Paper

Teenage pregnancy and contraception

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Abstract

Introduction: The Age Specific Fertility Rate (ASFR) for women below 20 years has remained virtually unchanged between 34-38%, despite declining total fertility rates. Hence the proportion of teenage pregnancies is increasing. Low maternal age has been clearly shown to have adverse effects on pregnancy, childbirth and future reproductive health.

Objectives: To assess the awareness, knowledge, usage of contraceptives and the proportion of unplanned pregnancies among teenage mothers.

Design: A case control study

Subjects and method: The subjects were selected from the admissions to the unit during the 3 month period from 01st January to 31st March 1999.

Cases: All Primigravidae below 19 years (yrs) of age (n=113).

Controls: All Primigravidae 19 to 28 yrs. of age (n=281).

Results: Teenagers were less educated and more than one third of them were not even educated up to grade 5.($p<0.001$). The majority of them was poor and had a monthly family income of less than Rs. 5000/= ($p<0.001$). The teenagers had lesser awareness regarding all methods of contraception ($p<0.001$). Most teenage pregnancies were unplanned and the usage of contraception was lower. The vast majority of teenagers who were not using contraception did it out of ignorance (92%), rather than out of fear, choice or due to non-availability.

Discussion: It should be possible to reduce teenage pregnancies in general by comprehensive sex education programmes in schools, community intervention programmes focussing on teenagers and ensuring general access of contraceptives to them

Introduction

In Sri Lanka the contraceptive prevalence rate has increased from 34% in 1970 to 66% in 1993. During this period the total fertility rate has decreased from 4.2% in 1970 to 2.3% in 1993 but the Age Specific Fertility Rate (ASFR) for women below 20 years has remained virtually unchanged between 34-38%[1]. Hence the proportion of teenage pregnancies is increasing. Hospital based studies have found teenage pregnancy rates ranging from 4% in Colombo[2] to 9.8% and 11% in Anuradhapura[3] and Kuliyapitya[4] respectively.

Low maternal age has been clearly shown to have adverse effects on pregnancy, childbirth and future reproductive health. Preterm labour and low birth weight are the commonest complications seen and are mainly responsible for the increased perinatal morbidity and mortality[2, 5-14]. Teenage pregnancies carry a high risk of abortion[14,15,16], hypertension in pregnancy (HIP)[5,6,9,17-20], intrauterine growth restriction (IUGR)[4,5,10,17,21] and operative vaginal delivery[11,19,21,22]. Other than HIP the risk of maternal morbidity in general (eg. anaemia, urinary tract infection, depression etc) and mortality too are increased in teenage pregnancies[4,6,17-19,21,23]. Commencement of sexual intercourse during the early adolescent years has also been shown to carry a significantly higher risk of developing both intraepithelial and invasive carcinoma of the cervix uteri later on in life[24-27].

Poor socio economic factors and poor prenatal clinic attendance may contribute to and increase the risk of pregnancy and childbirth complications[4,7,9-11,13,14,28]. However, even after statistically adjusting for these factors in communities where it is relevant and also in communities where pregnant teenagers have good prenatal care and are from good socio economic strata, the increased risk is seen in all teenagers in general and the younger teenager (<17 years) in particular[8-10,13].

A large number of teenage pregnancies are unplanned and unwanted and this results in a significant proportion undergoing termination of pregnancy (TOP)[9,14,19,28,29-34]. Although TOP is illegal in Sri Lanka it is a well known fact that a large number of illegal (and unsafe) TOP are being carried out in the country. The high risk of unsafe abortion such as death of the mother or future infertility if she survives are well known and are causing much concern to health providers. However it is a tragedy that while there is a strong lobby to legalise TOP and to provide safe TOP facilities with reduced risks, there is less emphasis on

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addressing the root cause of the problem viz unwanted pregnancies. The more rational and effective method of tackling this problem would be to concentrate on preventing these unplanned and unwanted pregnancies by promoting contraception.

Anticipation of possible complications and prenatal care can prevent or minimise the adverse effects of at least some (not all) of the complications of teenage pregnancies. However the risks will still remain. Hence steps should be taken to prevent teenage pregnancies especially in those below 17 years of age. Several studies have shown that health education and motivation for the use of temporary contraceptives play a vital role in preventing teenage pregnancies[35-41]. Hence this study was undertaken.

Objectives: To assess the awareness, knowledge, usage of contraceptives and the proportion of unplanned pregnancies among teenage mothers.

Design and setting: A case control study carried out in the university obstetric unit of the Teaching Hospital, Galle.

Subjects and method: The subjects were selected from the admissions to the unit during the 3 month period from 01st January to 31st March 1999.

Cases: All Primigravidae below 19 years (yrs) of age (n=113).

Controls: All Primigravidae 19 to 28 yrs. of age (n=281).

Mothers who were deaf, dumb or mentally subnormal were excluded.

All the subjects were interviewed by using a pretested questionnaire.

Z scores were calculated for the difference in the proportion of cases and controls in each of the variables analysed and the significance of each difference was evaluated

Results:

Table 1. Age distribution

	Mean	*Range*	*SD.*
Cases	17.1	15 - 18	0.67
Controls	24.4	19 - 28	2.72

Teenagers were less educated and more than one third of them were not even educated up to grade 5.

Table 2. Educational level

	Cases (%)	*Controls (%)*	*p*
<5 Grade	41 (36.7)	19 (6.7)	
>5 Grade	72 (63.3)	262 (93.3)	<0.001

Majority of teenagers were poor and had a monthly family income of less than Rs. 5000/=.

Table 3. Monthly family income

	Cases (%)	*Controls (%)*	*z*	*p*
<5000 Rs.	98 (86.7)	170 (59.4)	6.3	<0.001
>5000 Rs.	15 (13.3)	111 (40.6)		

Teenagers had a poor knowledge about the various methods of contraception. Less than 20% of them were aware about the safe period, the Intra Uterine Contraceptive Device (IUCD) and the injectable Depot Medroxy Progesterone Acetate (DMPA). Of the teenagers 64.5% were aware of the oral contraceptive pills (OCP). However this was much less than the 96% awareness in the control group.

Table 4. Awareness and knowledge of contraceptives

	Cases (%)	*Controls (%)*	*z*	*p*
Safe period	11 (9.7)	145 (51.6)	10.2	<0.001
Condoms	44 (38.9)	257 (91.4)	10.8	<0.001
OCP	73 (64.5)	271 (96.4)	6.9	<0.001
IUCD	14 (12.4)	186 (66.1)	12.5	<0.001
DMPA	22 (19.5)	261 (92.8)	18.1	<0.001

The mean interval between marriage and conception was significantly less in the teenage group.

Table 5. Interval between marriage and conception (months)

	Mean	*Range*	*SD.*	*p*
Cases	5.8	18-1	3.5	
Controls	12.2	48-1	6.2	<0.001

Almost two thirds (62%) of teenage pregnancies were unplanned compared to only 19% unplanned pregnancies in the controls. This is also highlighted by the contraceptive usage where 24% of controls used some form of contraception while only 9% of teenagers used a contraceptive.

Table 6. Unplanned pregnancies and usage of contraceptives

	Cases (%)	*Controls (%)*	*z*	*p*
Unplanned Pregnancies	70 (61.9)	53 (18.8)	8.42	<0.001
Usage of contraceptives	11 (8.8)	68 (24)	4.13	<0.001

The main reason for a teenager not using contraceptives was ignorance.

Table 7. Reason for not using contraceptives

	Cases (%)	Controls (%)	z	p
Ignorance	64 (62.7)	32 (13)	8.9	<0.001
Fear	6 (3.8)	19 (8.9)	0.3	0.7
Unavailable	0	2 (0.9)	1.6	0.1
Choice	22 (19.5)	261 (92.8)	8	<0.001

Only 13% of teenagers had planned their future family size while 77% of controls had already done so. While 79% of controls had already decided on when they would like to have their next pregnancy only 23% of teenagers had even thought about it.

Table 8. The proportion of subjects who had not planned their family size (Unplanned fam. size) and the interval before the next pregnancy (Unplanned preg. interval)

	Cases (%)	*Controls (%)*	z	*p*
Unplanned fam. size	98 (86.7)	64 (22.9)	16	<0.001
Unplanned preg. interval	87 (76.9)	59 (20.9)	12	<0.001

Discussion

Ideally pregnant women should commence antenatal care early in gestation. However in teenagers the first clinic visit may take place during the latter part of the pregnancy[42]. This usually occurs when a young unmarried teenager becomes pregnant and not in the married teenager. Due to a poor awareness of the pregnancy combined with a denial of its existence, she refuses to accept the fact that she is pregnant. In Sri Lanka she is brought to the clinic (very often by the mother) when the pregnancy is clinically obvious.

Interaction between poor socio-economic conditions, educational levels, dietary habits and maternal health behaviour will have adverse effects on prenatal care and obstetric outcome in teenagers. In this study nearly 38% of teenagers were not educated up to grade 5 while approximately 94% of controls had been educated more than grade 5. Approximately 87% of teenagers were from families whose monthly income was less than Rs. 5000/= per month compared with only 59% in the control group.

In the present study the proportion of unplanned pregnancies was 62% in the teenage group and 19% in the control group. It is possible that a significant number of these unplanned pregnancies were also unwanted. However since TOP is illegal in Sri Lanka no effort was made to elicit any history of attempts at TOP or to find out if they would have requested a TOP if it were legally possible. Many studies have shown that unplanned pregnancies are due to poor knowledge, awareness and usage of contraception[28,32, 43-47]. This was noted in the present study too. The usage of contraceptives by teenagers in this study was only 9% while rates of up to 80% have been reported from some parts of the USA[46].

In a study done in USA in 1980, to identify reasons for the increasing numbers of pregnant adolescents, it was found that only 43% had an adequate overall knowledge of contraception. Subjects reported many misconceptions about contraceptives and a general lack of motivation concerning contraceptive use[43]. In the present study only 29% had an adequate overall knowledge of contraception compared to 79% in the control group.

It is impossible to prevent teenage sexual activity. However it should be possible to prevent these teenagers from becoming pregnant. Studies have shown that teenage pregnancies could be prevented by health education and providing contraceptives to sexually active teenagers[29,36,37,48]. There is a need to change the attitudes of society towards teenage sexuality. Continued and expanded access to contraceptives for teenagers was probably responsible for the reduction of teenage pregnancy rate from 11.7% in 1991 to 9.9% in 1996 in the USA[37]. In a study done in the UK it was found that in communities served by young female general practitioners and in practices, which afforded more time for teenagers to discuss their problems with a nurse, the teenage pregnancy rates were lower than in other communities[48]. It has also been shown that comprehensive school based 'sex education' programmes combined with community intervention programmes are the best ways of reaching teenagers and providing them with the necessary knowledge and contraceptive services[49,50].

In Sweden, mandatory sex education in schools is combined with general access to contraception. This is probably the reason for the dramatic decline in teenage birth rates in Sweden from 2.9% in 1975 to 1.3% in 1989. This trend was also accompanied by a decline in TOP rates from 3% in 1975 to 2.1% in 1989[13].

The sexual behaviour of teenagers place them at a high risk of developing Sexually Transmitted Diseases (STD)[28,51]. The use of barrier contraceptives will not only provide them with protection against STD but may also protect them from developing intraepithelial and invasive cervical cancer later on[52].

Conclusions

Compared to older women who became pregnant, teenagers were less educated, had a lower monthly income and had a shorter mean interval between marriage and conception. Teenagers also had a lower awareness and knowledge of the different methods of contraception. The low contraceptive usage among the teenagers was mainly due to a lack of knowledge and fear of side effects and most of them did not plan their family size and future pregnancies. The proportion of unplanned pregnancies in teenagers was also significantly higher than in older women.

It should be possible to reduce teenage pregnancies in general and the unplanned pregnancies in particular by educating teenagers about temporary contraception.

It should be possible to reduce teenage pregnancies in general. Comprehensive 'sex education' programmes in schools, community intervention programmes focussing on teenagers and ensuring general access of contraceptives even to teenagers, should be considered.

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