

Comparison of Antenatal Complications in Adults and Adolescents Pregnant Women on the Basis of Health Determinants



Medical Science

KEYWORDS : Adolescent; pregnancy; preterm delivery; low birth weight.

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ABSTRACT

Objectives

To evaluate the comparison between adolescent and adult health determinants and antenatal complications.

Methods

A comparative study was conducted from May 2010 to April 2011, involving 90 patients between 15-30 years who were compared for antenatal complications.

Results

The mean age of adolescents was 18.67 years and the adult was 27.27 years. Low educational attainment was 36(80%) in adolescent group compared to 26(57.8%) in adult group. Early marriage was consistently identified as risk factor for adolescent pregnancy.

Conclusion

Pregnant adolescent girls had more antenatal complications than those of a pregnant adult.

INTRODUCTION

Adolescent pregnancy has been on the rise and emerged as a serious problem today all over the world and more in our country. Adolescent are inherently a high-risk group. Due to biological factors or social factors including prenatal or both are important Determinants of poor pregnancy outcome.

According to census 1991, adolescent girls constitute 20.7% of total female population in India. More than 31% of women aged 15 to 19 are married. The average age marriage of adolescent females in India is 14.7% years nearly half of the female adolescents are already mothers and over a tenth are pregnant. Pregnancy among adolescent is associated with maternal complications, premature birth, low birth weight, perinatal mortality and increased infant mortality¹.

In India, 10.3 per cent of the female population belongs to the age group of 15-19 years and 22.1 per cent of Karnataka's population comprises of adolescents.

Incidence of adolescent pregnancy in the country varies from 3.2 to 18.6 percent².

Most of the adolescent pregnant women come from rural areas early marriage, illiteracy, poor sanitary conditions, customs and beliefs, lack of transportation, inadequate antenatal care all contribute to increased maternal mortality, morbidity, perinatal mortality and morbidity.

OBJECTIVE:

To evaluate the comparison between adolescent and adult health determinants and its antenatal complications.

MATERIAL AND METHODS:

The present study was approved by ethical committee, written informed consent was obtained from the participants. The present study group included 45 adolescent mothers (<20yrs) who were delivered in NMCH, Raichur Karnataka. During the same period the control group of 45 adults mothers (20-34 yrs), who were delivered after each study case in ratio 1:1. Both groups were taken care during labour and delivery. All participants were interviewed and the information of the demographic characteristics was recorded in the designed record form. The demographic characteristics maternal and neonatal data was analyzed using chi-square root, Fisher exact test, unpaired t-test, arithmetic mean, median, standard deviation was set at $p < 0.05$. All statistical analysis conducted by using the computer software programs SPSS/PC.

INCLUSION CRITERIA:

- Pregnant women in age group of 15-30 years.

- Free from systemic disease like hypertension, bronchial asthma, thyroid Disease, endocrine & connective tissue disease, tuberculosis.

EXCLUSION CRITERIA:

- Age < 15 years and >30 years.
- Mothers with major illnesses existing from previous pregnancy like diabetes mellitus, hypertension, tuberculosis, asthma, hypothyroidism, connective tissue disorder.
- Not willing to participate.

OBSERVATION AND RESULT:

DISTRIBUTION OF PREGNANT WOMEN ACCORDING TO AGE (IN YEARS)

Mean age 20.97 and SD 2.87 with minimum age 18 years and maximum 30 years.

In the present study, The percentage of pregnant women are shown in the above table. 45(50%) of the women belongs to age group 15- 19 years. 27(30%) were between 20-24 years, 17(18.9%) were between 25-29 years, only 1(1.1%) was 30 years.

The Mean age was 20.97 with standard deviation of 2.87. The minimum age was 18 years and maximum age was 30 years. In the present study the age related distribution was more in adolescent group and in adult group maximum was between 20- 24 years i.e 30%

DISTRIBUTION OF ADOLESCENTS AND ADULTS ACCORDING TO SOCIO ECONOMIC STATUS

36(80%) belongs to low socio-economic status in adolescent group compare to 28(62.2%) woman in adult group, 9(20%) woman belongs to middle socio-economic status and 17(37.8%) woman in adult group. None of the woman belongs to high socio-economic status in both the groups. In the present study the maximum number of women were belonging to low socio-economic status, compared to adult group the percentage of low socio-economic status was more in adolescent

DISTRIBUTION OF ADOLESCENTS AND ADULTS ACCORDING TO EDUCATION

Literate in adolescent 9(20%) 19(42.2%) adult group, the number of illiterates were 36(80%) in adolescent and 26(57.8%) adult group. In the present study numbers of illiterates were more in both the group. adolescent group was having more number of illiterates than the adult group, may be because of their low socio-economic status and unawareness of education.

BMI	Adolescents	%	Adult	%	Total
Underweight	3	6.7	0	0.0	3
Normal	31	68.9	34	75.6	65
Overweight	11	24.4	11	24.4	22
Obese	0	0.0	0	0.0	00
Total	45		45		90

TABLE -I DISTRIBUTION OF ADOLESCENTS AND ADULTS ACCORDING TO BMI

The above table shows percentage of adolescent and adult pregnant women according to BMI 3(6.7%) women in adolescent group belongs to underweight category V/S 0(0.0%) woman in adult group. 31(68.9%) women belongs to normal BMI compare to 34(75.6%) women in adult group,11(24.4%) of women were overweight in both the groups.

None of the cases belong to obese category in both the groups.

Admission status	Adolescents	%	Adult	%	Total
Booked	32	71.1	34	75.6	66
Unbooked	13	28.9	11	24.4	24

TABLE-II DISTRIBUTION OF ADOLESCENTS AND ADULTS ACCORDING TO ADMISSION STATUS

The above table shows number of booked or un-booked cases in adolescent and adult group 32(71.1%) in adolescent group was booked cases and 34(75.6%) in adult group.

Comparing with both the groups booked cases were more in adult group.

13(28.9%) were un-booked cases in adolescent group and 11(24.4%) cases were Un-booked in adult group.

Overall majority of cases in the present study belongs to booked cases in both the groups.

Health determinants	Adolescents	%	Adult	%	Total	p-value
Anemia	7	15.6	3	6.7	10	0.31
CED	3	6.7	0	0.0	3	0.24
Low Birth weight	18	40.0	12	26.7	30	0.26
SES	36	80.0	28	62.2	64	0.12
Education	36	80.0	26	57.8	62	0.03

TABLE - III COMPARISON OF HEALTH DETERMINANTS BETWEEN ADOLESCENTS AND ADULTS

The above table shows comparison of health determinants between adolescents and Adult pregnant women.

7(15.6%) cases of anaemia in adolescent compared to 3(6.7%) cases in adult. CED 3(6.7%) V/S 0(0%), LBW 18 V/S 12(36.7%),

SES 36(80%) V/S 28(62.2%) illiterate 36(80%) V/S 26(57.8%).

In the present study anaemia CED, LBW, Low socio-economic status, illiteracy were more in adolescent group compared to adult group.

A low BMI status indicative of chronic energy deficiency. CED is calculated with the report of BMI in present study.

Complications	Adolescent	Percent	adult	Percent	p-value
Abortion	12	26.7	0	0.0	0.006
IUD	1	2.2	1	2.2	-
Anemia	7	15.6	5	11.1	0.75
PIH	6	13.3	5	11.1	0.74
Preterm	18	40.0	15	33.3	0.66
PROM	2	4.4	1	2.2	-
RH negative	2	4.4	0	0.0	0.49

TABLE - IV COMPARISON OF ANTENATAL COMPLICATIONS BETWEEN ADOLESCENTS AND ADULTS

The above table shows various antenatal complications observed in the study group of Adolescent pregnant girls compared with the control group of pregnant women. The Percentage of abortion was 12(26.7%) versus 0 cases in adult group. The p value was Highly significant i.e. 0.006, 1(2.2%) case of IUD in adolescent group compared to 1(2.2%) in adult. The percentage of Anemia in adolescent group was 7(15.6%) versus 5(11.1%),In the present study the incidence of PIH was same in both the groups i.e. 6(13.3%) versus 5(11.1%) in adult group.

In the present study percentage of preterm labor in adolescent group was 18(40%) Which was higher when compared to adult group 15(33. %), Then the percentage of PROM was almost similar in both the group i.e.2 (4.4%) in adolescent group Compared to 1(2.2%) in adult group. There were only 2(4.4%) cases of Rh negative Pregnancies in adolescent compared to no case in adult group.

DISCUSSION:

Comparing both the groups In adolescent group they belonged to more in low socioeconomic status and most of them were unbooked.. Comparison of health determinants between adolescents and adult pregnant women. 7(15.6%) cases of anaemia in adolescent compared to 3(6.7%) cases in adult. CED 3(6.7%) V/S 0 (0%), LBW 18 V/S 12(36.7%), SES 36(80%) V/S 28(62.2%) illiterate 36(80%) V/S 26 (57.8%). Anaemia CED, LBW, Low socio-economic status, illiteracy was more in adolescent group compared to adult group.

A low BMI status indicative of chronic energy deficiency. CED is calculated with the report of BMI in present study. there is co-relation between antenatal complications like. Abortion was 12(26.7%) versus 0 cases in adult group. The p value washighly significant i.e. 0.006. Anemia in adolescent group was 7(15.6%) versus 5(11.1%), Incidence of PIH was same in both the groups i.e. 6(13.3%) versus 5(11.1%) in adult group.

Preterm labor in adolescent group was 18(40%) which was higher when compared to adult group 15(33. %),

CONCLUSION

From my present study, I can conclude that there is more antenatal complications in adolescent group taking consideration

of health determinants.so by improving socioeconomic status ,increasing age of the marriage and regular ANC can definitely reduce the complications.

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