

Prospective Comparative Assessment of Sociodemographic Profile and Fetal Outcome in Teenage and Adult Mother

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Abstract

Aim: The present study aims to find out the incidence and to compare the various obstetric and fetal outcome of teenage pregnancy versus adult.

Methods: The present study was conducted in the Department of obstetrics and gynecology, Nalanda Medical College and Hospital, Patna, Bihar, India. 100 cases of teenage pregnancy (13-19 years) were compared with 100 cases of controls (20-26 years) for fetal outcome admitted in the Department of obstetrics and Gynecology, Nalanda Medical College and Hospital, Patna, Bihar, India for the period of 1 year.

Results: The result showed that the mean age of teenage mother and adult mother was 18.75 and 23.65 years respectively. The maximum number of teenage mother belong to low socioeconomic status (55%), housewife (96%) by occupation, illiterate (70%), living in a joint family (60%) and belong to the rural background (70%). While in adult mother's maximum number of females from middle (60%) socioeconomic class, housewife (85%) by occupation, educated up to primary level (40%), living in nuclear family (55%) and belong to urban background (55%). Statistically, we found a significant difference in mean age, socioeconomic status, occupation, education level, family and area in both groups ($p < 0.05$).

Conclusion: Prevention of teenage pregnancy and reduced complications of teenage pregnancy can be achieved by improving the overall socioeconomic status of our female population and better nutrition especially during pregnancy.

Keywords: Teenage mother; Adult Mother; Neonatal complication; Pregnancy

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Introduction

Teen age is the modern definition of adolescent that means period of life (15-19yrs) during which care free child become responsible adult. In recent years incidence of teen pregnancy increasing due to early onset of puberty, sexual activities in girls and relative lack of education on contraceptive methods. Pregnancy during

teenage adversely affects the health of the females as she is yet to attain her physical and mental health. Teenage pregnancy also effects the social development and national economy. An estimate by health ministry shows 12% of economic loss of GDP. A girl become parent before becoming an

adult and both mother and fetus competes for nutrition. [1]

The adolescent pregnancy is one of the most important problems in the 21st century. More than 14 million adolescent girls give birth each year. [2] Although these births occur in all societies, 12.8 million take place in the developing countries. In some societies, girls marry and start their families before their own childhoods have ended. In other countries, the majority of the births given by the young mothers occur without marriage. [3]

The rate of the adolescent pregnancies varies from country to country. The highest levels of adolescent pregnancies are in Africa. There are also high rates in India, Bangladesh, Latin America and the Caribbean. The average rate of births per 1 000 women aged between 15-19 years is 115 in Africa, 75 in Latin America and the Caribbean, and 39 in Asia. In the developed countries, this is given to be 25 births per 1 000 women. Among all of the births over the world, more than 10% are given by the adolescents. [3,4] According to WHO every year 21 millions girls aged 15-19 years in developing regions become pregnant and approx 12 millions of them give birth. At least 777,000 birth occur to teenage girls younger than 15 years in developing countries. [5]

As early marriages are common in rural India and early motherhood is a celebrating event in our villages but in fact, early childbearing is associated with multiple health risks for both mother and baby. A teenage mother is at increased risk for poor maternal weight gain and high maternal mortality rate and also associated with the toxemia of pregnancy, anemia, sexually-transmitted disease, preterm delivery and intrauterine growth retardation. The adverse fetal outcome includes preterm birth, low birth weight infants, stillbirth and birth asphyxia. [6]

Hence the present study aims to find out the incidence and to evaluate the various obstetric and fetal outcome of teenage pregnancy and compare it with the maternal and fetal outcome and adult pregnancy.

Materials and Methods

The present study was conducted in the Department of obstetrics and gynecology, Nalanda Medical College and Hospital, Patna, Bihar, India. 100 cases of teenage pregnancy (13-19 years) were compared with 100 cases of controls (20-26 years) for fetal outcome admitted in the Department of obstetrics and gynecology, Nalanda Medical College and Hospital, Patna, Bihar, India for the period of 1 year. All the primigravida teenage patients were included in the study until we got 100 cases. For comparative study, we took 100 cases of adult pregnancy by random selection.

Inclusion criteria:

Only Singleton pregnancy was included, primigravida, BMI -19-25.

Study group: Up to 19 years of age at the time of the delivery.

Control group: 20-26 ears.

Exclusion criteria:

Women more than 26 years of age, History of pre-pregnancy medical illness e.g. HT, diabetic, cardiac, renal, endocrine or autoimmune disease, Multiple gestation

Methodology

All patients were managed according to the department protocol and followed up clinically until they are discharged.

Statistical Analysis: Statistical product and service solution SPSS-21 software was used for statistical analysis. Chi square test and Student 't' test was applied as and when necessary. P value less than 0.05 was taken as statistically significant.

Results

Table 1: Distribution of sociodemographic profile in both groups

Variables	Teenage Mother N=100 (%)	Adult Mother N=100 (%)	X2 (df)	p value
Age in Mean (SD)	18.75(0.948)	23.65(2.050)	(t test) -24.787	0.000
Socioeconomic Status	05 (5)	15 (15)	24.450 (2)	0.000
1. High	40 (40)	60 (60)		
2. Middle	55 (55)	25 (25)		
3. Low				
Occupation			13.350 (1)	0.000
1. Housewife	96 (96)	85 (85)		
2. Working	4 (4)	15 (15)		
Education			79.142 (3)	0.000
1. Illiterate	70 (70)	25 (25)		
2. Primary	25 (25)	40 (40)		
3. Secondary	5 (5)	20 (20)		
4. Graduate	00 (0.0)	15 (15)		
Family			7.125 (1)	0.008
1. Nuclear	40 (40)	55 (55)		
2. Joint	60 (60)	45 (45)		
Area			24.037 (1)	0.000
1. Urban	30 (30)	55 (55)		
2. Rural	70 (70)	45 (45)		

The result showed that the mean age of teenage mother and adult mother was 18.75 and 23.65 years respectively. The maximum number of teenage mothers belong to low socioeconomic status (55%), housewife (96%) by occupation, illiterate (70%), living in a joint family (60%) and belong to the rural background (70%). While in adult mother's maximum number of females from middle (60%)

socioeconomic class, housewife (85%) by occupation, educated up to primary level (40%), living in nuclear family (55%) and belong to urban background (55%). Statistically, we found a significant difference in mean age, socioeconomic status, occupation, education level, family and area in both groups ($p < 0.05$). (Table 1)

Table 2: Distribution of Cases According to Period of Gestation (weeks)

Period of Gestation (weeks)	Teenage Mother N=100 (%)	Adult Mother N=100 (%)	X2 (df)	p value
Pre-term (32-36)	25 (25)	5 (5)	21.511 (2)	0.000
Term (37-40)	70 (70)	85 (85)		
Post-term (>40)	5 (5)	10 (10)		

The teenage mothers had a higher proportion (25%) of preterm deliveries as compared to the adult mothers (5%) while adult mothers had a higher proportion of post-term pregnancies (10%) as compared

to the teenage mothers (5%). However, most of the deliveries were term delivery in both groups. The period of gestation during delivery was statistically significant in both groups (p-value 0.00). (Table 2)

Table 3: Distribution of Cases According to Mode of Delivery

Mode of Delivery	Teenage Mother N=100 (%)	Adult Mother N=100 (%)	X ² (df)	p value
Assisted Breech	5 (5)	12 (12)	12.250 (3)	0.030
Forceps	3 (3)	3 (3)		
LSCS	32 (32)	15 (15)		
Normal Vaginal	60(60)	70 (70)		

Vaginal delivery was the commonest mode of delivery in the groups, 60% of teenage mothers and 70% of adult mothers delivered by vaginal rout. In teenage mothers, cesarean section (LSCS) was done in 32%, 5% delivered by assisted breech and 3% by forceps. While in adult mothers, LSCS was done in 15%, 12% delivered by assisted breech and only 3% delivered by forceps. Mode of delivery was significant in our study (p-value 0.01). (Table 3)

Discussion

Teenage is basically a time for growing up and the child is not physically and emotionally mature enough to reproduce. Hence, if the girl is taken out of school at this time and pressurized into marriage, it can cause considerable emotional stress. Furthermore, these young girls, having little or no knowledge of contraception, usually become pregnant soon after marriage which further aggravates the physical and psychological stress.

Although more teenagers presented with primigravid pregnancies, both adults and teenagers had a similar booking trend and attendance of more than five antenatal visits. This finding differs from other studies, which suggest that stigma and embarrassment prevent teenagers from attending antenatal visits. [7,8] The cost of transport, limited knowledge of antenatal care programmes and fear of HIV testing

were previously argued for poor antenatal visits amongst teenagers. [8] This was not evident in this study. Fulpagare et al., [9] on the other hand have demonstrated better antenatal attendance in teenagers compared with adults.

Early marriage and childbearing are encouraged in some societies especially in rural areas and less developed or traditional societies. [10] In young people, the behavior and opinions concerning gestation is related with social and cultural environment. Individual, familial and social factors formulates one's thoughts concerning sexual intercourse family formation, gestation and maternity. [11]

In our study, the mean age of teenage mother was 18.75 and for the adult mother, it was 23.65 year. This is comparable to other studies. [12,13] Most of the teenage mothers (55%) belonged to lower socioeconomic status. It prevents them to take benefit of available facilities. That is why more teenage mothers were associated with pregnancy-related complications. Various studies show similar results. [14-16] In our study majority of teenage mothers belonged to a rural area (70%). This indicates that child marriage and early marriages are still prevalent in the rural area. This result is comparable to previous studies. [15-17] Our study also showed that 70% of teenage mothers were illiterate and thus leading to early marriage, early

conception, and poor quality of life. Female literacy is correlated strongly with the decline in fertility, development of self-confidence, increasing the age of first sexual intercourse, delaying marriage and use of contraception. This study is comparable to other studies. [15,18-21]

Our study showed that preterm delivery was higher in teenage mothers (25%) as compared to adult mothers (5%). This is comparable to previous studies. [22,23] But some study showed that preterm deliveries were less among teenage mothers and term and post-term deliveries were common among the teenage mothers. [24] In our study, vaginal delivery was the most common mode of delivery in both teenage and adult mothers. The incidence of LSCS was significantly more in teenage mothers (32%) as compared to the adult mothers (15%). [25] Instrumental delivery was seen in 3% and 3% in teenage mothers and adult mothers, respectively. This is comparable to the previous studies. [13,22]

Conclusion

Prevention of teenage pregnancy and reduced complications of teenage pregnancy can be achieved by

- improving the overall socioeconomic status of our female population and better nutrition especially during pregnancy.
- improving the education of girls as it could play a significant role in decision making of their own life, delaying marriage and building self-confidence.
- Awareness of the fact that one should not marry before the age of 20 years
- improving the utilization of family planning services to reduce the rate of teenage pregnancies and minimizing their hazards and to prevent further pregnancies

The young people should be educated upon safe sexual life, negative effects of early sexual affairs and pregnancies before they start their sexual activity. Sexual

health information should take place more effectively in the education system. Health foundations apart from the education institutions in terms of supporting the young people about sexual health and family planning should undertake an important role. We believe that the more the girls attend to schools, the presence of an obligatory secondary education and the more the women appear in working life would protect the young people from early marriages, early pregnancies and their outcomes.

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