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Obstetric Outcome of Teenage Pregnancies at a Tertiary Care Hospital in Sokoto, Nigeria

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Abstract

Context: Maternal age is an important factor in determinant of obstetric outcome. Teenage pregnancy constitutes a high risk pregnancy associated with complications arising from adverse physiological , anatomical and socio economic factors.

Objective: To determine the obstetric outcome of adolescent pregnancies managed at Usman Danfodiyo University Teaching Hospital (UDUTH) Sokoto, Nigeria.

Methods: A retrospective review of teenage pregnancies seen at UDUTH, Sokoto, Nigeria over a 2 year period, 2002 to 2003 was carried out. The outcome was analysed and compared with the controls.

Results: Teenage pregnancies accounted for 11.8% of 4498 deliveries within the period. Majority of the teenagers (79.1%) were nullipara. Pregnancy induced hypertension, eclampsia, intrauterine fetal death, anaemia, cephalopelvic disproportion and preterm labour were the mains complications observed and were significantly higher in this group than in non- teenage mothers ($P<0.001$). Similarly the caesarean section and perinatal mortality rates were significantly higher in the former than latter ($p<0-001$).

Conclusion: Pregnant teenagers are at higher obstetric risk than their non-teenage counterparts. Female education, contraceptive services and antenatal care will help to reduce both the teenage pregnancy rate and its associated hazards.

Key Words: Teenage Pregnancy, Risk, Outcome.

Introduction

Maternal age is an important determinant of obstetric outcome of pregnancy[1]. Pregnancies among teenagers often constitute an important medical, social and educational problem [2,3]. Maternal and perinatal morbidity/mortality is influenced by medical complications like preterm labour, anaemia, pregnancy-induced hypertension, eclampsia, cephalopelvic disproportion and social problems such as unwanted pregnancy[4,5,6,7]. In addition, poverty, ignorance and lack of pregnancy supervision all combine to increase pregnancy risk to both the mother and the fetus in this group of patients[6]. This study was undertaken to determine the obstetric complications of teenage pregnancies in Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto and suggest ways of minimising their associated hazards.

Materials and Methods

The Labour Ward registers of Usmanu Danfodiyo University Teaching Hospital, Sokoto were examined and all the cases of teenage pregnancies delivered between 1st January 2002 and 31st December 2003 were extracted. Teenage pregnancy refers to pregnancy where maternal age is 13 to 19 years. The case records of these patients were retrieved and the data related to the obstetric history, features and management of the current pregnancy, fetal and maternal outcome were collated and compared with those of their non-teenage counterparts. Chi-square was used to compare some of the variables.

Results

During the period under review, there were 532 teenage deliveries out of 4,498 total deliveries giving an incidence of 11.8%. Their age ranged from 13 to 19 years with a mean of 17.8± 1.2 years. The age distribution as shown in the barchart revealed that majority of the patients (85.2%) were 17 to 19 years of age.

Most of the patients, 527 (99.1%) were married. Four hundred and twenty one patients (79.1%) were nullipara. The booked cases were 249 (46.8%) while the unbooked cases were 283 (53.2%). None of the unbooked cases had formal education while 42.1% of the booked group had at least primary education.

The common complications as shown in Table 1 were pregnancy induced hypertension (22.6%), eclampsia (20.5%), intrauterine fetal death (17.5%), anaemia (12.0%), cephalopelvic disproportion (9.4%) and preterm labour (6.8%). The rates of these complications were significantly higher in the teenage mothers than in

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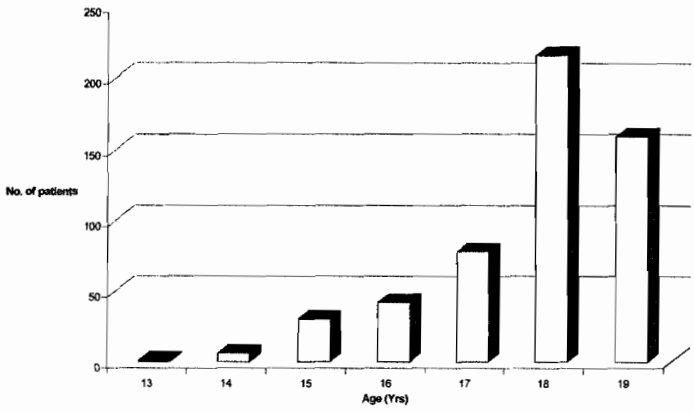
Age distribution of the teenage mothers



the non-teenage group ($p < 0.001$). The caesarean section rate in the teenage group (12.6%) was significantly higher than the 1.7% observed in the non-teenage mothers ($p < 0.001$). Within the teenage group, the caesarean section rate was significantly higher in the unbooked patients (10.7%) compared to the booked counterpart (1.2%); $p<0.001$. The two main indications for caesarean section were cephalopelvic disproportion (41.8%) and eclampsia (32.8%). Four unbooked patients had uterine rupture.

There were 97 perinatal deaths (7 in booked and 90 in unbooked cases) giving a perinatal mortality rate of 18.2% which was significantly higher than the 4.0% observed in the non-teenage mothers ($p < 0.001$). The perinatal mortality rate was significantly higher in unbooked than in booked teenagers ($p < 0.001$). The maternal mortality rate of 24.4 /1000 deliveries that occurred in the teenage mothers was not significantly different from the 31.8/1000 deliveries observed in the non-teenage group. All the 13 maternal deaths in the teenage group occurred in unbooked patients and the causes were eclampsia (9), ruptured uterus (2), anaemia (1) and puerperal sepsis (1).

Table 1
Pregnancy and labour complications in teenage and non- teenage mothers

Complications	Teenage (n= 532) No (%)	Non- teenage (n=3966) No (%)	X^2 Values	*p*- Values
Pregnancy induced hypertension	120 (22.6)	384 (9.7)	68.11	<0.001
Eclampsia	109 (20.5)	242 (6.1)	127.31	<0.001
Intrauterine fetal death	93 (17.5)	48 (1.2)	416.29	<0.001
Anaemia (PCV < 30%)	64 (12.0)	111 (2.8)	100.54	<0.001
Cephalopelvic disproportion	50 (9.4)	121 (3.1)	51.00	<0.001
Preterm labour	36 (6.8)	9 (0.2)	206.10	<0.001
Post partum haemorrhage	24 (4.5)	47 (1.2)	19.13	<0.001
Breech presentation	11 (2.1)	86 (2.2)	0.11	>0.05
Premature rupture of fetal membranes	10 (1.9)	61 (1.5)	0.17	>0.05
Retained placenta	5 (1.0)	44 (1.1)	0.17	>0.05
Ruptured uterus	4 (0.8)	62 (1.6)	2.15	>0.05
Antepartum haemorrhage	3 (0.6)	35 (0.9)	0.28	>0.05
Twins	2 (0.4)	95 (2.4)	9.07	<0.001

Discussion

This study has demonstrated that teenage pregnancies are more likely to be complicated by pregnancy-induced hypertension, eclampsia, intrauterine fetal death, anaemia in pregnancy, cephalopelvic disproportion and preterm labour than non-teenage pregnancies. Many previous authors [4,6,7,8] have made similar observations. In addition, the perinatal outcome is better in booked teenage mothers than their unbooked counterparts. This is not surprising as these complications are more likely to progress uncontrolled in the latter group. Several studies have shown that with good antenatal care, the perinatal outcome of teenage pregnancies is as favourable as that of mature mothers [9,10].

Caesarean section rate in this study was significantly higher in teenagers than in non-teenage mothers and its main indication in the former was cephalopelvic disproportion. This is similar to the finding in Ilorin[7]. However in a similar study in Hong Kong, the caesarean section rate was significantly lower in the teenage mothers than the non-teenage group [9]. This may be attributed to a higher rate of preterm labour (13.0%) in the population compared to ours (6.8%). In preterm labour, the risk of cephalopelvic disproportion (which is the main indication for caesarean section in this study) is very minimal. Studies have shown that the best obstetric outcome of pregnancies occur in 20-30 years age group

while the worst are found in extreme of reproductive age [5,11,12,13]. Therefore, inclusion of patients above 35 years of age among the control in this study would have increased the rate of these complications in the control. It may be necessary to carry out a similar study in future with patients aged 20-30 years as control.

In conclusion, pregnant teenagers are definitely at greater risk and require additional efforts and resources to preserve and protect their total health. They need closer surveillance for prevention and treatment of pregnancy induced hypertension, eclampsia, anaemia, cephalopelvic disproportion and preterm labour. There is need to prevent teenage pregnancy through female education and contraceptive services. However, when such pregnancies do occur, it is necessary to minimize their complications through optimal perinatal care.

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