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Original Research Article

Prevalence of Premenstrual Syndrome (PMS) including insomnia in some undergraduate medical students of Nepal

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Abstract: Premenstrual Syndrome (PMS) is a common disorder in young reproductive women. It is present with specific uncomfortable and unusual symptoms that clearly begin after ovulation and generally end with the onset of menstruation. The present study aimed to determine the prevalence of premenstrual syndrome in undergraduate medical students of Kathmandu Medical College. 194 female undergraduate students were enrolled in this study by convenience sampling. The subjects completed self designed questionnaires of their information based on the criteria of ACOG. According to the mentioned criteria, 20.1% (39) of the subjects indicated the symptoms of PMS including insomnia. The most common PMS symptoms seen were abdominal discomfort or pain and fatigue (94% and 76.28%, respectively). PMS was significantly related to dysmenorrhea and menstrual abdominal pain or discomfort ($p < 0.05$). The high prevalence of this syndrome and its effect on various aspects of life including normal daily functioning, we highly recommend informing about methods of controlling symptoms and management of this syndrome, and apply non-interventional treatments and methods to reduce the symptoms.
Keywords: premenstrual syndrome, abdominal discomfort, insomnia.

INTRODUCTION

Premenstrual Syndrome (PMS) is a series of physical, behavioral and emotional symptoms that start around one week prior to menstruation and generally end when the menstrual cycle begins[1].The prevalence of PMS has been reported in 20 to 32 % of premenopausal and with severity in 30-40% of the reproductive female population[2,3]. Menstrual disorders are very common among teenagers and young women. These disorders are often considered as sources of anxiety for patients and their families. Premenstrual dysphoric disorder focuses more on psychological factors, while the syndrome mostly accompanies with somatic symptoms[4].Diagnostic and Statistical Manual of Mental Disorder-IV (DSM-IV) which identifies PMDD and focuses on mood swift stated that the existence of at least 5 symptoms out of 11 symptoms stated for this syndrome is essential[5]. These 11 symptoms are stress and anxiety, mood change (feeling bored or crying all of a sudden), depressed mood, persistent of anger or personal clashes, decreased interest in social relationships and daily work, feeling of immersion or being out of control, change in appetite behavior (overeating or having little appetite), difficulty in sleeping (oversleeping or insomnia), lack of concentration, fatigue and lethargy, and physical symptoms (chest pain, abdominal pain, joint or muscle pain, frequent urination, weight gain, back pain, acne, nausea, abdominal bloating, chest pain and chest sensitivity, headache)[6,7]

The few research studies using objective polysomnographic recordings have shown alterations of sleep disturbance in the late luteal phase compared to other phases of the menstrual cycle in women with severe PMS or PMDD[8-10].PMS is thus present in reproductive women of all ages causing substantial morbidity with obvious detriment to interpersonal relationships, social interactions, daily lifestyle work performance, emotional well-being and overall health-related quality of life. This disorder is particularly common in the younger age groups and, therefore

represents a significant public health problem in young girls [11-13].

METHODS

A sample of 194 female medical students (MBBS, BDS and Nursing) was selected for this study. The study was approved by Institutional Review Committee (IRC) of Kathmandu Medical College. The study was conducted from March, 2017 to May, 2017. Informed written consent was taken from each participant. A self-designed questionnaire was administered to the participant by including known PMS symptoms obtained from literature evidence. The subjects completed their information based on the criteria of ACOG. Premenstrual Syndrome (PMS) including insomnia and discomforts due to PMS were divided into different categories (Mild, Moderate and severe). The questionnaire was given to each subject to inform about her experience of discomfort during the premenstruum is present or absent and whether it affects the normal daily life functioning or not. Respondents were also asked to tick the common symptoms of PMS which they have during their premenstruum. Sections were also provided for demographic data. The questionnaires were analyzed and the frequencies of the symptoms experienced by the respondents were calculated. A chi-square test was then done.

RESULTS

Of the 211 students approached, 194 agreed to take part in the study representing 91.9% response rate. The age range was 17-22 years with a mean of 18.3years of the population studied admitted experiencing varying degrees of symptoms consistent with PMS. Table 1 shows the most common symptoms of subjects. The prevalence of PMS with insomnia was seen in 20.1% of the study population (Figure 2). The most common PMS symptoms seen were abdominal discomfort or pain and Fatigue with 184(94.84%) and 148(76.28%) respectively. The other major PMS symptoms were mood swings 68(35.05%), anxiety 53(27.31%) and 62(31.95%) irritability. The population affected by PMS in daily life functioning was 49(25.25%).

Table-1: Most common premenstrual symptoms of the study subjects (N=194).

PMS Symptoms	Mild N (%)	Moderate N (%)	Severe N (%)	No N (%)	Total N (%)
Lower abdominal discomfort /Pain	121(62.37%)	49(25.25%)	14(7.2%)	10(5.18%)	194(100%)
Mood swings	45(23.19%)	22(11.34%)	1(0.51%)	126(64.96%)	194(100%)
Anxiety	34(17.52%)	16(8.24%)	3(1.54%)	141(72.68%)	194(100%)
Fatigue	98(50.51%)	46(23.71%)	4(2.06%)	46(23.71%)	194(100%)
Irritability	40(20.61%)	21(10.82%)	1(0.51%)	132(68.04%)	194(100%)
Insomnia	23(11.85%)	14(7.21%)	2(1.03%)	155(79.89%)	194(100%)
PMS symptoms affecting daily life functioning	31(15.97%)	16(8.24%)	2(1.03%)	145(74.74%)	194(100%)

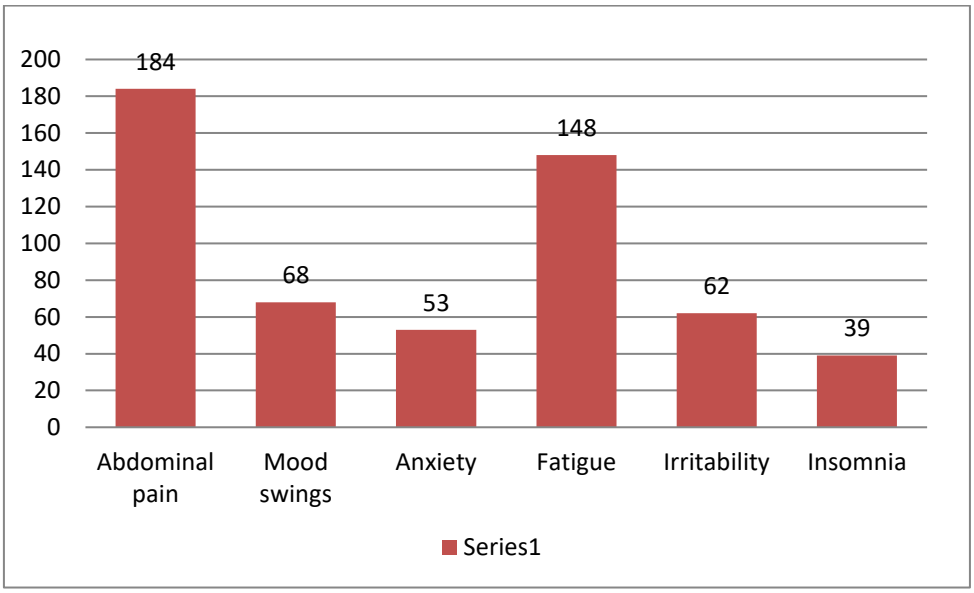

Fig-1: Most common PMS symptoms in the study subjects (Total=194).

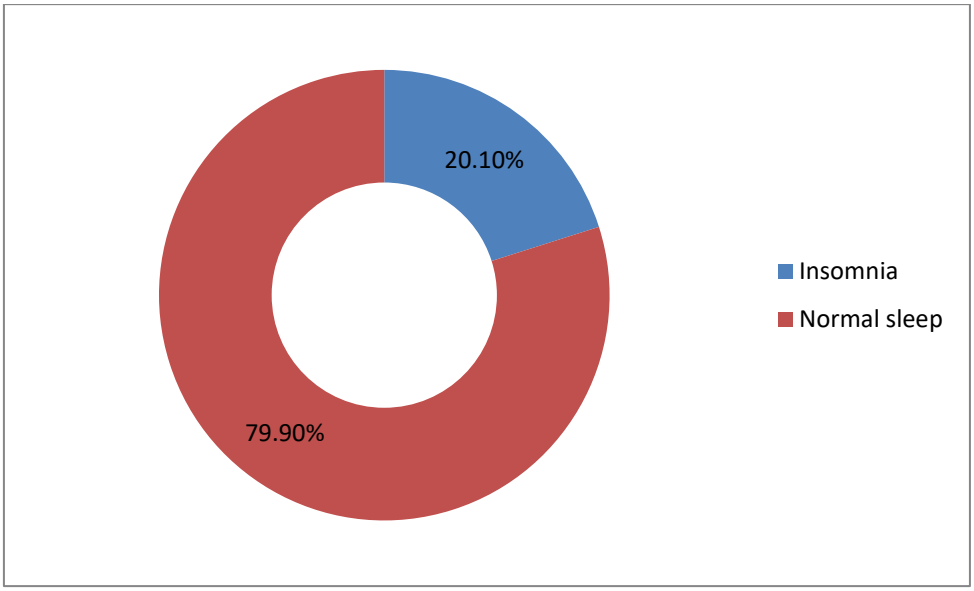

Fig-2: Prevalence of PMS with insomnia in the study subjects (Total=194).

DISCUSSION

In the present study, the prevalence of premenstrual syndrome (PMS) in medical students studying in KMCTH, Nepal was determined using universally accepted criteria. Previously conducted studies have estimated that up to 80 percent of women suffer from various degrees (at least one symptom) of premenstrual syndrome in their childbearing age. In this study, the prevalence of this syndrome with at least one symptom in the age group of 17 - 22 years was 184(94%) and the prevalence of PMS including insomnia was seen in (39)20.1% of the studied population. This was similar with the study carried out on 396 students in Egypt indicating that in the age group of 18 - 24 years and 89% of studied individuals had experienced various degrees of this syndrome with behavioral changes and sleep disorders[14]. In other study conducted by Cleckner and Smith, Premenstrual symptoms reported as being moderate or greater in severity were found to be quite prevalent (88%), in a

sample of adolescents, the severity being greater in 16-18 year-olds[15].

CONCLUSION

As far as PMS is concerned, very limited studies have been conducted in this geographical area and negligible studies in our country Nepal. In the present era women are involved in social, occupational, educational, familial issues and other responsibilities, if one may not find a solution for these individuals, the community will suffer from its many complications. Since there is no permanent solution for premenstrual syndrome (PMS), strategies for prevention or reduction of symptoms are the best ways to manage this syndrome; therefore, more research in this area and this part of the geographical area is very much essential.

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