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Original Research Article

"Perinatal Outcome of Adolescent Pregnancy and Labour"

Naireen Sultana[1*], Mst. Aleya Khatun[2], Nahid Sultana[3], Rawshan Ara[4], Farzana Islam Khan[5], Rabeya Sultana[6]

[1]Associate Professor (Obstetrics & Gynaecology), Tairunnessa Memorial Medical College, Gazipur, Bangladesh
[2]Assistant Professor (Obstetrics & Gynaecology), Shahid Tazuddin Memorial Medical College, Gazipur, Bangladesh
[3]Professor (Obstetrics & Gynaecology), Tairunnessa Memorial Medical College, Gazipur, Bangladesh
[4]Associate Professor (Obstetrics & Gynaecology), Tairunnessa Memorial Medical College and Hospital, Gazipur, Bangladesh
[5]Assistant Professor (Obstetrics & Gynaecology), Tairunnessa Memorial Medical College, Gazipur, Bangladesh
[6]Ex Associate Professor (Obstetrics & Gynaecology), City Medical College, Gazipur, Bangladesh

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***Corresponding author:** Naireen Sultana

Abstract

Introduction: Teenage pregnancy is the problem of both developed and developing countries. In developed country modernization may contribute to unwanted pregnancy as a result of relaxation of traditional, cultural norms prohibiting premarital sexual activity. But in our country early marriage, ignorance, illiteracy, lack of adequate healthcare facilities, failure to seek family planning advice due to social taboos and shyness are the cause of this problem. ***Objective:*** To evaluate perinatal outcome of adolescent pregnancy and labour. ***Methods*:** This is a prospective case control study was carried out in the Department of Obstetrics and Gynaecology of Dhaka Medical College Hospital, Dhaka Bangladesh from 1st January 2008 to 1st July 2008.A total number of 100 adolescent pregnant women who satisfied the inclusion and exclusion criteria. Purposive consecutive sampling from admitted patients. One hundred pregnant women of 15 to 19 years case group and One hundred pregnant women of 20 to 35 years control group who were admitted into the hospital during the same period. ***Results*:** The overall percentage of adolescent mother during this study period among total 4592 obstetric cases admitted in Dhaka Medical College Hospital (DMCH) is 5.75% (264 cases were teenagers and 4202 were between 20-35 years old control group). Statistics significant test for difference in proportions were conducted in some of the events of both groups. Above table shows majority of adolescent mothers were between more than 17 years up to 19 years (88%). In control group majority from age 20-30 years (76%). Above tables shows 38% adolescent mothers were illiterate, 32% had primary education, 8% had secondary education and 22% could sign only. In control 20% illiterate, 24% could sign only, 38% had primary education and 18% had secondary education.54% of adolescent mothers has normal vaginal delivery,4% had assisted breech delivery, 2% had forcep delivery, 4% had ventouse delivery and 36% had caesarean section. Whereas in control group caesarean section was 38% and normal vaginal delivery 59%.foetal conditions were noted. 60% of neonates of adolescent mothers were healthy and 76% of neonates of older mothers were healthy. The differentiation was statistically significant between two groups ($P<0.05$). ***Conclusion*:** From our study we can say that, in order to improve the teenage health periodic information, education, community activities, ANC camps to be held at primary health care centers. Further study is needed for better outcome.

Keywords: Maternal Outcome, Teenage Pregnancy, Caesaren Deliveries.

INTRODUCTION

In recent decades adolescent pregnancy has become an important health issue in a great number of countries, both developed and developing. However, pregnancy in adolescence is by no means a new phenomenon. In large regions of the world (eg. South Asia, the Middle East and North Africa) age at marriage has traditionally been low in kingship based societies and economics. In such cases most girls are married soon after menarche, fertility is high and consequently many children are born from adolescent mothers [1]. The incidence of adolescent pregnancy and adolescent birth is widely divergent. The highest adolescent birth rate is in Sub-Sahara Africa and in some countries in South Asia and Latin America. Intermediate figures are found in the Middle East, North Africa, USA and Eastern Europe. In developed countries the highest incidence of adolescent pregnancies, abortion and birth are recorded in the USA with a tendency to decrease in recent years. Lower figures are obtained in Canada, Australia and the United Kingdom. The lowest

adolescent birth rate is found in the Scandinavian countries, Switzerland, the Netherlands, Japan, Korea and China [1]. About 11% of all US births in 2002 were to teens (ages 15 to 19) [2]. The majority of teenage births (about 67%) are to girl's ages 18 & 19 [3]. About 860000 teenagers become pregnant each year, and about425000 give birth [3]. About 1 in 3 teenagers becomes pregnant before age 20 [4]. The teenage birth rate is declining. Between 1991 and 2002, the rate fell by 30% (from 61.8 per 1000 women to 43) [3]. About 17% of teenage mothers go on to have a second within 3 years after the birth of their first baby [5]. Some complications of pregnancy may occur more frequently in adolescent than in older women. Some have reported an increased incidence of hypertensive disorders in pregnant adolescent, compared to older pregnant women. Anaemia frequently occurs in adolescent than the older pregnant women especially in developing countries. The cause is often nutritional deficiency. Infectious diseases like malaria, hook warm and HIV infection also play an important role. Adolescents were at increased risk of contracting HIV infection. Pregnant adolescents are especially at risk of iodine deficiency with serious consequences for the feotus. Immaturity of the pelvic bones and of the birth canal may be significant factors in obstetric risk in young pregnant adolescents such as obstructed labour, cephalopelvic disproportion, higher caesarean section rate, fistulas etc. Adolescent pregnant girls are at increased risk from preterm delivery (<37 weeks) compared to older pregnant woman. The youngest age groups run the highest risk. Possible associated factors are immaturity of organs, short interval between menarche and pregnancy and low educational attainment. The perinatal mortality and morbidity is higher and the maternal mortality is also higher in young adolescent mother due to pregnancy induced hypertension, puerperal sepsis and septic abortion [1].

MATERIALS AND METHODS

This is a prospective case control study was carried out in the Department of Obstetrics and Gynecology of Dhaka Medical College Hospital, Dhaka, Bangladesh from 1st January 2008 to 1st July 2008. A total number of 100 adolescent pregnant women who satisfied the inclusion and exclusion criteria. Purposive consecutive sampling from admitted patients. One hundred pregnant women of 15 to 19 years case group and One hundred pregnant women of 20 to 35 years control group who were admitted into the hospital during the same period. Careful history and thorough clinical examination was performed with the aim of detecting clinical symptoms and signs suggesting or warning complication of pregnancy and delivery including perinatal complications. At entry into the study, a detailed history about socio-demographic, past obstetric history, present history, record of antenatal checkup and present complications where studied and a comparison of these variables were made between teenagers and older group. On admission into the labour ward a questionnaire was filled up. Age of the patients were calculated in years and was recorded accordingly. Monthly income was assessed.

Patients who were in labour were managed according to the need. Patients of eclampsia were managed in eclampsia ward with anticonvulsant, antihypertensive and diuretic if needed. Obstetric management was in the form of augmentation of labour or caesarean section postpartum haemorrhage was managed by giving blood transfusion and treatment of the cause like removal of placenta if there was retained placenta. Uterine atony if present, was managed by syntocinon and ergometrine and in some cases, even hysterectomy was done. Data were analyzed by using computer based programme statistical package for social science (SPSS) for window version 12.

OBSERVATION AND RESULTS

The overall percentage of adolescent mother during this study period among total 4592 obstetric cases admitted in Dhaka Medical College Hospital (DMCH) is 5.75% (264 cases were teenagers and 4202 were between 20-35 years old control group). Statistics significant test for difference in proportions were conducted in some of the events of both groups.

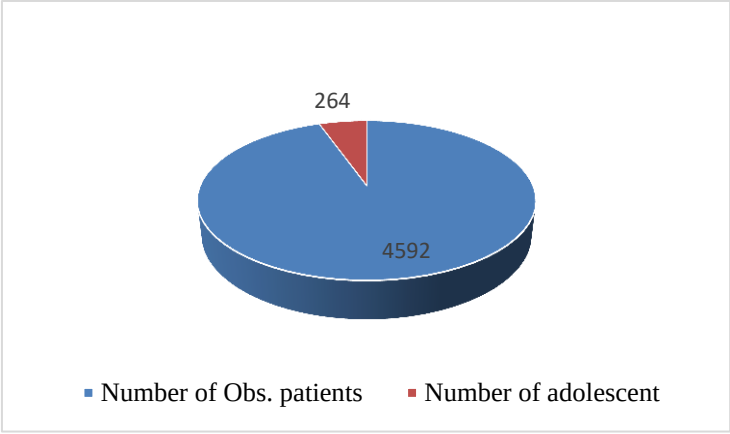

Fig-1: Distribution of admitted adolescent pregnant patient in DMCH.

Table-1: Age distribution of admitted adolescent pregnant patient and comparing it with no adolescent pregnant mother.

Age group	Case (n=100)		Age group	Control (n=100)	
	No.	%		No.	%
<17 years	12	12	20-30 years	74	74
> 17-19 years	88	88	> 30-35 years	26	26

Above table shows majority of adolescent mothers were between more than 17 years up to 19 years (88%). In control group majority from age20-30 years (76%) Table-1.

Table-2: Education status.

Education status	Case (n=100)		Control (n=100)	
	No.	%	No.	%
Illiterate	38	38	20	20
Can sign only	22	22	24	24
Primary education	32	32	38	38
Secondary education	8	8	18	18

Above tables shows 38% adolescent mothers were illiterate, 32% had primary education, 8% had secondary education and 22% could sign only. In control 20% illiterate, 24% could sign only, 38% had primary education and 18% had secondary education Table-2.

Table-3: Complication arise during pregnancy and labour and comparison between two groups.

Complications	Case (n=100)		Control (n=100)		X^2	P value
	NO.	%	NO.	%		
Hypermesis gravidarum	3	3	2	2	11.645	0.001
Pre-eclampsia	13	13	2	2		
Eclampsia	14	14	3	3		
IUD	2	2	1	1		
Preterm labour	10	10	5	5		
Malpresentation	6	6	2	2		
PROM	9	9	2	2		
Prolonged labour	14	14	4	4		
Obstructed labour	5	5	3	3		
Oligohydramnias	5	5	3	3		
Scar tenderness	0	0	14	14		
APH	0	0	2	2		
No complication	19	19	57	57		

Above tables shows complications during pregnancy and labour. Eclampsia, preeclampsia,preterm labour, prolong labour, obstructedlabour, PROM was significantly higher among the adolescent mothersthan among the older mothers. The differentiation was statistically significant between two groups ($P<0.05$) Table-3.

Table-4: Indication of caesarean section.

Indication of LSCS	Case (n=36)		Control (n=38)		X^2	P value
	NO.	%	NO.	%		
Obstructed labour	5	13.89	3	7.89	4.842	0.028
Prolonged labour	7	19.44	5	13.16		
Preeclampsia	3	8.33	2	5.26		
Eclampsia	8	22.22	3	7.89		
Previous LSCS	0	0	12	31.58		
Malpresntation	2	5.56	2	5.26		
CPD	4	11.11	1	2.63		
Foetal distress	5	13.89	3	7.89		
Failed trial	2	5.56	2	5.26		
APH	0	0	3	7.89		
Oligohydramnios	0	0	2	5.26		

Indication of caesarean section is highlighted. In the adolescent group. Eclampsia, preeclampsia, obstructed labour, prolongedlabour, CPD, foetal distress was the main indication for caesarean section. Whereas in control group the main indication for caesarean section is previous LSCS, APH, prolong labour, malpresentation. The differentiation was statistically significant between two groups (P<0.05) Table-4.

Table-5: Perinatal outcome.

Condition	Case n=100		Control n=100		X^2	P value
	No.	%	No.	%		
Healthy	60	60	76	76	5.88	0.053
Asphyxiated	35	35	21	21		
Still born	5	5	3	3		
Congenital malformation	0	0	0	0		

In table 5 foetal conditions were noted. 60% of neonates of adolescent mothers were healthy and 76% of neonates of older mothers were healthy. The differentiation was statistically significant between two groups (P<0.05).

DISCUSSION

In our study we found that, adverse outcome of teenage pregnancy arises not only from physical and medical causes associated but also depends on individual, family, social, cultural, economic factors besides lack of access to health care resources, contraception, education. Increased incidence of LSCS in teenage pregnancies and medical complications associated with it like anemia, PIH, and fetal complications being, prematurity, IUGR, Low birth weight are preventable factors [6]. In one study reported that, teenage pregnancy exposes mothers to many health-related complications and newborns to poor birth outcome. Adverse outcome of teenage pregnancy arises not only from physical and medical causes associated but also depends on individual, family, social, cultural, economic factors besides lack of access to health care, contraception, resources, education [7]. In our study we noted that, in case group most of the patients completed only their SSC, no one completed their masters where as in control group 7 people completed their masters. This implies that teenage mothers are less careful about their pregnancy probably secondary to lack of awareness, maturity and other social factors. In one study reported that, increased incidence of LSCS in teenage pregnancies and medical complications associated with it like anemia, PIH, and fetal complications being, prematurity, IUGR, Low birth weight are preventable factors [8]. In our study we found that, 54% of adolescent mothers have normal vaginal delivery, 4% had assisted breech delivery, 2% had forcep delivery, 4% had ventouse delivery and 36% had caesarean section. Whereas in control group caesarean section was 38% and normal vaginal delivery 59%. Which similar to other studies. Teenage pregnancy remains major health issue in our country due to prevailing social dogmas, age old traditions and poor access to health care in remote rural areas, illiteracy leads to lack of knowledge about family planning and puts the adolescents at risk for early pregnancy. Education play major role in decreasing the incidence of teenage pregnancy and its attendant health risks and psychological issues. Rate of caesarean delivery was high, predominant indication being cephalo pelvic disproportion, fetal distress, medical disorders associated like pre-eclampsia, and eclampsia. Vaginal delivery was seen in cases with low birth weight baby's secondary to growth restriction or prematurity [9]. According to Osbourne G K *et al*. a study shows that "anaemia was theonly antenatal complication that was significantly increased [10]. Study ofSusan *et al*. shows that pregnancy with maternal anaemia is 26.3%, UTI-19.9%, respiratory tract infection- 5.4% [11]. My study shows that 64%of adolescent mothers are anaemic, 26% has oedema, 22% are hypertensive and 14% have proteinuria. In my study, in the adolescent group eclampsia, pre-eclampsia, pretermlabour, prolonged labour, obstructed labure, PROM are significantlyhigher among adolescent group than among control group. In a study, Chen KX *et al*. [12] showed that the rates of very preterm delivery, preterm delivery, very LBW, LBW, SGA, and neonatal mortality were higher in teenage pregnancies. They were consistently increased with decreasing maternal age and were always highest among infants born to mothers aged 15 years or younger [12]. Study of Sarker CS *et al*. showed that eclampsia and pre-eclampsia affected teenage mothers (10.6%) were much more frequent than mother of 20 years of age and above (5.2%). Incidence of 30% low birth weight baby, 21.1%prematurity and 16.4% perinatal mortality were recorded [13]. According to British journal of obstetrics and gynaecology-the caesarean section rates were not higher for younger adolescents in comparison to the control group [14]. My study shows that 54% adolescents had normal vaginal delivery, 36% had caesareanion, 2% had forceps delivery and 4% had ventouse delivery. On the other hand caesarean section was 38%, normal vaginal delivery was 59%, and ventouse delivery was 3% in the control group. Here caesarean section was low and vaginal delivery was more in the adolescent group. In one study reported that foetal conditions were noted.

60% of neonates of adolescent mothers were healthy and 76% of neonates of older mothers were healthy. In my study complications following delivery were more in adolescent group. Postpartum eclampsia, wound infections were more common in adolescent mother than control group. MMR in Asia (UNFPA 1999) report shows that in Bangladesh MMR is 8.5 per thousand. Bangladesh Bureau of Statistics Publication data on1996 shows that adolescent maternal mortality rate is 3.9 per thousand [15]. Bangladesh Demographic and Health Survey report (1999-2000) shows that in Bangladesh MMR is 3 per thousand [16]. In my studying adolescent group maternal mortality is 2%.

CONCLUSION

Adolescents are real assets and can be the driving force of positive change in the society. They need to be brought up with care and tenderness and it is our duty to help them grow safe and with high-quality of life. Adolescence pregnancy is universally accepted as high-risk pregnancy. Due to complications like ecla obstructed labour, prolonged labour, CPD. preterm labour, low birth weight baby etc. But we can easily reduce the number of such high risk teenage, unwanted and unplanned pregnancy through improved family planning services. From our study we can say that, in order to improve the teenage health periodic information, education, community activities, ANC camps to be held at primary health care centers. Further study is needed for better outcome.

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