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Research Article

Menstrual cycle characteristics and associated physical problems among school going adolescent girls

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ABSTRACT

Background: Onset of menstruation is the most marked physical change in an adolescent girl. Besides secondary sexual characters, other physical changes such as weight gain, acne etc. may trouble young girls. This study was carried out to study the characteristics of menstrual cycles and associated physical problems among the school going adolescent girls

Methods: A predesigned survey questionnaire was administered to students of classes 6 to 12 prior to a health education talk at two urban schools in Bhopal.

Results: Of 414 students, 413 responded to the questionnaire. The mean age of the girls was 14.4 years [range: 10-18; SD: 2]. Of these, 277 girls reported their age at menarche, the mean age being 12.7 years [range: 11.2-13; SD: 1.52] and a majority (58%) of them had regular menstrual pattern. A good proportion of them suffered from mild dysmenorrhoea (46%); nearly 18% reported severe dysmenorrhoea and 6% girls reported absence of dysmenorrhoea. Only 16% of adolescent girls had consulted a doctor for symptoms related to menstrual cycle the rest took it as a natural course of events during menstruation. Among other physical changes besides secondary sexual characters, 32% suffered from acne, 24% reported weight gain and 21% had excessive hair growth.

Conclusions: A good proportion of school going adolescent girls experience menstrual pattern deviation from normal and all so other problems such as acne, weight gain and excessive body hair. However, only a minority of them approach doctors for alleviation of these problems. Some of these problems may easily be addressed during the adolescent school health programs if held regularly.

Keywords: Adolescent, Menstrual, Dysmenorrhea, Acne, Weight gain

INTRODUCTION

Adolescent girls constitute a vulnerable group, particularly in India where female child is often neglected. Adolescence in girls signifies the transition from girlhood to womanhood and menarche is an important milestone of this transitional period. Globally, the age of menarche varies between 9 to 18 years with the average age in United States being about 13 years, while in India, has been reported to be around 12 years.^{1,2}

Menstruation may be associated with various symptoms occurring before or during the menstrual flow. The

challenges to the young girls include psychological adjustment to menstruation and coping with premenstrual and menstrual symptoms. Some may have pain in abdomen (dysmenorrhoea) with or without gastrointestinal upsets like anorexia and vomiting.³ Adolescents have reported the menstrual pain as "worst pain of life".⁴ Complaints such as leg pain, backache may also be associated with a normal menstrual cycle. Premenstrual symptoms may be experienced 7 to 10 days before the onset of bleeding. These include irritability, malaise, headache, acne, abdominal pain etc. the key health issue being their psychosomatic impact.

It is important to educate young girls and their parents regarding changes during adolescence, the menstrual pattern and associated symptoms initially and in subsequent cycles. It is equally important for clinicians to develop the skill of evaluating young patients and their problems appropriately. The objective of the present work is to study the characteristics of menstrual cycles and associated physical problems among the school going adolescent girls.^{5,6}

METHODS

A cross sectional study was conducted among school going adolescent girls of classes 6 to 12 in two urban schools of Bhopal district, Madhya Pradesh.

A pre-designed, peer-validated, survey questionnaire was used for data collection prior to a school health talk. The questions was administered in English and properly explained to avoid any form of misunderstanding and to facilitate accurate response by the subjects.

Of 414 questionnaires distributed, 413 students responded. Data was analyzed as percentage of responses. The question contained items regarding variables such as socio-demographic data, age of menarche, menstrual pattern, average duration, dysmenorrhoea other physical problems. They were also asked whether they had consulted a doctor on any earlier occasion regarding menstrual problems.

RESULTS

The questionnaire was administered to 414 participant, adolescent girls of classes 6th to 12th, of which 413 responded . The mean age of these girls was 14.4 years [range:10-18;SD:2]. Of these 307 girls were postmenarchal, however only 277 reported their age at menarche. The mean age of menarche was 12.7 years [range: 11.2-13;SD:1.52], The mean duration of flow was 4.96 days [range:2.9-5.8;SD:1.65].

Menstrual pattern: To the questions on menstrual pattern, 307 girls responded of which 58.3 % had regular menstrual pattern cycles while 29.3% had irregular cycles. The cycle duration was less than 21 days in 6.8 % and more than 35 days in 5.5% (Figure 1).

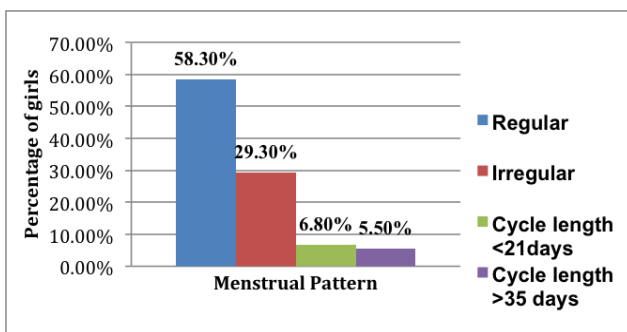


Figure 1: Menstrual cycle pattern among school going adolescent girls (N= 307).

Dysmenorrhoea: Of 271 respondents to the question on dysmenorrhoea, majority (46%) reported mild dysmenorrhoea; 30% had moderate dysmenorrhoea;18% had severe dysmenorrhoea and 6% girls reported no dysmenorrhoea during menstrual cycles (Figure 2). Among these, 254 girls reported the timing of onset of dysmenorrhoea. Majority of them (84%) had dysmenorrhoea after starting of menstrual flow on day 1 of menses, while 16% experienced dysmenorrhoea prior to starting of menses.

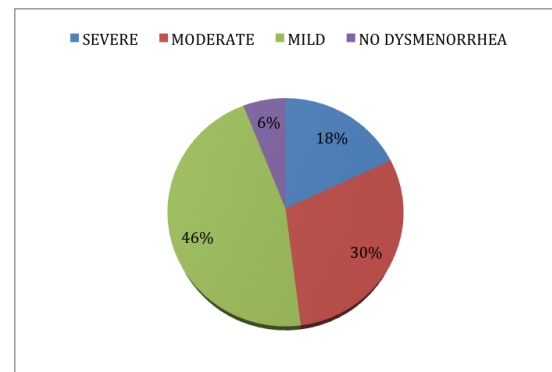


Figure 2: Severity of dysmenorrhoea among adolescent girls (N=271).

Physical changes other than secondary sexual characters: Among these changes, acne was the most reported problem – 95 girls out of 301 responders to this item on questionnaire reported having acne (32%). Besides, weight gain was reported by 24% (68/288 responders) and 21% (63/307) felt they had excessive hair growth (Figure 3).

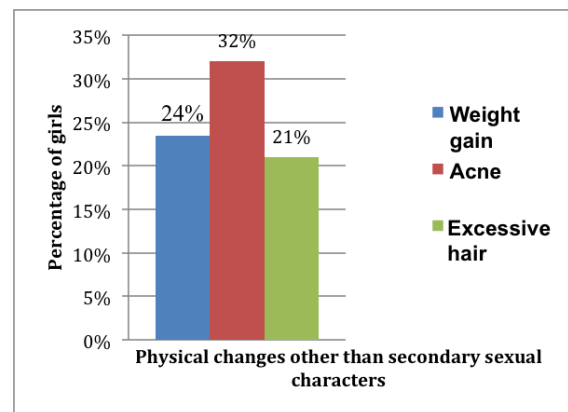


Figure 3: Physical changes other than secondary sexual characters those were troublesome.

Consultation with doctor: Of total 279 respondents to this item on the questionnaire, only 16.1% of adolescent girls had ever consulted a doctor for any symptoms related to menstrual cycle. The rest took it as a natural course of events during menstruation.

DISCUSSION

The mean age of school going adolescent girls of classes 6th to 12th included in our study was 14.4 years and the mean age at menarche as reported by 277 girls was 12.6 years. Earlier studies by Thakre et al. from Nagpur, and Dharampal et al. from Wardha in 2012 were also carried out among a similar group of adolescent girls. The former study included three hundred and eighty seven girls in the age group of 12-16 years (mean age 13.82 years), while the latter study reported on 1100 school going adolescent girls.^{7, 8} The mean age of menarche was found to be 13.5 years for urban girls and 13.67 years for rural girls in the study by Dharampal et al.⁸

The menstrual pattern of girls in our study (58% with regular cycles) differed from that observed by Thakre et al. (42% girls with regular cycles) and that by Dharampal et al. (69% with regular cycles).^{7, 8} The abnormal bleeding pattern was observed in 9% of girls in the study by Thakre et al.⁷ A study from Karad, Maharashtra reports a much lower prevalence of irregular cycles (36%) and the mean age of menarche being 12.8 years.⁹ They reported presence of oligomenorrhoea in 16%, menorrhagia in 18%, hypomenorrhoea in 60% and dysmenorrhoea in 49% of girls.⁹

Almost all girls (94%) in our study reported some degree of dysmenorrhoea though the majority had only mild dysmenorrhoea. The studies mentioned above have reported a lesser prevalence (61% and 56% respectively) of girls having dysmenorrhoea.^{7, 8}

Of total 279 responders to the questionnaire item regarding consultation with doctor, in only 16% of girls reported having done so for menstrual or related complaint. This is much lower than that reported by a study from Eastern India wherein 60% of girls had sought consultation with a doctor.¹⁰ The study by Dharampal et al. found that self medication was practised by 7.13% of adolescent girls.⁸

CONCLUSIONS

The menstrual disorders and related complaints are very frequent among the school going adolescent girls. There is a hesitation on part of the adolescent girls in seeking health care consultation. School health education of adolescent girls that addresses not only issues related to menstruation but but also other bodily / psychological changes can help alleviate their anxiety. This will also encourage them to seek medical help and also prepare

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