

Original Article

A Hospital Based Study of Frequency, Intensity and Impact of Premenstrual Syndrome Symptoms on Female Patients

1. Irum Sohail 2. Arifa Bari

1.Assoc. Prof. 2. Senior Registrar, Dept of Gyne & Obst., Foundation University Medical College Rawalpindi.

ABSTRACT

Objective: To study the frequency, intensity of the premenstrual symptoms and its impact on the women reporting to the hospital with other complaints.

Study Design: Observational Study.

Place and Duration of Study: This study was conducted at the Outpatient Department of Gyne & Obst. Unit, Fauji Foundation Medical College / Hospital, Rawalpindi from 1st June 2008 to 31st December 2008.

Patients and Methods: We had total 224 women who were included in this study. These women were included in this study because they were menstruating regularly for the last six months. They were not suffering from any surgical, medical or psychiatric illness and were not pregnant. These women were interviewed by trained personnel and all the symptoms with their intensity were entered into the specially designed proformas. Only those symptoms were given importance which was present in the preceding at least three menstrual cycles.

Results: Out of total 224 women only 34% of the women had any awareness regarding the presence of these symptoms in relation to menstruation. Lethargy was the commonest symptom found in 74% of women with mild intensity (51.9%). Least common symptom was negative thoughts present in 16% of the women. 50% of the women reported that their daily activities were affected by the presence of these symptoms. For the relief of these symptoms the commonest drug used was ponston(39.7%). The age group mostly affected in our study was from 36 to 50 years.

Conclusion: The awareness regarding premenstrual syndrome associated symptoms is very low and especially amongst women belonging to rural background with low educational status. Health providers should be actively involved in providing information and therapies to these women so that they do not suffer in silence.

Key Words: premenstrual syndrome, Pakistani rural women, awareness.

INTRODUCTION

Premenstrual syndrome (PMS) is defined as a group of symptoms that include physical, cognitive, effective and behavioral, which occur during the luteal phase of the menstrual cycle and are resolved with the onset of menstruation.¹

Most of the women will notice some changes in mood or may develop physical symptoms during the time preceding menstruation. These changes are however minor and the symptoms are considered important if they interfere with routine activities at work, school or in social events.²

The American College of Obstetricians and Gynecologists (ACOG) has defined ten diagnostic criteria for PMS. The person fulfills these criteria if she suffers from one of the six affective and one of the four somatic symptoms in the days preceding menstruation in the three prior menstrual cycles and these ceased within four days of onset of menses.³

The etiology of premenstrual syndrome is still unclear and many causes have been proposed which include hormonal disturbances, abnormal serotonin function,

interaction of endorphins and prostaglandins with GABA, cholecystokinin and the renin- angiotensin-aldosterone system.⁴

As the etiology of premenstrual symptom has remained unclear therefore a range of treatment modalities have been employed in the management of PMS. Among these the most common ones are oral contraceptives, progesterone, bromocriptine, prostaglandin synthetase inhibitors (especially mefenamic acid), and danazol⁵. Amongst herbal treatments the trials have shown some benefit of chaste berry (vitex agnus castus)⁶ and evening primrose oil (Oenothera biennis)⁷. Amongst these the most promising treatments that have been found out to be effective are those which suppress ovulation.⁸

We have conducted this study to find out the frequency, intensity and impact of premenstrual syndrome symptoms in our patients. As most of our patients belong to the low socioeconomic status with lack of primary education we wanted to find out what was the awareness level of PMS amongst them and if they were suffering from any symptoms of PMS, what treatments were used to relieve these symptoms.

PATIENTS AND METHODS

This study was conducted in the out patient department of Obstetrics and Gynaecology unit of Fauji Foundation Hospital Rawalpindi over a period of six months from 1st June 2008 to 31st December 2008 where 15672 patients attended the outdoor clinic of Gyne and Obst. Unit. The hospital is a tertiary care unit where all referred patients from rural areas of Punjab and adjacent areas come. The study was approved by hospital ethical committee and then a questionnaire was developed for the interview of the patients. The doctors on duty in the outdoor were trained to fill the questionnaire under supervision of a senior doctor. Only those women were interviewed who were in their reproductive age group and were not suffering from any medical, surgical or menstrual problem. All the pregnant women and patients having psychiatric problems were also excluded from the study. We had a total of 224 women who agreed to give the interview who were menstruating regularly for the last six months thus they were fulfilling the inclusion criteria.

The data was entered into the SPSS version 15 and then analysis was done. Descriptive statistics were used to describe the data i.e mean and standard deviation (SD) for quantitative variables while frequency and percentages for qualitative variables.

RESULTS

Out of total 224 patients we had only 78(34%) women who were aware that the presence of these symptoms prior to menses was due to some problems in the body caused by menstruation but none had any awareness of the exact relationship with the menstrual cycle. Approx 10%(n=24) of patients had less than three symptoms in the preceding menstrual cycles while rest were complaining of three or more than three symptoms in their preceding menstrual cycles for the last three cycles. The mean age of these patients were 32 years (13-52) and we had 65%(n=146) of women married while 34% (n=78) were unmarried. The mean parity of married women were 3.6 children (0-11). 86% (n= 194) of the women belonged to low socioeconomic status i.e their monthly income was below Rs. 5000/- while the rest were from middle class. Regarding the educational status only 6%(n=15) women were educated till middle class while 25(11%) had only education till primary level. The most common symptom was lethargy which was present in 74% of women and the severity was mild in 59%. After this the next common symptom was headache in about 62% of the women and mostly was of the minor degree i.e. 51%% (Table I). The least common symptom was negative thoughts which was only present in 40 of women and which was also in mild severity 62.5%.

Table No.1: Premenstrual symptoms in order of their Frequency and Intensity

Sr. No.	Symptom	Yes	Mild	Moderate	Severe
1	Lethargy	181 (74%)	94 (51.9%)	75 (41.4%)	12 (6.6%)
2	Headache	152 (62%)	79 (57.9%)	58 (38%)	15 (9.8%)
3	Irritability	142 (58%)	80 (56%)	47 (33%)	15 (10%)
4	Poor concentration	112 (45%)	87 (77.6%)	23 (20%)	2 (1.7%)
5	Nausea	99 (40.5%)	71 (71.7%)	26 (26%)	2 (2%)
6	Social withdrawal	93 (38%)	39 (41%)	45 (48%)	9 (9.6%)
7	Sadness	88 (36%)	64 (72.7%)	22 (25%)	2 (2.2%)
8	Appetite change	87 (35%)	51 (58%)	27 (31%)	9 (10%)
9	Mood changes	85 (34.8%)	55 (64%)	29 (34%)	1 (1.1%)
10	Depression	79 (32%)	56 (70%)	22 (27%)	1 (1.2%)
11	Insomnia	55 (22.5%)	28 (50%)	22 (40%)	5 (9.09%)
12	Bloating	54 (22%)	37 (68%)	17 (31%)	0
13	Hostility	47 (19%)	23 (48%)	17 (36%)	7 (14%)
14	Mastalgia	44 (19.6%)	22 (50%)	18 (40.9%)	4 (9.09%)
15	-ive thoughts	40 (16.3%)	25 (62.5%)	13 (32%)	2 (5%)

If we see for the level of awareness amongst different age groups then the most educated was the age group of 36-50 years in which 34 (44%) of the women knew something regarding the cyclical changes while the next aware group was 25 women(32%) who belonged to the 26-35 years group (Fig.A). Among the rest of the age groups 19%(n=15) women belonged to 20-25 years while below 20 years were only 3% of the girls who

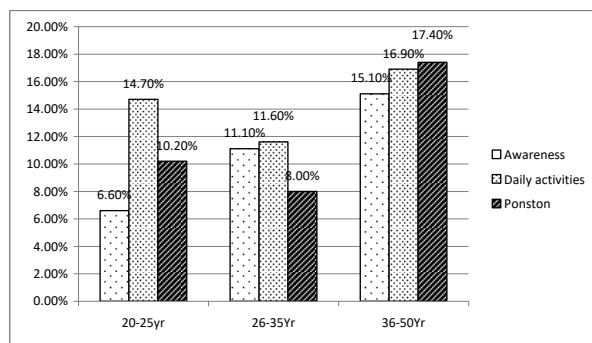
had awareness. There were no women in the 50 years age group with any information regarding these changes. 93 of the women stated that during this specific time because of the symptoms they withdrew from all the social activities while 58% said that these symptoms were not affecting their social activities. On the other hand 50% of the women commented that the daily activities were being affected due to these

symptoms. The age group which was more aware had the maximum number of the women who had limitation in their daily activities i.e. 38 women (33%).

Table No.2: Different Treatments used for Premenstrual Symptoms

Sr. No.	Treatment	Yes	No
1	Ponston	89 (39.7%)	135 (60.3%)
2	Panadol	33 (14.7%)	191 (85.3%)
3	Nicotine	25 (11.2%)	199 (88%)
4	Vitamins	22 (9.8%)	202 (90%)
5	Injectables	7 (3.1%)	217 (97%)
6	Homeopathic	4 (1.8%)	220 (98.2%)
7	Exercise	4 (1.8%)	220 (98.2%)
8	COC	4 (1.8%)	220 (98.2%)
9	Anxiolytics	3 (1.3%)	221 (98.7%)

Figure A: Level of awareness, Daily activities and use of ponston in different age groups



As the awareness regarding the etiology of these symptoms was low therefore mostly tablet ponston was being employed for the relief of these symptoms i.e. 89 pts were using it (Table II). Tablet panadol was the next commonest drug being used by 33(14.7%) women, Nicotine by 25(11.2%) and Vitamins by 22 (9.8%) women. 3.1% (n=7) of the women were using injections of unknown nature for the relief of these symptoms. The least common used medication was anxiolytic i.e. 1.3 % while combined oral contraceptives, homeopathic treatments and exercise was used by 1.8% of women each. The use of tablet ponston along with maximum awareness was seen in the 36-50years age group i.e. the use was 17.40% while the total number of women were 34 (15.10%) (Fig.A). This group also complained of maximum limitation of daily activities 16.90%. In 20-25 years age group the awareness was only 6.6% (n=15) while the use of tablet ponston was also 10%. The women in 26-35 years age group although had a high awareness level than their younger counterparts i.e. 11.10% (n=25) but the use of medication was the lowest i.e. 8% only with limitation of daily activities in 11.6% cases.

DISCUSSION

In our present study we had included only those women who had come for other ailments than menstrual irregularities and were not suffering from any surgical, medical or psychiatric problem therefore a true frequency rate of PMS could not be given as there is no control group. Different studies done in the region state prevalence as 33%⁹ to 51%¹⁰. In our study we have tried to find out the frequency, intensity of different premenstrual symptoms which can have an impact on a healthy women's life.

As most of our women belonged to the rural background they had a low literacy rate with poor socioeconomic status therefore the awareness was present in only 34% and that too in the age group which was more affected i.e. 36-50 years. This is true as stated in the study by Hylan TR, et al¹¹ that the women who experience more impairment will believe that no treatment is available. We had 100% of the patients reporting at least one of the premenstrual symptoms in their previous menstrual cycle and this is same in study by Cleckner-Smith¹² in 1998 which showed 100% of the adolescents in the study suffering from one of the premenstrual symptoms.

The most frequently occurring symptom was lethargy, in 79% of women which has also been stated as 84%¹³ in an Iranian study on female university students. Most of the other studies have found irritability as being the commonest symptom i.e. 71.4%¹⁴, 80%¹¹ and 37%¹⁵ and in our study it was present in 58% of our patients and mostly experienced it to the mild severity. Loss of concentration was reported in 45% of our patients which was 48.3%¹⁵ in female medical students in Saudi Arabia. In our study group the somatic symptoms were of less frequency i.e. abdominal bloating (22%), mastalgia(19.6%) and headache in 62% only, while in comparison with the females in Saudi Arabia those had it in 75%, 64%, and 44% respectively¹⁵.

The impact on daily activities were worse as 50% of the women stated that this was affected while social withdrawal was only in 41% while in Saudi women the daily chores were affected in 41.6%¹⁵.

The frequency distribution of PMS symptoms showed that most of our patients had mild form of symptoms i.e. 51%-77%, moderate were 20%-48% while the severe intensity was reported in a range of none to 14%. This frequency of symptoms is same as in the study by Balaha¹⁵ as 45% was mild, 32% moderate and 22% was severe. We had less number of patients who reported with severe symptoms and this corresponds with the study by Abulhashim¹⁶ et al and Nisar¹⁰ et al where the severe cases were 5.8% and 4.4% respectively.

For the relief of these symptoms tablet ponston (mefenamic acid) was the commonly used drug i.e. 39.7%. Prostaglandin synthetase inhibitor have been

shown to be beneficial in managing both dysmenorrheal and premenstrual symptoms like headache, depression, tension and irritability⁵. The next common used medications were multivitamin tablets (9.8%) although only pyridoxine 80mg was found to be superior in relieving anxiety and mood and has no effect on physical symptoms¹⁷. Similarly 1.8% of the women were using combined oral contraceptives, exercise and homeopathic form of treatments. Some studies have showed that some premenstrual symptoms may improve by doing regular exercise¹⁸ while combined oral contraceptives have been advocated to play a definitive role in ovulation suppression thus causing a decrease in the premenstrual syndrome¹⁴. The most important contraceptive pill which has some role in the symptoms of PMS is that constituting of drospirenone 3mg but unfortunately it is still unavailable in Pakistan. A qualitative study done in 1998 in Ireland²⁰ stated that the term premenstrual syndrome is understood by women differently than it is represented by medical researcher and text book authors thus clearly indicating that it was women's own perception that whether she was suffering from PMS symptoms or not and it was very difficult for anyone to judge it in her place. Therefore making it mandatory that the most common symptom of PMS should be made publically aware so that the women do not suffer in silence.

CONCLUSION

Although most of the women are suffering from different symptoms associated with premenstrual syndrome, their awareness regarding the etiology is very low. The intensity of these symptoms might be mild but these do affect their daily activities therefore awareness should be made common to healthcare providers first so proper therapies can be provided along with counseling of these women coming from rural background with low education. Further studies on large sample of general population need to be conducted to confirm the frequency of PMS and also to plan out strategies for better detection of this disease to find the exact burden. The introduction of reproductive health education at some level of education can also help in providing information, education and support to the young girls suffering from PMS.

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Address for Corresponding Author:

Dr Irum Sohail
Associate Professor Department of Gynae/Obs
Foundation University Medical College
Rawalpindi