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Research Article

OUTCOME OF TEENAGE PREGNANCY IN KIRTIPUR HOSPITAL: A RETROSPECTIVE STUDY

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ABSTRACT

Aim: To find the occurrence of teenage pregnancy and compare the feto-maternal outcome with that of adult pregnancy.

Method: A retrospective study was conducted in Kirtipur Hospital from January 2010 to January 2015 (5 years and 1 month) All teenage pregnancies (aged 15-19 years) were included and outcomes were compared with adult pregnancies (aged 20-24 years). Who had been delivered during the same period of time. Statistical analysis was performed using SPSS software.

Result: There were total 582 deliveries during the study period out of which teenage pregnancy (15-19 years) were 102 deliveries and adult pregnancy (20-24 years) were 480 deliveries.

Teenage pregnancy resulted in more low birth weight babies as compared to adult pregnancy which is also statistically significant(P=0.002). Preterm deliveries were significantly being higher (P<0.001) in teenage mothers when compared to adult mothers. As for the neonatal complications, low birth weight and fetal distress were higher in teenage pregnancy than adult pregnancy (P<0.001, P<0.001 respectively). When obstetric outcomes were compared postpartum hemorrhage and intra uterine growth restriction (IUGR) was significantly higher in teenage pregnancy than adult pregnancy.

Conclusion: Teenage pregnancy increases the risk of low birth weight babies, preterm deliveries, fetal distress, PPH and IUGR are higher in teenage pregnancies than adult pregnancy.

INTRODUCTION

Pregnancy among teenage female is associated with high risk for both mother and baby. In teenage pregnancy complications and deaths are twice as common than in adult pregnancy[1, 2]. Since teenage pregnancy is related with high morbidity and mortality, it is regarded as a public healthy priority[3].

In Nepal, teenage pregnancy comprises 23% of the population[4]. Understanding the problems of teenage pregnancy Nepal Government has developed adolescent sexual reproductive healthy (ASRH) policy in 2000 that focuses on reducing incidence of early marriage and child bearing [5].

The aim of this study was to compare the feto-maternal outcome between teenage pregnancies and adult pregnancies in Kirtipur Hospital (our hospital).

MATERIAL AND METHOD

This was hospital based retrospective study conducted in Kirtipur hospital from 2010-2015. Kirtipur Hospital at the time of study was 15 bed hospital at the time of study where there are large constraints in the form of the socio-demographic characteristics of patient. It caters for poor availability of manpower and facilities. The study was approved by the ethical board of Institutional review committee of Phect Nepal under which Kirtipur Hospital is run. Statistical analysis was done using SPSS software and chi square test was done used to find the P value. P value <0.005 was consider significant.

All teenage mothers (15-19 years) who delivered during our study period were included in the study and the outcomes were compared with the control group of adult mothers (20-40 years) who delivered during the same period.

Pregnant women with pre-existing medical disease like congenital and rheumatic heart disease, chronic hypertension, overt diabetes mellitus, hypothyroidism etc. files with incomplete data and pregnancy among girls less than 15 years old which are rare were excluded in the study.

RESULT

There were total 582 deliveries during the study period out of which teenage pregnancy (15-19 years) were 102 deliveries and adult pregnancy (20-24 years) were 480 deliveries.

Teenage pregnancy resulted in more low birth weight babies as compared to adult pregnancy which is also statistically significant(P=0.002). As for the type of deliveries in teenage and adult pregnancy was not significant (P=0.319). Preterm deliveries were significantly being higher (P<0.001). In teenage mothers when compared to adult mothers. As for the neonatal complication, low birth weight and fetal distress were higher in teenage pregnancy than adult pregnancy (P<0.001, P<0.001 respectively). When obstetric outcomes were

compared postpartum hemorrhage and intra uterine growth restriction (IUGR) was significantly higher in teenage pregnancy than adult pregnancy.

Age of mother	<2.5Kg	>=2.5Kg	Total	Pvalue
15-19 years	15(14.70%)	87(85.30%)	102	0.002
20-24years	28(5.84%)	452(94.16%)	480	

Table 1: Comparison of birth weight

Age of mother	Vaginal Delivery	Instrumental	Cesarean Section	Total	P
15-19 years	57(55.88%)	3(2.945)	42(41.17%)	102(100%)	0.319
20-24 years	233(48.54%)	25(5.20%)	222(46.25%)	480(100%)	

Table 2: Comparison of type of Delivery

Age of mother	<=37weeks	>37-40 weeks	>=40-42weeks	>42 weeks	Total	P
15-19 years	10(9.80%)	45(44.12%)	43(44.12%)	4(3.92%)	102(100%)	<0.001
20-24 years	30(6.25%)	410(85.41%)	32(6.67%)	8(1.67%)	480(100%)	
Total	40(6.87%)	455(78.17%)	75(12.88%)	12(2.06%)	582(100%)	

Table 3: Association of age of mother with gestation age

Obstetric outcome	15-19years(n=102)	20-24years(n=480)	Total(n=582)	P
PPH	9(8.82%)	10(2.08%)	19(3.26%)	0.001
PIH	1(.98%)	13(2.70%)	14(2.40%)	0.301
PROM	1(.98%)	4(0.84%)	5(0.85%)	1
PPROM	1(0.98%)	-	1(0.17%)	0.393
APH	-	5(1.04%)	5(0.85%)	0.657
Malpresentation	1(0.98%)	8(1.67%)	9(!.54%)	0.610
IUGR	7(6.86%)	5(1.04%)	12(2.06%)	<0.001
Oligohydramnios	7(6.86%)	35(34.31%)	42(7.21%)	0.879
Shoulder dystocia	1(0.98%)	2(0.41%)	3(0.50%)	1
Valval Hematoma	-	2(0.41%)	2(0.34%)	1
Rh Negative	1(0.98%)	3(0.62%)	4(0.68%)	1

Table 4: Comparison of obstetric outcome

Neonatal Complication	15-19 years(n=102)	20-24 years(n=480)	Total(n=582)	P
Preterm	5(4.9%)	5(1.04%)	10(1.71%)	0.006
LBW	13(12.74%)	6(1.25%)	19(3.26%)	<0.001
Fetal Distress	20(19.60%)	15(23.95%)	35(6.01%)	<0.001

Table 5: Comparison of Neonatal complication

DISCUSSION

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 this birth occurring in developing countries[6]. In developing countries like Nepal, where early marriage is the social practice, the median age for every married woman is 16.6years[7]. So, majority of the newly married are adolescents. Adolescent pregnancy has been a long problem with adverse obstetric and neonatal outcomes. It is associated with higher morbidity and mortality for both the mother and child.

A prospective cross-sectional study was done by Suwal A. in college of medical sciences Teaching Hospital Bharatpur in the period of two years from September 2008 to August 2010. This study showed that incidence of teenage pregnancy was 100 (6.5%). Among the teenage deliveries 65.65% was normal vaginal deliveries, forceps 6.06%. vacuum7.07% and lower section caesarean 21.21%. There were 10% preterm deliveries, preeclampsia 5% and eclampsia 4%. Perinatal death was 6%[7].

In descriptive cross-sectional study done by Pun KD and Chauhan M in Kathmandu University Hospital, Dhulikhel, Kavre from June 2007 to 2008 showed that low birth weight babies among teenage mothers and young mothers was 28% and 26.7%respectively(p=0.572). Preterm birth was not associated with adolescent pregnancy (7% vs 11.5%, p=0.141). Normal delivery was the common mode of delivery in both adolescent and control group (74.4% vs 74.6%). Neonatal complications were more common in adolescent than in young mothers (17.2% vs 16.7%). Maternal complications like antepartum haemorrhage (2.4% vs 1.7%), postpartum haemorrhage (0.6%vs 0.2%) was more common among adolescent mothers[8].

Another prospective study done by Gazala Yasmin, Aruna Kumar and Bharati Parihar in a tertiary centre hospital of Madhya Pradesh, India in one year, the incidence of teenage pregnancy was 5.10%(672) of the total Obstetric admissions (13,189). In this study 53.12%teenage pregnancies were associated complications. The major maternal complications were Preterm labour 27.45%, Hypertensive disorders of pregnancy 20.17%, Premature Rupture of Membranes 18.21%, Abortion 14.57%, Anaemia 8.12%, Low Birth Weight 16.86%, preterm births 16% and still births 5%[9].

Kayastha S and Pradhan A in one and half year prospective study done in Nepal Medical College Teaching Hospital from August 2010 to February 2012 showed the incidence of teenage pregnancy was 9.7%(264 out of 2708). Normal delivery was 82.9% vs 81.1%(p=0.56) in teenage and young mother. Rate of lower section caesarean section was similar in both the groups, 10.2% and 10.7%(p=0.84). However, instrumental delivery was more in the control group, although it was not statistically significant (0.7% vs 2.2%

p=0.16). Preterm delivery was 3.0% vs 2.2%. Intrauterine fatal death was 0.7% vs 0% in test group and control group (p=0.15). Proportion of Low birth weight babies in test group and control group was 7.2% vs 5.9%(p=0.55). Hypertensive disorders of pregnancy were more in teenage mothers as compared to young mothers (6.4% and 5.65, p=0.66). Post-partum haemorrhage was found more in teenage mothers, though it was not statistically significant (1.8% vs 0.7%, p=0.84). Proportion of babies with intrauterine growth restriction was 3.0% in test group and 1.1% (p=0.009) in control group, the only parameter statistically significant. Fatal congenital anomaly was 0.7% vs 0.45(p=0.54) [10].

CONCLUSION

The study confirmed that teenage pregnancy is associated with increased risks of adverse pregnancy outcome. Our data showed IUGR, low birth babies, pre-term deliveries, fetal distress and post-partum haemorrhage were statistically higher in teenage pregnancies than adult pregnancies.

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