] Worldwide 13 million births each year occur to girls younger than 19 years. The incidence of teenage pregnancies varies dramatically between the different countries. Approximately 90% of the teenage births occur in developing countries.[4] Nevertheless, there is also a significant variation in teenage pregnancy and birth rates between developed countries, although the teenage pregnancy and birth rate of developed countries are significantly lower than that of developing countries.3 Teenage pregnancies are considered problematic because complications from pregnancy and childbirth are the leading causes of death in teenage girls aging between 15 and 19 years in developing countries. It is estimated that 70,000 female teenagers die each year because they are pregnant before they are physically mature enough for successful motherhood.[5] Therefore, teenage pregnancies and births are considered as risky. Adverse Maternal outcomes of teenage pregnancy includes Preterm labour, anemia, Hypertensive Disorders of Pregnancy (HDP), Urinary Tract Infection, abortion, Sexually Transmitted Diseases, HIV, malaria, obstetric fi stulas, puerperial sepsis, mental illness and high rate of Cesaerean Sections for cephalopelvic disproportion and fetal distress. Adverse fetal outcomes include preterm births, Low Birth Weight infants, Still Births, birth asphyxia, Respiratory Distress Syndrome and birth trauma or injury

MATERIAL AND METHODS

The present study was conducted in the Department of obstetrics and gynaecology of SMGS hospital of Government Medical College Jammu from October, 2012 to September, 2013. Teenage pregnant women (age<20yrs) were compared with pregnant adult women of 20-30 years of age in terms of obstetrical outcome and follow up was done for 7 days postpartum for perinatal outcome. Those who delivered in the hospital and were willing to participate in the study. Only Primigravidas were selected to eliminate the influence of parity were included into study while Not willing to participate in the study. When age of the participant could not be ascertained i.e. D.O.B certificate or its equivalent was not available and participant was not willing to get an x-ray elbow-wrist done (for visualization of ossification centres for age determination). Chronic medical illnesses like, heart disease, hypertension, diabetes mellitus, tuberculosis etc. (other than anaemia) were excluded were excluded from the study. Detailed history was recorded and a complete physical and systemic examination was done in each case (as per proforma enclosed) Routine laboratory investigations were done which included Hb, BT, CT, ABO/Rh, Urine analysis. Maternal outcome was noted in terms of : Gestational age at delivery, Onset of labour: Spontaneous, Induced, Mode of delivery, Vaginal, Instrumental, LSCS, Intrapartum complications, Meconium staining of amniotic fluid, preterm labour, accidental haemorrhage, Postpartum complications, Postpartum haemorrhage, Perineal tear, hematoma. Statistical analysis done by Chi-Square test.

RESULT

Table 1: Distribution of Patients According To Age (Teenage Group)

Age(In Years)	No. Of Patients	Percentage
16	2	2.5
17	6	7.5
18	43	53.75
19	29	36.25
Total	**80**	**100**

The youngest teenage mother in the study was of 16 years. Majority of the patients in teenage group were of 18 and 19 years (53.75% and 36.25% respectively).

Table 2: Mode of Onset of Labour

Onset Of Labour	Cases (N=74)		Controls (N=78)	
	No	%	No	%
Spontaneous	62	83.7	57	73
Induced	11	14.8	19	24.4
Elective Lscs*	1	1.35	2	2.56

Elective LSCS were done for malpresentations in both groups. Induced and elective LSCS have been taken together for the purpose of analysis. Odds ratio = 0.53 (0.22-1.24) $\chi^2 = 2.56$, p-value = 0.1 NS. 83.7% of patients among cases had spontaneous onset of labour as compared to 73% among controls Induction was done in 14.8% among cases as compared to 24.4% among controls.

Table 3: Mode of Delivery

Modeof Delivery	Cases (N=74)		Control (n=78)		Strength Of Association OR (95% CI)
	NO.	%	NO	%	
Vaginal	53	71.6	57	73	Ref. odds ratio=1
LSCS	16	21.6	18	23	0.96 (0.41-2.21)
Instrumental Delivery	5	6.8	3	3.9	1.79 (0.35-10.04)

$\chi^2 = 0.66$, p-value =0.71

Majority of patients i.e 71.6% of teenage mothers and 73% of controls delivered vaginally. LSCS was done in 21.6% of patients among cases and in 23% among controls. 6.8% and 3.9% of patients had instrumental delivery among cases and controls respectively

Table 4: Obstetrical Complications

Complication	Cases (N=74)		Controls (N=78)	
	NO	%	NO	%
Anemia	31	42	24	30.7
Oligohydramnios	2	2.7	-	-
Polyhydramnios	2	2.7	1	1.3
APH	-	-	1	1.3
Pre-Eclampsia	13	17.5	9	11.5
Eclampsia	3	4	-	-
IUGR	5	6.8	1	1.3
PROM	1	1.35	2	2.6
Preterm Labour	15	20.7	5	6.4
Fetal Distress	17	22.97	13	16.6
Perineal tear	4	5.4	0	0
PPH	10	13.5	4	5.1
Uneventful*	17	23	39	50

χ^2 =11.92, p-value =0.001highly significant

Anemia was the most common complication seen in both groups. It was more common in cases as compared to controls (42% vs. 30.7%) with a p-value of 0.15 which is not significant Preterm labour was seen in 20.7% of cases as compared to 6.4% among controls Fetal distress was seen in 22.97% of cases as compared to 16.6% among controls Preeclampsia and eclampsia were more common in teenage mothers as compared to controls (21.5% vs.11.5%) with a p-value of 0.09 which is not significant PPH was seen in 13.5% of cases and 5.1% among controls. Perineal tear was seen in 5.4% of cases and no case was seen among controls. No obstetrical complication was seen in 23% of teenage mothers as compared to 50% among controls with a p-value of 0.001 which is highly significant.

DISCUSSION

The incidence of teenage pregnancy shows marked variation in developed and developing countries. Births to adolescents as a percentage of all births range from about 2 % in China to 18 % in Latin America and Caribbean. Worldwide, just seven countries account for half of all adolescent births: Bangladesh, Brazil, Congo, Ethiopia, India, Nigeria and United States of America. As per DLHS III [6] (District level Household and Facility Survey), in India, overall incidence of adolescent pregnancy is 5.6% (rural 6.4% and urban 3.5%) there is a wide range of variation amongst states: West Bengal leads in teenage pregnancy at 14%, followed by Karnataka at 11%,Andhra Pradesh at 10 %, Bihar at 8 % and Chattisgarh at 7%. Goa and Kerala has lowest adolescent pregnancy rate of 2% and 3% respectively, where as Gujarat has 3.4% of adolescent pregnancy. Our study showed that, out of 303 adolescents, 299 (98.6%) were married, while 4 (1.3%) were unmarried. In a study by Bhalerao *et al*[7] and Shruti D *et al*[8], incidence of pregnancy among unmarried adolescents was 3 % and 5.63% respectively. As pregnant teenagers often receive inadequate antenatal care, their anemia during labour and the postpartum period usually get worse. In developing countries more than 25% of teenage mothers were found to be anemic as revealed in studies conducted by Saxena *et al*,[9]Bhalerao *et al*[10] and Rahman MM *et al*.[11] In contrast to it our study found a lower incidence (8.12%). In most developed countries (including the USA) 30–60% of adolescent pregnancies end in abortion.[12] In our study we have observed The youngest teenage mother in the study was of 16 years. Majority of the patients in teenage group were of 18 and 19 years (53.75% and 36.25% respectively). Induced and elective LSCS have been taken together for the purpose of analysis. Odds ratio = 0.53 (0.22-1.24) X^2 = 2.56, p-value = 0.1 NS. 83.7% of patients among cases had spontaneous onset of labour as compared to 73% among controls Induction was done in 14.8% among cases as compared to 24.4% among controls. Majority of patients i.e. 71.6% of teenage mothers and 73% of controls delivered vaginally. LSCS was done in 21.6% of patients among cases and in 23% among controls. 6.8% and 3.9% of patients had instrumental delivery among cases and controls respectively. Anemia was the most common complication seen in both groups. It was more common in cases as compared to controls (42% vs. 30.7%) with a p-value of 0.15 which is not significant Preterm labour was seen in 20.7% of cases as compared to 6.4% among controls Fetal distress was seen in 22.97% of cases as compared to 16.6% among controls Preeclampsia and eclampsia were more common in teenage mothers as compared to controls (21.5% vs.11.5%) with a p-value of 0.09 which is not significant PPH was seen in 13.5% of cases and 5.1% among controls. Perineal tear was seen in 5.4% of cases and no case was seen among controls. No obstetrical complication was seen in 23% of teenage mothers as compared to 50% among controls with a p-value of 0.001 which is highly significant. Various studies conducted in different regions of the world revealed preterm labour to be the most common complication as reported to be 10.56% by Dubashi SS,[13] 13.2% by Sharma *et al*[14] and 48% by Mahajan S.[15]

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