TEENAGE PREGNANCY IN JOS, NORTH-CENTRAL NIGERIA

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ABSTRACT

Background: Teenage pregnancy is an obstetric risk factor. They are more likely to suffer from complications of pregnancy, labour and delivery with increased morbidity and mortality in both infants and mothers.

Objective: To determine the prevalence of teenage births, demographic characteristics and pregnancy outcome in this group of women

Methods: This was a 12 months retrospective descriptive study of the pregnancy outcome of teenagers in the Jos University teaching Hospital, Jos, Nigeria between January and December 2003.

Results: The prevalence of teenage birth was 5% or 21 per 1000 deliveries. The mean age was 18.20 ± 0.84 years, and mean parity was 1.2 ± 0.82. About 81% of the teenagers had completed only primary and secondary education. Nineteen percent (19%) of them were non-literate. Preterm delivery (24.5%) and vaginal trauma (episiotomies 41.3%) were the maternal morbidity while low birth weight (14.3%) was the common foetal morbidity in the study. The teenagers were similar to the total population in respect of booking status, and perinatal morbidity, but worse of in preterm delivery and low birth weight. There was no much difference, however, in the still birth and caesarean section rates. The maternal and foetal outcomes were generally satisfactory in the study.

Conclusion: Teenage mothers constitute 5% of our antenatal patients and appear to be disadvantaged both socially and economically, as they are yet to attain their educational potentials. The older teenage status in addition to booking for antenatal care in pregnancy resulted in better foetal and maternal outcome.

Key words: Prevalence, Teenage pregnancy, Pregnancy outcome.

INTRODUCTION

The age at first marriage in this country varies from place to place, among different ethnic, religious and cultural settings. Teenage pregnancy, an important outcome of early marriage, constitutes an important educational, medical and social problem[1]. Early teenage pregnancy and child bearing has negative demographic, socio-economic and socio-cultural consequences[2]. In the southern part of Nigeria, the mainly Christian Yoruba and Igbo girls tend to marry in the third decade of life[3] while in northern Nigeria with mainly Muslim Hausa and Fulani tribes, early marriage before the age of 16 years is common[4]. Teenage mothers are more likely to suffer from severe complications during delivery, which result in higher morbidity and mortality for both the mothers and infants[2]. Pregnancies become high-risk before the age of 18 years, and maternal mortality rate have been found to be slightly higher in pregnancies under the age of 20[5]. Teenage pregnancies have been observed to be associated with increased incidence of anaemia, pregnancy induced hypertension, eclampsia, low birth weight and perinatal mortality, particularly in un-booked or unsupervised pregnancies[6-8]. In the older teenagers, 17-19 years, their reproductive capacity is good[9]. Some authors have attributed low socio-economic circumstances responsible for the obstetric problems of teenagers rather than maternal age. In addition, the socio-economic advancement of teenage mothers in the areas of educational attainment and accessibility to job opportunities may be curtailed[10,11]. This study reviews and documents the characteristics and obstetric outcome of pregnant teenagers delivered at the Jos University Teaching Hospital, and suggests ways of improving on the pregnancy outcome in this group of women.

MATERIALS AMD METHODS

This was a retrospective study of teenage (women of less than 20 years of age) deliveries in the Jos University Teaching Hospital, Jos, Nigeria over a 12 months period, (January to December 2003). The delivery records of the maternity unit were examined and all cases of teenage pregnancies delivered in the unit, and relevant information like socio-demographic characteristics, foetal and obstetric outcome were extracted and collated. The data was analysed with the Epi Info 2002 statistical software.

RESULTS

During the period of study, there were 2,960 deliveries among which 147 were teenage deliveries, an incidence of 5.0%.

Table 1 showed that the age of the teenagers ranged from 15-19 years with a mean of 18.20 ± 0.84 years. The women were of parity 1-5 with a mean of 1.2 ± 0.82. About 96% of the teenage pregnancies were of parity of 1 and 2. The women were Christians in 55.8% and Moslems in 44.2%. None of the teenagers had completed tertiary education. Forty-four (22.9%)

of them had completed only primary education while 57.8% had completed secondary education at the time of the study. The teenagers were full-time housewives in 70.1%, while 17.1% were still in various levels of schooling or studies. The booking status of the patients showed that up to 77.5% of them were booked for antenatal care in the Jos University Teaching Hospital antenatal clinic. Only 2 (1.4%) were un-booked for antenatal care.

Table 2 shows the maternal outcome of the teenage pregnancies. Preterm delivery was higher (13.9%) in the teenagers compared to the total population with 9.5%. Episiotomy rate was high (41.3%) in the teenagers compared with the 19.8% in the total population. Spontaneous vaginal delivery was slightly higher (87.8%) and caesarean section rate was lower (9.5%) in the teenagers compared with 83.9% and 13.9% in the total population respectively. The mean blood loss in the teenagers was 248.00 ± 137.98 ml compared with 250.60 ± 165.32 ml. In the teenagers, 10 (6.8%) had postpartum haemorrhage (blood loos of ≥ 500 ml), while this was 8.2% in the total population.

Table 3 showed that the means of asphyxia status, birth lengths, head circumference and cord lengths in both groups were similar. However, low birth weight was higher (14.3%) in the teenagers compared with 10.9% in the total population in the study. Foetal gender showed that the male infants were 55.5% in the teenagers and 53.4% in the total population. The female infants were also similar in both groups, that is, 44.5% and 46.6% in the teenagers and the total population respectively.

Table 1: Socio-demographic characteristics of the teenagers

Age in years		
	15	2 (1.4)
	16	5 (3.4)
	17	12 (8.2)
	18	70 (47.6)
	19	58 (39.4)
Parity		
	1	119 (81.0)
	2	22 (15.0)
	3	4 (2.6)
	4	1 (0.7)
	5	1 (0.7)
Religion		
	Christianity	82 (55.8)
	Islam	65 (44.2)
Educational level		
	Non-literate	18 (12.3)
	Completed primary education	44 (29.9)
	Completed secondary education	85 (57.8)
	Completed tertiary education	0 (0.0)
Occupation		
	Housewife	103 (70.1)
	Student	26 (17.7)
	Civil servant	5 (3.4)
	Tailor	4 (2.7)
	Business	4 (2.7)
	Others	5 (3.4)
Booking status		
	Booked in JUTH	114 (77.5)
	Booked elsewhere	31 (21.1)
	Un-booked	2 (1.4)

Table 2: Maternal outcome of the teenage and other mothers

	Teenagers (%)	Total Population (%)
Gestational age at birth in the infants in weeks		
Gestational age		
Preterm	36 (24.5)	521 (17.6)
Term	109 (74.1)	2,400 (81.1)
Post term	2 (1.4)	39 (1.3)
State of the perineum after vaginal delivery		
Perineal status		
1^0 Perineal tear	5 (3.8)	157 (6.2)
2^0 Perineal tear	0 (0.0)	15 (0.6)
3^0 Perineal tear	0 (0.0)	0 (0.0)
Bruise of perineum	0 (0.0)	20 (0.8)
Episiotomy	55 (41.3)	504 (19.8)
Perineum Intact	73 (54.9)	1,852 (72.7)
Total	**133* (100.0)**	**2,548# (100.0)**

(There were *14, and #412 caesarean sections in the teenagers and general population respectively and therefore deducted from the total numbers to get those that had vaginal deliveries)

The mode of delivery in the teenagers and the total population

Mode of delivery		
SVD	129 (87.8)	2,482 (83.9)
Caesarean section	14 (9.5)	412 (13.9)
Vacuum delivery	3 (2.0)	45 (1.5)
Forceps delivery	0 (0.0)	2 (0.1)
Breech delivery	1 (0.7)	19 (0.6)
Total	**147 (100.0)**	**2,960 (100.0)**

Table 3: The foetal outcome in the teenagers and the total population

	Teenagers (%) (n = 147)	**Total Population (%) (n = 2,960)**
Index of intrapartum asphyxia in the infants		
Degree of asphyxia		
Still birth (Apgar 0)	5 (3.4)	99 (3.3)
Severe asphyxia (Apgar 1-3)	1 (0.7)	32 (1.1)
Moderate asphyxia (Apgar 4-5)	10 (6.8)	137 (4.7)
Mild asphyxia (Apgar 6-7)	32 (21.8)	527 (17.8)
No asphyxia (Apgar 8-10)	99 (67.3)	2164 (73.1)
Mean	**7.23 1.77**	**7.36 1.72**
Birth length of the infants in centimetres		
Range	22.0-60.0	20.0-65.0
Mean	47.06 ± 4.31	47.69 ± 4.26
Head circumference of the infants in centimetres		
Range	23.0-54.0	12.0-54.0
Means	33.25 ± 2.84	34.00 ± 2.71
Umbilical cord length in centimetres		
Range	30.0-70.0	19.0-85.0
Means	52.82 ± 6.16	52.64 ± 6.14
Birth weight of the infants in Kilogrammes		
Very low birth weight	4 (2.7)	43 (1.4)
Low birth weight	17 (11.6)	280 (9.5)
Normal birth weight	117 (80.3)	2471 (83.5)
Macrosomia	8 (5.4)	166 (5.6)

DISCUSSION

The prevalence of teenage pregnancy in this study was 5.0% of the deliveries in the Jos University Teaching Hospital. This was higher than the reported figure from Ile-Ife[1], but much lower than 24.0% reported in Sagamu[8], and the northern part of Nigeria[12]. This relatively low prevalence rate may be attributable to the urban status of the study population.

The mean age of the women was 18.20 ± 0.84 years, and majority (87.0%) of them were aged 18-19 years. This is in contrast to findings in the far north of the country where early marriage and subsequent pregnancy is common. In Nigeria[13,14], and especially in Sokoto, early marriage is a common practice resulting in early pregnancy[12].

One hundred and forty-one (96% of the teenage mothers were of parity one and two. In up to 81% of them, the pregnancy was the first one, that is, primipara.

All the teenage mothers were of educational levels of less than secondary school level. None of them had completed tertiary education. Salako in Sagamu also found that teenage mothers were less educated than women of higher age groups in the same population[8]. Educational level and occupation determine the socio-economic status and / or empowerment of a person. The socioeconomic empowerment of the teenage mothers could thus be predicted in the study as inferred by their educational level and occupation. Majority (87.8%) of them were either housewives or students, without any form of economic empowerment. A similar finding of low socio-economic status in teenage pregnancy was also reported from a study in Nnewi[15], Eastern Nigeria.

Preterm delivery was higher than for the total population in the study (24.5%: 17.6%). This was lower than the reported 35.7% preterm delivery rate in Nnewi[15]. Another maternal morbidity that was observed to be high was the episiotomy rate (41.3%). This high episiotomy rate may be because majority (81%) of them were primigravidae, and were amenable to having episiotomy to ameliorate the problem of tight perineum usually encountered in them. This therefore may not be solely because they were teenagers, but parity being a major contributory factor.

The Caesarean section rate in the total population was higher than in the teenagers. The Sokoto study reported a relatively higher caesarean section rate and increased fistulae formation among the teenagers, particularly among those aged 15 years and below[12]. This was contrary to the case in our study. The reason for this is probably because the majority of our teenagers were between 18 and 19 years of age. By this age, these women would have developed the full anatomic capacity of their pelvis, thus eliminating cephalopelvic disproportions in these teenagers. Obstetric complications are significantly greater in teenagers 16 years and below[9]. Physiological and anatomical

immaturity in teenagers younger than the age of 17 years, no doubt, is contributory to the obstetric risks[16]. On the other hand, the teenagers in our study had antenatal care, and all had supervised labour and delivery in the maternity unit of the teaching hospital. Postpartum haemorrhage (blood loss following delivery of ≥ 500 ml) in the teenagers was lower than that in the total population. This may be explained by the low parity in them compared with higher parity in the older women. There was no maternal mortality in the teenagers in this study. The reason may be due to the fact that all of them were supervised in labour and the number of the cases analysed was small. The Sokoto study reported higher maternal mortality of 1.3% in teenagers[12].

The foetal outcome demonstrated that the immediate neonatal outcome assessed by Apgar scores, the sex ratio, mean birth length, head circumference, and umbilical cord length were all similar in the teenagers and the total population. Many studies[17-22] have shown that the obstetric risks of teenage pregnancy include prematurity, low birth weight, operative vaginal deliveries, caesarean section rate, anaemia, pregnancy induced hypertension and puerperal sepsis. This study confirmed that low birth weight in the infants of the teenagers were higher that that of the total population (14.3%: 10.9%). The low birth weight among the infants of the teenagers in the study was lower that the 20% reported in Sokoto[12].

Teenage pregnancy is still encountered in our practice. They appeared to have improved incidences of maternal and perinatal morbidity and mortality reported in the literature. These probably have been the benefits of antenatal care, supervised labour and delivery. Antenatal care in teenage pregnancy improves maternal and perinatal morbidity and mortality rates in teenage pregnancy as well as in older pregnant women. The prevention of childhood marriage and teenage pregnancy may be further reduced by compulsory primary and secondary education, social reformation and the utilization of family planning.

The study demonstrates that older teenagers, who make up most of the study group have good obstetric performance. The utilization of health care facilities by teenagers will have beneficial as well as positive effects on the reduction of maternal and foetal morbidity and mortality.

The study opines that pregnant teenagers are not, particularly a high-risk group when they are older teenagers, have good antenatal care, and are supervised during labour and delivery.

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