

Pharmacological & Non-Pharmacologic Strategies Used by Working Ladies of Reproductive age for the Management of Pre Menstrual Syndrome

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ABSTRACT

Introduction: Premenstrual syndrome (PMS), a common cyclic disorder of young and middle-aged women, is characterized by emotional and physical symptoms that consistently occur during the luteal phase of the menstrual cycle, and remit after onset of menstruation. Its bad impact will influence the professional activities specially in working ladies. Although PMS is undiagnosed disease but Different treatment strategies are being adopted by females to eliminate the symptoms of PMS. This study is design to find out which strategy is most commonly practiced especially in working ladies.

Objectives: To determine the frequency of pharmacological & non-pharmacologic strategies used by working ladies of reproductive age for the management of pre menstrual syndrome.

Setting: Dow University Hospital, Dow International Medical Centre (DIMC).

Duration: 12 months from 15.6.2016 to 15.6.2017

Design: Cross sectional study

Subject and Methods: A total of 221 female having PMS problem reported in Gynae OPD were including in this study. All the working women were assessed the management strategies used during PMS to overcome its symptom all the assessment was done. All the information was entered in proforma.

Results: The average age of the patients was 26.68±5.31 years. There were 19(8.6%) females used non-pharmacologic strategies, 82(37.1%) was used pharmacological strategies while 120(54.3%) female used both pharmacological & non-pharmacologic strategies to relive PMS. In pharmacological strategies, ponstan and paracetamol were commonly used to relive PMS while in non-pharmacologic strategies exercise and psychological therapy was 35.7% and 38.9% respectively.

Conclusion: - It is concluded that complete social and personal counseling and awareness along with medical treatments will improve the life style of the working ladies facing this problems. As it adversely affects the educational, social and emotional well-being, means should be adopted to reduce the incidence of this disorder.

Keywords: Premenstrual syndrome, pharmacological, non-pharmacologic strategies

INTRODUCTION

Premenstrual syndrome, a common cyclic disorder of young and middle-aged women, is characterized by emotional and physical symptoms that consistently occur during the luteal phase of the menstrual cycle, and remit after onset of menstruation.^[1-4] Its bad impact will influence the professional activities specially in working ladies. Although PMS is undiagnosed disease but Different treatment strategies are being adopted by females to eliminate the symptoms of PMS.^[4-6]

Premenstrual Symptoms have been difficult to diagnose and treat research findings can be difficult to apply because of the variability of inclusion criteria and outcome measures in clinical trials. Although the diagnosis should be made on the basis of a patient-completed daily symptom calendar and the exclusion of other medical disorders but Initially all patients with PMS should be offered non-pharmacologic therapy i.e. by natural methods, change her lifestyle first like exercise, walk and some little nape^[7-8]. In recent years, randomized controlled trials and other well-designed studies have defined diagnostic criteria and identified effective treatments for moderate to severe PMS. The current diagnostic criteria for PMS can be based on the WHO's International Classification of diseases

(ICD-10) or the American College of Obstetricians and Gynaecologists (ACOG) or the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)^[9]. Reported studies of Pakistan shows that Majority 98.8% of women was unaware of Premenstrual syndrome in Pakistan, and do not follow medical or natural strategies properly^[9]. In other countries, like in India the prevalence with PMS is 20% of which 8% suffer with severe symptoms^[3], in one of the India study it was found that 42% faced PMS regularly, while 58% occasionally. And only 34% had received the treatment for PMS. According to European studies about 98% women using non pharmacological methods to relive PMS^[10] like this in one of the Asian study shows that +41% women pharmacological method to overcome PMS. Same study of Jordan also shows that the most frequently reported self-treatment strategies used by women to alleviate PMS symptoms were taking analgesics, increasing hot fluids, regular exercise and intake practicing relaxation.

The aim of my study is to find out the frequency of pharmacological and non pharmacological strategies used by working ladies in reproductive age. On literature search it has been observed that studies has been done on married, un married, students and housewives but no study

has been conducted on use of pharmacological and non pharmacological strategies. And the results of my study is based on local data base, so it provide me strong rational to conduct this study in our population to find out which strategy is most commonly practiced especially in working ladies. And I believe that complete social and personal counseling and awareness along with medical treatments will improve the life style of the working ladies facing these problems.

METHODOLOGY

Inclusion Criteria:

- All those ladies who are whether married or un-married have reproductive age b/w (15-45) yrs having regular menstrual cycle.
- Working ladies who have PMS problem reported in Gynae OPD.
- Ladies with any parity.
- Duration of work exceed from 6month to 1year.

Exclusion Criteria:

- Non-working ladies
- Non reproductive age below 15 and above 45yr.
- House wives and students are excluded.
- Pregnant ladies are excluded by history
- Those who donot have any sign and symptoms specifically before onset of menstruation.

Data Collection Procedure: Patient who fulfilled the inclusion criteria was included in this study after taking informed consent. All the working women as mentioned in operational definition was included to assess the management strategies used during PMS to overcome its symptom all the assessment was done under supervision of consultant having more than five years of experience. All the collected information from patient was entered in pre-designed proforma.

Data Analysis Procedure: Data was analyzed by using SPSS version 20 on computer. Mean, Standard Deviation (S.D) was calculated for age, duration of PMS, duration of work. Frequency and percentage were computed for socioeconomic status, educational status, marital status,

resident, parity, pharmacological& non-pharmacologic strategies. Effect modifier like socioeconomic status, educational status, marital status, resident, age, duration of PMS, duration of work (month, hr) was controlled through stratification. Post stratification applying chi-square test using p value ≤ 0.05 as significant.

RESULTS

A total of 221 female having PMS problem reported in Gynae OPD were including in this study. Most of the women were 21 to 30 years of age. The average age of the patients was 26.68 ± 5.31 years similarly the duration of PMS, duration of working and working hours per day is also given in table 1. There were 166(75.11%) female married and their parity status of these women is presented. Regarding resident status, 169(76.47%) came from urban area and 52(23.53%) from rural. Most of the women were belong to upper class and education status was graduate.

There were 19(8.6%) females used non-pharmacologic strategies, 82(37.1%) was used pharmacological strategies while 120(54.3%) female used both pharmacological& non-pharmacologic strategies to relive PMS. Frequency of pharmacological & non-pharmacologic strategies used by working ladies of reproductive age for the management of pre menstrual syndrome is presented. In pharmacological strategies, ponstan and paracetamol were commonly used to relive PMS while in non-pharmacologic strategies exercise and psychological therapy was 35.7% and 38.9% respectively.

Stratification analysis was performed and observed that rate of pharmacological& non-pharmacologic strategies used to relive PMS was not significant with respect to age group except rate of GnRH was significantly high in above 30 years of age ($p=0.0005$). Similarly stratification with respect to marital status, Socio economic status, Resident status, education status, duration of pms and duration of working and working hours per day was performed and presented in 3 to 9 respectively.

Table 1: Descriptive Statistics Of Variables

Variables	Mean	Std. Deviation	95% Confidence Interval for Mean		Median	Inter quartile Range
			Lower Bound	Upper Bound		
Age Groups (Years)	26.68	5.31	25.98	27.39	26	8
Duration of PMS (months)	11.018	9.74	10.395	12.21	6	9.0
Duration of Work	15.42	13.83	13.47	17.37	9	18
Working hours per day (hours)	8	1.30	6.83	8.19	7	2

Table 2: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Age Groups N=221

Pharmacological& Non-Pharmacologic Strategies		Age Groups (Years)			P-Value
		≤ 20 n=26	21 to 30 n=160	>30 n=35	
Pharmacological Strategies	Paracetamol	7(26.9%)	38(23.8%)	11(31.4%)	0.627
	Ponstan (mefanemic acid)	16(61.5%)	96(60%)	15(42.9%)	0.161
	OCP	2(7.7%)	20(12.5%)	2(5.7%)	0.434
	GnRH	0(0%)	2(1.3%)	6(17.1%)	0.0005
Non-Pharmacological Strategies	Exercise	13(50%)	52(32.5%)	14(40%)	0.191
	Psychological Therapy	13(50%)	60(37.5%)	13(37.1%)	0.466

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Table 3: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Marital Status N=221

Pharmacological& Non-Pharmacologic Strategies		Marital Status		P-Value
		Yes	No	
Pharmacological Strategies	Paracetamol	36(21.7%)	20(36.4%)	0.030
	Ponstan (mefenamic acid)	96(57.8%)	31(56.4%)	0.849
	OCP	23(13.9%)	1(1.8%)	0.013
	GnRH	8(4.8%)	0(0%)	0.097
Non-Pharmacological Strategies	Exercise	60(36.1%)	19(34.5%)	0.830
	Psychological Therapy	62(37.3%)	24(43.6%)	0.407

Table 4: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Socio Economic Status N=221

Pharmacological& Non-Pharmacologic Strategies		Socio Economic Status			P-Value
		Low n=18	Middle n=79	High n=124	
Pharmacological Strategies	Paracetamol	9(50%)	20(25.3%)	27(21.8%)	0.037
	Ponstan (mefenamic acid)	3(16.7%)	52(65.8%)	72(58.1%)	0.001
	OCP	2(11.1%)	4(5.1%)	18(14.5%)	0.108
	GnRH	2(11.1%)	0(0%)	6(4.8%)	0.041
Non-Pharmacological Strategies	Exercise	9(50%)	35(44.3%)	35(28.2%)	0.028
	Psychological Therapy	8(44.4%)	22(27.8%)	56(45.2%)	0.042

Table 5: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Resident Status N=221

Pharmacological& Non-Pharmacologic Strategies		RESIDENT STATUS		P-Value
		Urban	Rural	
Pharmacological Strategies	Paracetamol	45(26.6%)	11(21.2%)	0.427
	Ponstan(mefenamic acid)	99(58.6%)	28(53.8%)	0.546
	OCP	19(11.2%)	5(9.6%)	0.742
	GnRH	6(3.6%)	2(3.8%)	0.920
Non-Pharmacological Strategies	Exercise	61(36.1%)	18(34.6%)	0.846
	Psychological Therapy	67(39.6%)	19(36.5%)	0.688

Table 6: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Education Status N=221

Pharmacological& Non-Pharmacologic Strategies		Education Status				P-Value
		Middle or lower n=16	Matric n=36	Inter n=52	Graduate n=117	
Pharmacological Strategies	Paracetamol	8(50%)	9(25%)	18(34.6%)	21(17.9%)	0.012
	Ponstan(mefenamic acid)	4(25%)	24(66.7%)	26(50%)	73(62.4%)	0.015
	OCP	0(0%)	3(8.3%)	6(11.5%)	15(12.8%)	0.444
	GnRH	0(0%)	0(0%)	4(7.7%)	4(3.4%)	0.218
Non-Pharmacological Strategies	Exercise	2(12.5%)	19(52.8%)	19(36.5%)	39(33.3%)	0.035
	Psychological Therapy	10(62.5%)	11(30.6%)	18(34.6%)	47(40.2%)	0.152

Table 7: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Duration Of Pms N=221

Pharmacological& Non-Pharmacologic Strategies		Duration of PMS (months)			P-Value
		≤6 n=113	7 to 9 n=65	10-12 n=43	
Pharmacological Strategies	Paracetamol	34(30.1%)	13(20%)	9(20.9%)	0.251
	Ponstan (mefenamic acid)	67(59.3%)	35(53.8%)	25(58.1%)	0.775
	OCP	6(5.3%)	14(21.5%)	4(9.3%)	0.003
	GnRH	2(1.8%)	2(3.1%)	4(9.3%)	0.076
Non-Pharmacological Strategies	Exercise	61(54%)	16(24.6%)	2(4.7%)	0.0005
	Psychological Therapy	50(44.2%)	28(43.1%)	8(18.6%)	0.010

Table 8: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Duration Of Work N=221

Pharmacological& Non-Pharmacologic Strategies		Duration of Work		P-Value
		≤12 month	>12 months	
Pharmacological	Paracetamol	42(26.8%)	14(21.9%)	0.450

Strategies	Ponstan (mefanemic acid)	95(60.5%)	32(50%)	0.152
	OCP	12(7.6%)	12(18.8%)	0.016
	GnRH	0(0%)	8(12.5%)	0.005
Non-Pharmacological Strategies	Exercise	61(38.9%)	18(28.1%)	0.131
	Psychological Therapy	63(40.1%)	23(35.9%)	0.562

Table 9: Frequency Of Pharmacological& Non-Pharmacologic Strategies Used By Working Ladies Of Reproductive Age For The Management Of Pre Menstrual Syndrome By Duration Of Working Hours N=221

Pharmacological& Non-Pharmacologic Strategies		Duration of Working hours		P-Value
		<8 hours	>8 hours	
Pharmacological Strategies	Paracetamol	38(30.4%)	18(18.8%)	0.048
	Ponstan (Mefanemic acid)	64(51.2%)	63(65.6%)	0.032
	OCP	14(11.2%)	10(10.4%)	0.853
	GnRH	2(1.6%)	6(6.3%)	0.067
Non-Pharmacological Strategies	Exercise	61(48.8%)	18(18.8%)	0.0005
	Psychological Therapy	55(44%)	31(32.3%)	0.077

DISCUSSION

It has been estimated that as many as 80% of women of reproductive age may be suffering from some symptoms of PMS.¹² If the ICD-10 criteria are employed, it seems that 79.9% of women in this study were suffering from PMS. While there is very little published material on PMS and PMDD emerging from Pakistan It seems that PMS afflicts a significant number of women here.^[14-16] It is difficult to compare these studies, as different symptoms and diagnostic criteria and convenience sampling has been employed; so the results cannot be generalized to the diverse population of women in Pakistan. The results of this survey concur with the results of similar surveys of European and Latin American women,^[17,18] as physical symptoms predominate. The maximum prevalence of symptoms and syndromes is occurring by 35 years of age, similar to the European and Latin American women. In this study the average age of the patients was 26.68±5.31 years. This is not surprising, as we know this condition is prevalent in ovulatory cycles. (Women who are constitutionally predisposed to experience these symptoms in response to hormonal cycles, would have noticed these symptoms at an earlier age).

Reported studies of Pakistan shows that Majority 98.8% of women were unaware of Premenstrual syndrome in Pakistan, and do not follow medical or natural strategies properly^[9]. In other countries, like in India the prevalence with PMS is 20% of which 8% suffer with severe symptoms^[3], in one of the India study it was found that 42% faced PMS regularly, while 58% occasionally and only 34% had received the treatment for PMS. In present study there were 19(8.6%) females used non-pharmacologic strategies, 82(37.1%) was used pharmacological strategies while 120(54.3%) female used both pharmacological& non-pharmacologic strategies to relive PMS. In Pal et al study^[9] there was a higher percentage of women using the COCP (21.5%) in Lahore as compared to 5% in Islamabad and 2.6% in Karachi. As the total percentage of pill users (0.2%) was so small in this study, a comparison with non-users was not made. This conforms to the low average contraceptive pill usage in Pakistan (2%),^[19] being lower in rural areas which have not been sampled in this study.

According to European studies about 98% women using non pharmacological methods to relive PMS^[10] like

this in one of the Asian study shows that 41% women pharmacological method to overcome PMS. Same study of Jordan also shows that the most frequently reported self-treatment strategies used by women to alleviate PMS symptoms were taking analgesics, increasing hot fluids, regular exercise and intake practicing relaxation.

Nisar et al^[14] interviewed 172 medical students with a prospective record of 2 menstrual cycles and found that 51% suffered from PMS (ICD-10), while 5.8 % had PMDD. Mood symptoms predominated in this study (40%-83%) as compared to physical symptoms (68%). There was great impairment in ADL in 74% of those suffering from it. Shershah et al^[15] looked at the prevalence of PMS in 1600 women from multi ethnic backgrounds in Karachi who answered a questionnaire with the help of lady school teachers and medical students, and were diagnosed to have PMS if > 3 symptoms occurred in the last 6 cycles (in each cycle prior to menses, resolved with onset of menses). This was retrospective recall of symptoms and diagnostic criteria were not of ICD-10, ACOG or DSM IV. However, with their own above definition, they found the total prevalence of PMS was 33%; it was lowest in para 1 and 0 (20.89%) and highest in para 4 and above (55.89%), and more prevalent in the lower social class (57.5% to 60.6 %); it was lower in Pathanwomen (11.6%) as compared to Punjabi, Mohajir, Sindhi and Baluchi women (30.6%). Majority affected by PMS were housewives (38%) and while students, doctors, nurses and teachers showed a slightly lower incidence of 27-30%. Physical symptoms predominate in this study as well. The most dominant symptoms being: lower abdominal pain, cramps, backache, breast pain, social withdrawal, anxiety/ mood change, irritability/ depression.^[16] These are similar to the frequency of symptoms reported by Tabassum et al in medical students;^[16] however mood symptoms predominated in this study (92.8%) while they constituted 12-19% in the earlier study.^[15] Treatment sought was with vitamins, analgesics, herbal remedies and homeopathic drugs.

In a study from Iran, it is also found that 98.2% Iranian female university students suffer from PMS^[20]. In Pal et al^[9] study, who found 79.9% prevalence of PMS among Pakistani women in a population based study. Previous studies conducted on the medical students also noted variations in the frequency of PMS, as a study from

Pakistan found PMS in 51% students^[14] while 35.6% frequency was reported in a study conducted on Saudi medical students^[21].

Such variations in PMS prevalence can be explained on the basis of differences in the data collection methods, sampling techniques, type of the population studied and most of all, the diagnostic criteria used to define the PMS. However the frequency distribution of PMS symptoms and their severity among undergraduate female medical students of this study was in accordance with the frequencies reported in the previous studies^[14, 16, 23, 24].

It is remarkable that the majority of women suffering from PMS in this study, used no treatment/ medication to relieve their symptoms. This is consistent with the cultural influences which tell Pakistani women to accept these symptoms as part of being a woman rather than complain about it, there are greater pains to bear as a woman. Amongst those who did use medication the majority were satisfied with their treatment.

CONCLUSION

It is concluded that complete social and personal counseling and awareness along with medical treatments will improve the life style of the working ladies facing this problems. As it adversely affects the educational, social and emotional well-being, means should be adopted to reduce the incidence of this disorder. Further studies on large sample of population should be conducted to confirm these results and to plan out strategies for better detection and management of PMS in young girls.

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