

A Study of Menstrual Problems in Adolescent Girls

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ABSTRACT

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Objective: To study the common problems, related to menstruation faced by Adolescent girls.

Materials and Methods: This cross sectional study conducted from October 1st to November 30th 2007 at St. Theresa's girls Higher Secondary School at Chengaroor of Pathanamthitta district. The study group included 503 girls from 6th std. to 9th std. They were given a prepared questionnaire. General physical examination was done for those who had menstrual problems.

Results: Age of the study group, ranged from 10 yrs to 15 yrs. The mean age of onset of menarche was 12.2 yrs. 70.1% of adolescent had problems related to menstruation, of which dysmenorrhea was the major problem (88.8%). Other problems were menorrhoea, hypomenorrhoea, polymenorrhoea, oligomenorrhoea and menometrorrhagia (11.2%). 23% had missed school days for 1-3 days.

Conclusion: 70.1% of school girls have menstrual problems, the commonest being dysmenorrhoeal and premenstrual syndromes (88.8%). Problems like menorrhoea, hypo menorrhoea, polymenorrhoea, oligomenorrhoea and menometrorrhagia contributed to 11.2%. School absenteeism due to menstrual problems was detected up to 23%.

Keywords: Adolescent Girls, Menstrual Problems

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INTRODUCTION

The word adolescent is derived from the Latin word 'adolescere', which means to grow in to maturity. It is the period of life during which the carefree child grows in to a reasonable adult. Adolescence is the period beginning with the gradual appearance of secondary sexual characteristics at about 12 years and ending with cessation of somatic growth at about 20 years.

Adolescents under go important physical and sexual change and face several psychological pressures associated with growth and maturity. The most striking change in adolescent girls is the onset of menstruation. In the Indian context, the age of onset of menstruation or menarche is generally between 11-15 years. Though, slight variations may occur according to the nutritional status, heredity pattern and climate difference. After menarche, there are a number of common menstrual disorders that the female adolescent may encounter, including dysmenorrhea, irregularities in menstrual flow and premenstrual symptoms. These may lead problems in academic excellence and achievements in sports and other extracurricular fields as well as loss of self image.

MATERIALS AND METHODS

This cross sectional study conducted during the period of October 2007 - November 2007, at St. Theresa's girls Higher Secondary School at Chengaroor of Pathanamthitta district. Study group included 501 adolescent girls from 6th std 9th std. They were given a prepared questionnaire to be filled up. General physical examination was done for each student. Further an expert gynecological examination was done for those who had menstrual problems and the observations were evaluated. The data were analyzed, statistical significance was found out by chi-square considering P value <0.05 where ever necessary.

RESULTS

A total number of 501 adolescents of age group between 10-15 yrs contributed the study population. The maximum of the 501 adolescent girls 338 (67.5%) attained menarche. Majority of the adolescents were in the age group of 12-14 yrs (94.7%). The mean age at menarche was 12.2 yrs.

Menstruation status by socio-economic status: 83% of the students belonged to middle class and only 2

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were from upper class. Only 50.6% of the lower class population attained menarche, which is statistically highly significant ($P=0.0005$).

Menstrual problems in study population: out of 338 students who attained menarche, 237 (70.1%) had various menstrual problems. Dysmenorrhea was the major problem (88.8%). Study also showed, that the percentage of dysmenorrhea increases as age advances. The maximum number of dysmenorrhea is seen in the age group of 14 yrs (70.9%) and this is statistically significant ($P=0.02$).

Incidence of premenstrual syndromes in the study population: Out of 338 students who attained menarche 45.8% had one or more of PMS. Headache (42.5%) and irritability (40%) was the comments PMS noticed in this study population.

School absenteeism related to dysmenorrhea & PMS (23%) were reported to miss 2-3 days of class.

Relation between eating habits and menarche: Among 20 students of fussy eaters 14 did not attain menarche. This was found statistically significant ($P=0.0003$) when comparing with normal eaters.

Association between body shape and menarche:

Out of 28 students who were emaciated 13 of them not attained menarche, 8 students who are obese, all of them attained menarche. The chi-square test result shows that this is significant.

Incidence-of pallor in the study group: 11% of students were anemic in the study population, out of that 20% not attained menarche. The course of anemia, in this group is due to both poor eating habits and menorrhoea.

BMI and menarche in the study group: Majority of them having normal BMI. 1% of them of are obese and all of them attained menarche, 2.4% were over weight also attained menarche. 2.8% of them were undernourished and out of that 85.7% not attained menarche, which is significant ($P=0.0001$).

DISCUSSION

This study conducted among 501 school girls from 6th to 9th std, by questionnaire method and general physical examinations focus on the various menstrual problems in adolescents.

Status of menstruation: Out of 501 students' majority (67.5%) had attained menarche.

Age distribution and menarche: In this study majority (94.7%) of the students belonged to 12-14 yrs of age. The mean age of attainment of menarche was 12-2 yrs. The age of onset of menstruation varies from 9-14 yrs.

The mean age of menarche aged among British teenagers according to a survey done in school children aged 12-16 yrs reported as 13 yrs. In the US population it is about 12.8 yrs.

Socio-economic status & menarche

A study named age at menarche and secular trend in Maharashtrian (Indian) girls by Amrita Bagga and S. Kulkarni, it was observed, that in general adolescent girls of low socio-economic, group experienced menarche later than the girls of the middle and higher economic groups.

In this study 100% of girls from high and 70% from middle class attained menarche. Only 50.6% of lower class attained menarche, which is statistically highly significant ($P=0.0005$). This is a well established fact. The reason may be poor diet and poor environment stimulants.

Menstrual problems: Out of 501 students 67.5% had attained menarche. 70.1% of them were had various menstrual problems. Dysmenorrhea was the commonest problem (88.8%).

A Study conducted by P.Sharma et al its two areas of New Delhi in the age group -of 13-19 yrs also showed dysmenorrhoeal (67.2%) was the commonest problem faced by the adolescent girls. At younger age due to an ovulatory cycle there are only very few students who had dysmenorrhoea. As the age advances the ovulatory cycle sets in and they experience severe dysmenorrhoea. In this study maximum number of dysmenorrhoeal in the age group of 13 & 14 yrs, 78.9%.

Associated school absenteeism were noticed in 23% of students. Majority (62.5%) of them were absent for one day. 35.4% of them were for 2-3 days and 2.1% for more than 3 days. In spite of a large number of students who experienced dysmenorrhoea only a very few (1.9%) students were using painkillers. Only one student discussed her problem with a doctor. Others were taking painkillers from local pharmacists. All of them discussed their problems with parents.

Nearly half (45.8%) of the study subjects had one or the other symptoms of premenstrual syndrome. PMS has been reported to be one of the most distressing problem associated with menstrual cycle in the

literature also. Headache (42.5%) and irritability (40%) were the main symptoms of PMS in this study. A study conducted by P.Sharma et al also shows PMS was one of the distressing problems in adolescent girls.

The other problems found in this study were menorrhoea (4.2%) hypomenorrhoea (4.2%) polymenorrhoea (1.2%) oligomenorrhoea (1.2%) and menometrorrhagia (0.4%).

Relation of menstruation with eating habits

Out of 501 students majority (94.8%) of them had normal eating habits. Fussy eating habits were noticed in 4% of students, out of this 70% of them not attained menarche. All of them belong to 12-13 yrs of age group and this was found statistically significant ($P < 0.0003$). There were 6 students of over eating habits, all of them attained menarche. Fussy eating habits subsequently leading to poor health may be considered as reason for the late onset of menarche.

Body shape and menstruation

Majority of them (92.8%) had a feeling of normal body shape. There were 5.6% students who had a feeling of emaciated, out of this 46.4% of them not attained menarche, which is significant ($P < 0.04$). There were 8 students who were obese and all of them attained menarche.

Body mass index menarche

67.9% had normal BMI. There were 14 students who were undernourished, among them 85.7% had not attained menarche, which is statistically significant ($P < 0.001$). All of them belonged to 12-14 yrs. There were 5 obese and 12 over weight students all of them had attained menarche. The findings again reveal that undernutrition predisposes to delayed menarche.

CONCLUSION

501 school girls of 10-15 yrs were studied for menstrual problems by questionnaire method and general physical examination. Only 67.5% attained menarche by 15 yrs. Mean age of attainment of menarche was 12.2 yrs. Statistical significance was observed between low socio-economic status and late age of attainment of menarche. 70.1% had various menstrual problems. The commonest problem was dysmenorrhoea 88.8%. Of these, only 1.5 % were using painkillers. Medical consultation was done by only one student. Associated school absenteeism noticed in 23% of the study

population Premenstrual syndrome was the second priority problem in the study group (45.8%). Of which headache (42.5%) and irritability (40%) were the commonest. 11.2% of the study population had other problems like menorrhoea, hypomenorrhoea, polymenorrhoea, oligomenorrhoea and menometrorrhagia.

Fussy eating habits were revealed to have statistically significant connection with late attainment of menarche as detected by low BMI. Under nutrition also revealed significant correlation with delayed onset of menarche. Problems related to menstruation as frequent in adolescent girls ending in interruption of school routine. So that school health programs should focus this problem also and provide remedial measures.

END NOTE

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REFERENCES

1. The Indian Journal of Pediatrics Volume 75, No-2, Feb-2008.
2. An International Journal of Obstetrics and Gynecology Volume 88 issue 9, pages 895-898.
3. Hylan TR, Sudall K, Judge R. The impact of premenstrual symptomatology on functioning and treatment seeking behaviour: experience from United States, United Kingdom and France J. Women's Health Gender based Med
4. Amrita Bagga and S. Kulkarni. A study on age at ... And secular trend in Maharashtrian (Indian) Girls.
5. Widholan, O, Dysmenorrhoea during adolescents, Acta, Obstetric and Gynecologica Scandinavia 87 (Supplement) : 1989, 61-62.