Teenage Pregnancy Outcome in Rapti Sub Regional Hospital

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ABSTRACT

Aims: To determine the maternal and perinatal outcome in teenage pregnancies.

Methods: A hospital based descriptive cross sectional study conducted from April 2017 to April 2018, among the pregnant women of age group≤19 years, admitted to the labour ward atRapti Sub regional Hospital, Dang.

Results: : The total of 853 pregnant adolescent women were admitted during the study period, most of which belonged to 19 years of age (38.6%) and were primipara (93.3%) and 42.1% belonged to janjati group. 79.6% had normal delivery, while 14.1% of the cases underwent caesarean section, 5.9% had instrumental delivery and in 0.5% had perineal injury. Anaemia complicated 63.5% of teenage mothers, more in age group of ≤ 18yrs than in > 18years (61.4%vs 38.6%) and 4.6% had maternal complications, the majority being PPH (2.9%) followed by oligohydraminos, eclampsia, wound infection and vulvar haematoma. Preterm delivery occurred in 15.5% of the cases (≤ 18yrs vs>18yrs being 9.8% vs 5.7%), other neonatal complications included respiratory distress (1.5%), intrauterine growth retardation (4.5%), intrauterine foetal death (0.4%) and very low birth weight (1.2%).

Conclusions: Teenage pregnancy has increased risk of adverse pregnancy outcomes leading to various adverse maternal, fetal and neonatal complications.

Keywords: outcome, pregnancy, teenage.

INTRODUCTION

Pregnancy and child-birth related complications are the leading cause of mortality and morbidity among women at their child-bearing age.[1] As compared with the women bearing their child at later age, teenage women (13-19 age) who are at the transitional period of progress from the initial appearance of secondary sexual characteristics to full sexual maturity; and are at the phase of psychological and emotional development are more susceptible to death during giving birth to their children.[2-4] The early pregnancy exposes young women to complicated health conditions during pregnancy and after childbirth including anaemia, pregnancy induced hypertension, preterm labour, maternal and neonatal mortality and low birth weight.[4,5]

Globally, around 16 million women give birth to their child at the age of 15-19, representing up to one-fifth of all births and 529,000 women die due to pregnancy and childbirth related complications every year.[5] The global adolescent birth rate is still 46 births per 1000 women.[6] South Asian countries including Nepal have huge ratio of teenage pregnancies, since early marriage is common and there is a social expectation to have a child soon after marriage.[7,8]

In Nepal, the median age of women at first marriage is 17.9 years, while 17 percent have begun childbearing at the age of 15-19. Teenage pregnancy comprises 23% of the population in our country. In the mid-western region of Nepal, 17.3 percent of the girls under 20 years have begun their child-bearing while 12.4 percent have already had a live birth.[9]

The purpose of this study is to determine maternal and neonatal outcome of pregnancies among adolescent girls at Dang.

METHODS

This was a hospital based descriptive cross sectional study conducted in Rapti Sub-regional Hospital in the duration of 1 year, from April, 2017 to April, 2018. All pregnant women of age group ≤19 years admitted to the labour ward were included in the study.

Data were extracted from Delivery and Admission Register, inpatient records; all the collected data were first entered in Microsoft Office Excel Worksheet and

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exported to Statistical Package for Social Sciences (SPSS) version 21.0 for statistical analysis. p-value less than 0.05 was considered statistically significant.

RESULTS

During the study period of one year, there were 4661 mothers were admitted in the labour ward of Rapti Sub-regional Hospital and 853 were teenage i.e. 18.3 %. Among them, 329 (38.6 %) women belonged to the age group of 19 years and 315(36.9%) of the women were ≤18years. Majority of the women were Janajati (42.1%), followed by Brahmin and Dalit which were 27.4 percent% and 23.8% respectively [Table-1].

Table-1: Demographic Characteristics of Participants

Variables	Frequency	Percent
Age in years		
15	10	1.2
16	55	6.4
17	144	16.9
18	315	36.9
19	329	38.6
Ethnicity		
Janajati	359	42.1
Brahman	234	27.4
Dalit	203	23.8
Madhesi	14	1.6
Muslim	2	.2
Other	41	4.7

Most of the patients were primigravida (93.5%) and majority of the women (79.6%) delivered vaginally, while 14.1% had undergone caesarean section, 5.9% had instrumental delivery and 0.5% had extensive perineal tear [Table-2].

Table-2: Number of gestation and mode of delivery

Variables	Frequency	Percent
Gestation History		
Primigravida	797	93.5
G2	53	6.2
G3	2	0.2
G4	1	0.1
Mode of Delivery		
Normal Vaginal Delivery	679	79.6
Instrumental Delivery	50	5.9
Ceserean Section	120	14.1
Normal Vaginal Delivery with third degree tear	4	0.5

The overall incidence of preterm labour was 15.5%, greater being in the age group ≤ 18years i.e. 9.8% in compared to >18 years which was 5.7% [Table-3].

Table-3: Age group and gestation age in weeks

Age group	Gestation age in weeks			Total n (%)
	Preterm n (%)	Term n (%)	Post-term n (%)	
Less than or equal to 18	84 (9.8)	434 (50.9)	6 (0.8)	524 (61.5)
Greater than 18	49 (5.7)	279 (32.7)	1 (0.1)	329 (38.5)
Total	133 (15.5)	713 (83.6)	7 (0.9)	853 (100.0)

Maternal complications occurred 41 patients (4.6%), oligohydraminos, secondary PPH, Eclampsia, would infection, puerperal pyrexia and vulvar haematoma. Also, the complications were higher among age group of ≤ 18 years (3.4%) [Table-4].

Table-4: Age group and Maternal complications

Age group	Complications							Total n (%)
	1* PPH n (%)	1* Wound infection n (%)	2* PPH n (%)	Eclampsia n (%)	Puerperal pyrexia n (%)	Oligohydramnios n (%)	Vulvar hematoma n (%)	
≤18	18 (2.1)	1 (0.1)	2 (0.2)	1 (0.1)	1 (0.1)	6 (0.7)	1 (0.1)	30(3.4)
>18	7 (0.8)	0 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	2 (0.2)	0 (0.0)	11(1.2)
Total	25 (2.9)	1 (0.1)	3 (0.3)	2 (0.2)	1 (0.1)	8 (0.9)	1 (0.1)	41(4.6)

IUGR was the most common neonatal complications that comprised of 4.5% of total neonatal complications which was 7.4%, followed by respiratory distress i.e. 1.5% and VLBW i.e. 1.2% [Table-5].

Table 5: Age group and neonatal complication

Age group	Neonatal complication				Total n (%)
	Respiratory distress n (%)	IUFD n (%)	IUGR n (%)	VLBW n (%)	
Less than or equal to 18	5(0.6)	1 (0.1)	26 (3.0)	6 (0.7)	38 (4.4)
Greater than 18	7 (0.9)	2 (0.2)	12 (1.4)	4 (0.5)	25(3.0)
Total	12 (1.5%)	3 (0.4)	38 (4.5)	10 (1.2)	63(7.4)

Overall of 542 patients (63.5%) had anaemia with P-value of 0.439, consisting of 336 (39%) had mild, 204(23.9%) had moderate and 2(0.2%) had severe anaemia. Among total patient diagnosed with anaemia 61.4% belonged to age group of ≤ 18yrs (25.2% mild, 13.6% moderate, 0.1% severe) and 38.6% belonged to age group of > 18 years (14.2% mild, 10.3% moderate, 0.1% severe),as depicted in table 6.

Table 6: Age group and anemia

Age group		Anemia (n%)			Total n (%)	P-Value
	Normal n (%)	Mild n (%)	Moderate n (%)	Severe n (%)		
Less than or equal to 18	192 (22.5)	215 (25.2)	116 (13.6)	1 (0.1)	524 (61.4)	0.439
Greater than 18	119 (14.0)	121 (14.2)	88 (10.3)	1 (0.1)	329 (38.6)	
Total	311 (36.5)	336 (39.4)	204 (23.9)	2 (0.2)	853 (100.0)	

DISCUSSIONS

Teenage pregnancy has been one of the major public health problems.[10] In developing countries like Nepal, where early marriage is the social practice, majority of the newly married are adolescents.[11] Teenage pregnancies is a huge problem with adverse obstetric and neonatal outcomes. First pregnancy at a very early age is jeopardous to both mother and the child. So, preventing teenage pregnancy could be an effective step for reducing maternal mortality and morbidity further contributing to attain the Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages).

The study showed that teenage pregnancy contributed to 18.3 percent of the total deliveries in the hospital, out of which 42% constituted Janajatis, which was similar to the study done by Shrestha et al at Lumbini Medical College that revealed 52% of the teenage pregnancy belonged to Janajati followed by Dalit (25%) and Brahmin/Chettri (25%).[12] Around 93 percent of the teenage women were primigravida with normal vaginal delivery (79.6%) the commonest mode of delivery, similar to the study done by Pun et al which showed 77.4%. But the caesarean section rates in this study was less than that was seen in the study done by Pun et al, (14% vs 21%).[13]

Preterm labour is one of the major complications among the teenage pregnancy. The incidence in our study was 15.5%, slightly less than the study by Tripathi M. at Gandaki Medical College which was 20%.[14]

Anemia is defined as the haemoglobin concentration less than 11 gm/dl during pregnancy.[15] The prevalence of anemia among pregnant women of all group in western Nepal was 41.01% while among teenage pregnancy was 27.62% as shown by the study Singh, P. at Nepalgunj Medical College.[16] However, our study revealed 63.5% of the teenage women suffering from anaemia (mild 39.4%, moderate 24.4%, severe 0.2%). This could be due to the majority of the patients (42%) were Janajatis, who were from low socioeconomic status, with lack of education and regular antenatal check-up and care.

Study by Pun et al concluded that postpartum haemorrhage was higher in adolescent women than other age group[13] comparable to this study (2.9%) However, the overall maternal morbidity during the study period was minimal with no maternal mortality.

Regarding foetal outcome, those born to teenage mothers are more susceptible to have intra uterine growth restriction (IUGR) and low body weight (<2500gm). IUGR is seen among 4.5 percent of the

live births. LBW is seen among 22.4 percent of the births which does not have significant difference (p=0.77). This finding resembles the result of the study carried out by Suwal A. at College of Medical Sciences Teaching Hospital (CMSTH), Bharatpur.[17]

CONCLUSIONS

Teenage pregnancy rate at the facility was 38.5%, overall obstetric complication 20%; and 63% were anemic and neonatal complication of 7.4%. But the Cesarean Section rate appropriate at 14%. Much information was missed due to retrospective in nature.

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