Status of Types of Premenstrual Syndrome (PMS) in Adolescent girls of Surat City (Guj.)

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Abstract

In all women, different physical, psychological, behavioural and emotional changes are observed prior to the onset of menstruation, i.e., 7 to 10 days before vaginal bleeding starts and soon disappears as menses starts. This phase is known as Premenstrual Syndrome (PMS). Approximately 200 symptoms have been recognized till today. These symptoms are grouped into four major types – PMS – A, PMS – C, PMS – D and PMS – H.

The present paper is an attempt to study PMS in the adolescent respondents (age 13 to 19 years) of Surat city, (Guj.), by grouping its symptoms in above mentioned types. The paper tries to highlight which are the major and most commonly observed symptoms, what can be the possible factor behind it and which type of PMS is more prevalent in Surat subjects.

Keywords

Premenstrual syndrome, PMS – A, PMS – C, PMS – D, PMS – H, anxiety, depression, irritability, adolescence.

Introduction

Menstruation is an important phase of ovarian – uterine cycle for all the girls in their reproductive age. Menstruation (*menstrualis,* monthly) is the

periodical escape of blood from the uterus, which escape physiologically every fourth week from puberty to the menopause, except during pregnancy and lactation (Jellet, 1925). Premenstrual syndrome is one of the less heard yet most experienced menstrual disorders amongst the clinically defined disorders like Amenorrhoea, Menorrhagia, Dysmenorrhoe etc. It consists of variety of somatic symptoms occurring in the postovulatory phase of cycle and ordinarily terminating with the onset of menses (Madden and Wilson, 1980; Isselbacher *et al.,* 1980). The severity of symptoms is sufficient to result in deterioration of inter – personal relationships or to interfere in normal activities.

Dr. Abraham (1983) classified the most common symptoms of PMS in four subgroups, for which patients seek medical advice and which can avoid metabolic confusion regarding PMS (Abraham and Rumley, 1987). These distinct four subgroups are PMS – A (anxiety), PMS – C (carbohydrate craving), PMS – D (Depression) and PMS – H (hyper hydration), (www.DCnutrition.com/problems/Detail.CFM?RecordNumber=224). PMS – A is considered to be the most common subgroup while PMS – D is found least amongst the sufferers. Anxiety, irritability, mood swing, sleeplessness, emotional instability and nervous tension are the characteristic symptoms of PMS – A while depression, confusion, forgetfulness and cry spell are the chief symptoms for PMS – D. Similarly, PMS – C is represented by hypoglycemia, craving for sweets, headache, fatigue, heart palpitation and dizziness while PMS – H is a group of symptoms like weight gain, abdominal bloating and discomfort, breast congestion and tenderness and swelling of extremities. Presently, there is no evidence that these types represent different etiologies or different pathophysiological mechanism.

Materials and Method

A random survey was undertaken using a questionnaire, which was prepared after reviewing already established literature on PMS. General profile, respondent's and her family's health history, socio – economic background, menstrual details and of girls and their mothers and PMS symptoms experienced by them were noted. Per age group (13 to 19 years), 10 subjects were randomly selected from urban zones of Surat city, i.e. total 7 age groups, $7 \times 10 = 70$ cases were studied. Later PMS symptoms were categorized as per types and further analysis was done.

Results and Discussion

After survey, the Surat respondents were grouped into 4 types of PMS as per the symptoms they experience in each type. None of the subjects were undertaking any treatment for PMS and all were found to have good health status. When PMS – A was studied, amongst its representative symptoms, anxiety – AX was noted highest (67.14%) whereas decreased sleep – SDO – DEC was observed least (17.14%) while others were found moderate (Graph – 1). The high intensity of anxiety might be due to low adjustment capacities of the individuals towards situations in life making them more susceptible to illness (Riche and Milner, 1971; Rao, 1976) and the increase in unpleasantness of the stresses leading to anxiety and its association with illness (Holmes and Masuda, 1972; Rao, 1976). Age group 16 showed not only highest amount of anxiety (8/10 respondents) but also high level of irritability – IRB (8/10 respondents), (Graph – 1). Looking to the results in this age group one can say that probably irritability and anxiety are related to each other here. Apart from this, nervousness was found most in age 15 subjects but was not noted at all in 19^{th} age group, mood swing was high in age 17 and decreased sleep in age 19

years. Age group 17 showed no sleep problems. From the over all data, apart from anxiety and irritability, PMS – A symptoms were found quiet random in these adolescent girls.

PMS – A patients tend to have excess Ca++, Mg++ based diet, high fat and/or refined sugar intake (www.drkaslow.com/html/premenstrual_syndromes.html) which make them vulnerable to PMS – C and PMS – D symptoms in future.

Inspite of being the least observed type, PMS – D showed striking results in present study. Clinical depression – CD was found to be the highest 72.85 % (Graph – 2) ,even higher than intensity of anxiety symptom in PMS – A. Intensity of CD was highest in age groups 13 and 15 (9/10 respondents).Intensity of cry spell – CRS (28.57%) and confusion – CF (27.14%) were quiet close to each other. But, forgetfulness was noted to be the least, but not negligible, that is only 17.14% (Graph – 2). Generally PMS – D is rarely noted alone but is generally found to follow PMS – A (Abraham and Rumley, 1987) which is apparently true with this study. Also, it is very likely that depression is associated with irritability here (Stieglitz and Kimble, 1949; Abraham and Rumley, 1987).

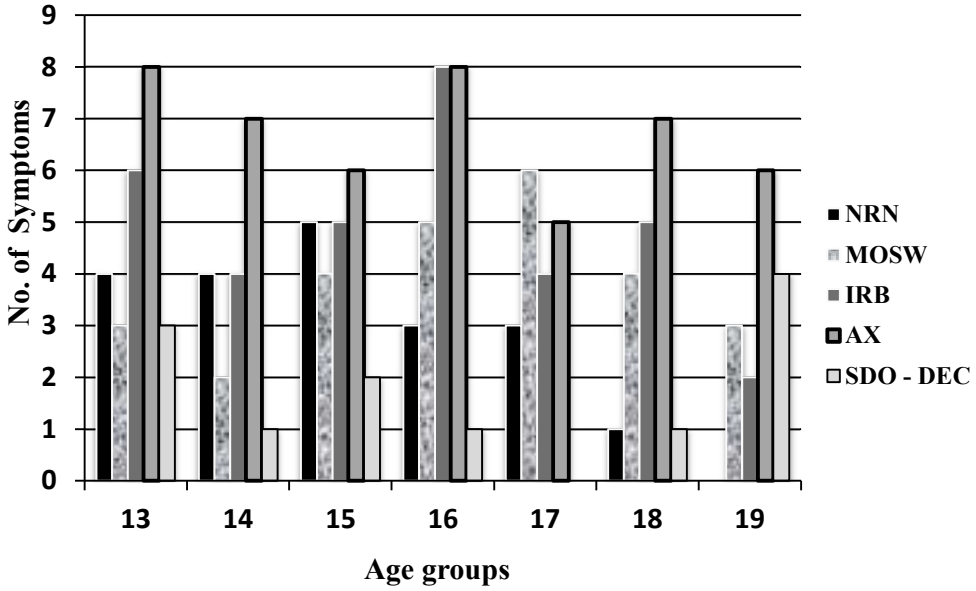
Dizziness – DZ showed highest intensity (34.28%), which itself reveals that intensity of PMS – C symptoms was found to be moderate overall. The least observed symptom weakness/ fatigue – WK/ FA was observed to be only 7.14% which is below moderate level (Graph – 3). Many groups showed total absence of certain symptoms like, hypoglycemia - HPG was not noted in age groups 14, 16 and 17 years whereas weakness was absent in 13, 14 and 16th ages. The comparative intensities of symptoms like DZ, headache – HA and increased appetite – CAP- INC were found to be almost similar (Graph – 3).

PMS – H was found to be below average from the data obtained during survey for various symptoms for the same. Unlike PMS – C, certain PMS – H symptoms like Edema of ankle - EA, Puffiness of abdomen - PA and Puffiness of fingers - PFG were totally absent in Surat respondents. Those symptoms which were found were having intensities below average like weight gain – WG (17.14%) and Abdominal fullness/ Feeling gaseous - AF/ GF (14.28 %), (Graph – 4). Breast tenderness or breast swelling – BT/ BS, swollen abdomen - SWA and Puffiness of face - PF were found to be extremely negligible (Graph – 4). Age group 17 subjects showed only sufferance of 1 PMS – H symptom, 16^{th} only 2, while the rest others showed not more than 4 characteristic symptoms out of 8 (Graph – 4).

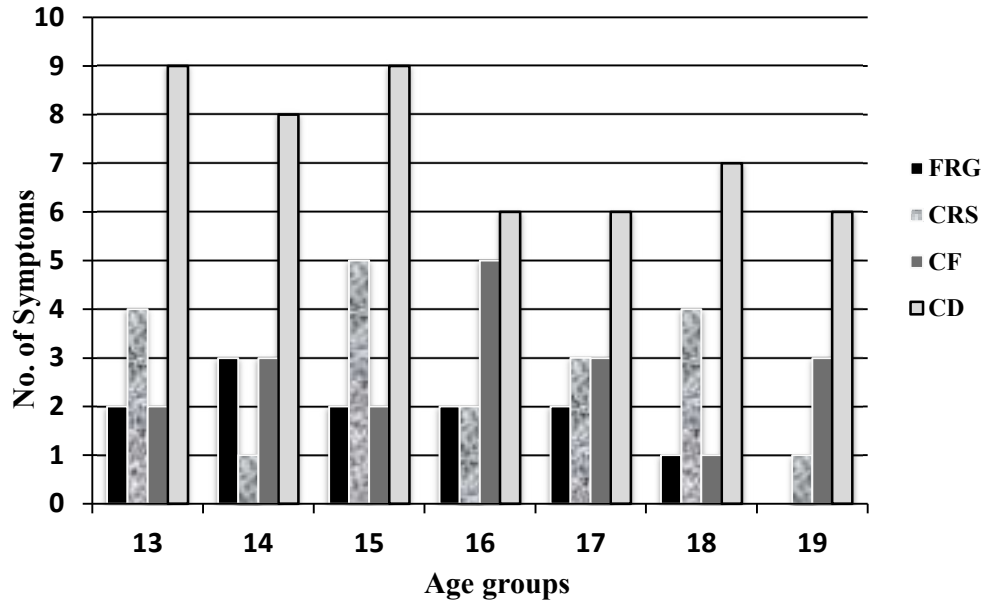
The results of Abraham in his 702 cases (Abraham and Rumley, 1987; www.drkaslow.com/html/premenstrual_syndromes.html; Hargrove and Abraham, 1982) states that PMS – A (66%) is the most commonly observed group of symptoms whereas PMS – D (1.70%) is the least observed. But in Surat sample population, only first half of Abraham's conclusions seemed to be agreeable, as with this study, PMS – D (36%) was found very high as compared to PMS – H (6%), (Graph – 5). Thus here, the least observed was PMS – H. Subjects scoring high for PMS – A have luteal phase deficiency (Backstrom and Mattsson, 1975; Abraham *et al.,* 1978; Munday *et al.,* 1981; Chakmajian, 1983) and are at high risk to breast cancer in future (Abraham and Rumley, 1987).

From the data of present Surat sample population, one can recognize them to be surely suffering with variable degrees of PMS problem and in future they may show PMS types overlapping or getting more intensified. Thus weather the intensity of PMS types is more in younger girls or in middle aged women, needs to be researched further.

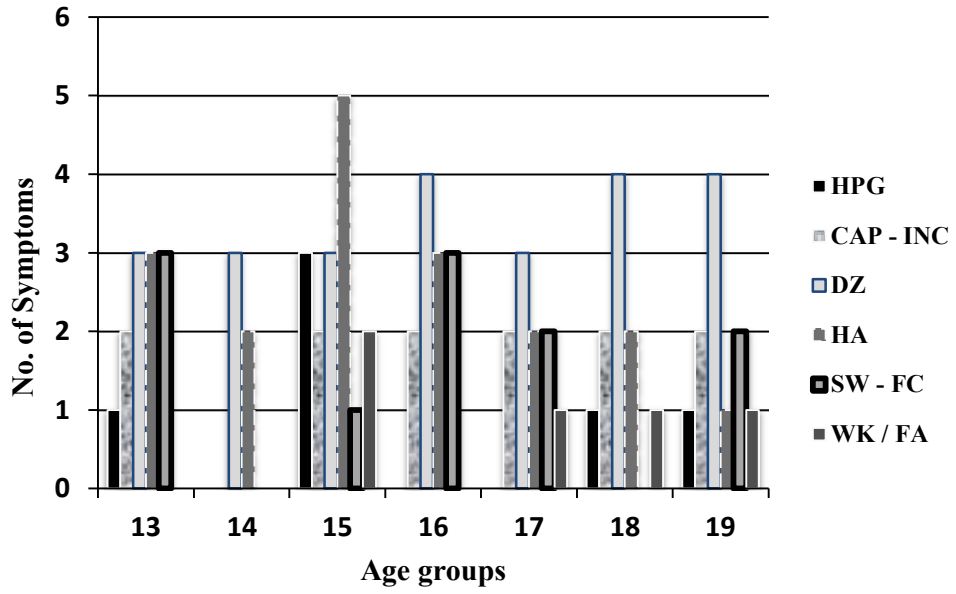
Graph - 1 PMS - A in 13 to 19 years Surat subjects.



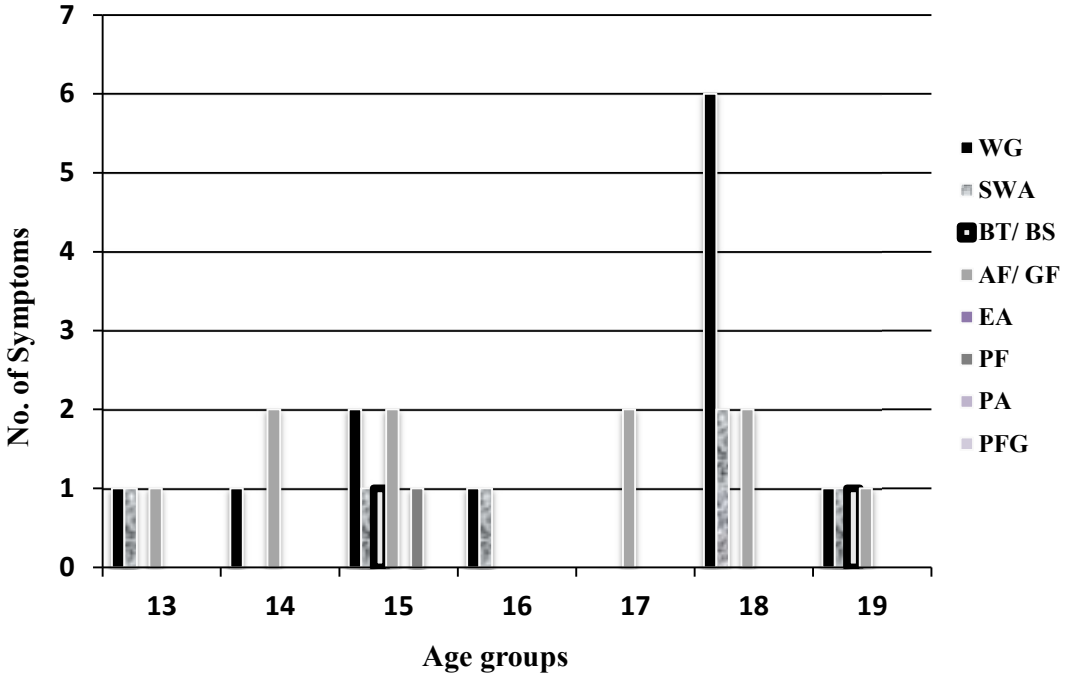
Graph - 2 PMS - D in 13 to 19 years Surat subjects.



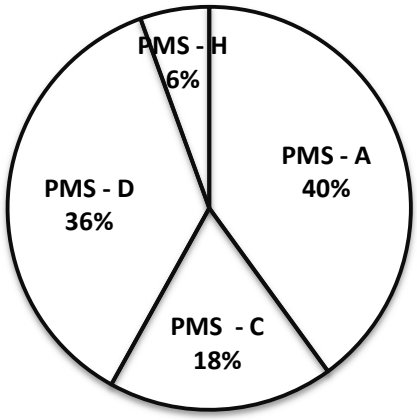
Graph - 3 PMS - C in 13 to 19 years Surat subjects.



Graph - 4 PMS - H in 13 to 19 years Surat subjects.



Graph - 5
Intensity of PMS types amongst Surat respondents.



Abbreviations

1) NRN – Nervousness

2) MOSW – Mood swing

3) IRB- Irritability

4) AX- Anxiety

5) SDO – DEC – Sleep disorder – decrease

6) FRG – Forgetfulness

7) CRS – Cry spell

8) CF – Confusion

9) CD – Clinical depression

10) HPG – Hypoglycemia

11) CAP – INC – Change in appetite – increase

12) DZ – Dizziness

13) HA – Headache

14) SW – FC - Sweets – Food craving

15) WK/FA - Weakness/ fatigue

16) WG – Weight gain

17) SWA - Swollen abdomen

18) BT/BS – Breast tenderness/ breast swelling

19) AF/GF – Abdominal fullness/ Gaseous feeling

20) EA – Edema of ankles

21) PF – Puffiness of face

22) PA – Puffiness of abdomen

23) PFG – Puffiness of fingers

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