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The Differentiation between Premenstrual Tension Syndrome and Dysmenorrhea in Young Age Group in Kerballa City: Cross-Sectional Study

Manal Nasih Ahmed Hamdan[1] Maysaloon Adnan Abdul Razzak[2]

[1]Obstetric and Gynecology Department ,College of Medicine, Kerbela University, Iraq

Abstract

Background: The repeated psychological and physical symptoms that occur during the luteal phase of menstrual cycle and relief with menstruation called Premenstrual syndrome.

The aim of study is to identify the symptoms of dysmenorrhea and premenstrual tension syndrome in young age group female and how can differentiate between these two symptoms.

Material & Method: The study was across sectional which was conducted with 259 students randomly selected from Karbala secondary nursery school of girls ,Their ages ranged from (range 15-29 years) with mean age 17.85±1.920 years. A questionnaire was used to collect the data, and was distributed randomly to all students in 3 classes in period from October 2017 to May 2018.

Results :259 girl shared in this study with mean age 17.85±1.920 years (range between 15-29 years) . 96.2%.Out of 259 , 205 had PMS (79.15%) with different symptoms.Most patients with PMS , developed dysmenorrhea (77. 5%) , There was significant difference between them p value (<0.001).

Conclusion: high rate of young girl had premenstrual syndrome .The diagnosis of PMS is generally undervalued due to different features for PMS are used in different research. Though dysmenorrhea would distort the physicians about the actual giving symptoms from these women .

Keywords: *rate of young; diagnosis; dysmenorrhea.*

Introduction

The repeated psychological and physical symptoms that occur during the luteal phase of menstrual cycle and relief with menstruation called Premenstrual syndrome. [(1)] PMS is a public health problem among young girls. [(2)]

The main symptoms of PMS includes the symptoms connected to mood and physical conditions.[(3)] The symptoms are severe and very disabling in some women and affect with their career, social function and family relations.[(4)]

Corresponding author:
Manal Nasih Ahmed Hamdan
E-mail: manal_naseh@yahoo.com

Dysmenorrhoea a painful cramps that start before the onset of menstruation and may continue for hours to days. Dysmenorrhea may be primary, with no recognizable cause, or secondary due to pelvic diseases .[(5)]

The PMS begins before the MC and stops shortly after menstruation.[(6)]

The prevalence rates of PMS between 16%.3 to 93%In the Middle East.[(7)] PMS was the collaboration between hormonal, neural, environmental and psychosocial factors . [(8,9)] the underlying pathophysiology of PMS remains uncertain. [(10)]

The diagnosis of PMS mostly depends on the patients complains and symptoms, which over Two MC using a symptom record.

To achieve that diagnosis 3 key element must be present : (1) symptoms should happen during the luteal phase and resolution occur within 1to 2 days after the start of menstruation; (2) symptoms should be recognized for several MC; (3) no medical or psychological disorders behind these symptoms [11]. According to ACOG diagnostic criteria the diagnosis of PMS was done when at least one somatic symptom and one emotional symptom had been occured[12] .

Estrogen and progesterone effect on Serotonin receptors, and selective serotonin reuptake inhibitors (SSRIs) are proven to reduce PMS symptoms. [(13)]. The relationship between Prolactin levels, hypoglycemia or vitamin deficiencies and PMS had not been established[(14)] .

Materials and Method

The study was across sectional which was conducted with 259 students randomly selected from karbala secondary nursery school of girls ,Their ages ranged from (range 15-29 years) with mean age 17.85±1.920 years. A questionnaire was used to collect the data, and was distributed randomly to all students in 3 classes in period from October 2017 to May 2018.

The study was approved by the Ethics Committee of the University of Karbala and informed consent was obtained from all participants**.**

The students were instructed to fill out the questionnaire over 2 menstrual cycle.

All of the questionnaire related to symptoms asking to them before include week before, week after and others. Also include the severity of symptoms which include mild, moderate ,severe.

For severity of dysmenorrhea we select MMS criteria (Multi dimensional Scoring system criteria) .

The **MSS** grading of pain is as follows:

Grade 0: not painful Menstruation and un affected daily activities.

Grade 1 (mild): not painful Menstruation and rarely affected daily activities.

Grade 2 (moderate): moderate painful Menstruation and affected daily activities **Grade 3** (severe): extreme painful Menstruation and inhibited daily activities .

Result

259 girl participate in this study with mean age 17.85±1.920 years (range between 15-29 years) .

The mean BMI 22.40 ±5.285 kg/m2(range 17.1-29.3 kg/m2), Most of them 65.3% had normal BMI as shown in table (1).

Table (1): BMI in studied group

		Frequency	Percent
BMI	Under weight	54	20.9
	Normal	165	63.7
	Overweight	40	15.4
	Total	259	100.0

In table (2),most of these females hadn't use COC (combined oral contraceptive pills) 62.5% , and had regular period 64.5% with no history of chronic disease 96.2%.

Table (2): The history of studied group

History points	Classification	Frequency	Percent
Number of children	Yes	18	6.9
	NO	241	93.1
Marital status	Divorced	9	3.5
	Married	31	12.0
	Single	219	84.6
C.O.C pills user	NO	191	73.7
	Other types	28	10.8
	YES	40	15.5
History of COC use	NO	180	69.5
	YES	69	30.5

Cont... **Table (2): The history of studied group**

regular period	NO	92	35.5
	YES	167	64.5
chronic disease	NO	249	96.2
	YES	10	3.8

Out of 259 , 205 had PMS (79.15%) with different symptoms Only 11.6%(30 patients) need doctor advice for the symptoms and 17% (44 patients) took drugs for relieve symptoms.

During the period , Out of 259 , 191 (73.7%) had different symptoms in first 2 days of period as shown in table (3).

Table (3):Symptom during 2 days of period of studied group

Symptom during 2 days of period	**Classification**	**Frequency**	**Percent**
(Menstrual Cramps) 2days before	Mild	39	15.1
	Moderate	58	22.4
	Sever	96	37.1
	No	66	25.5
(Menstrual Cramps) 2 days after	Mild	60	23.2
	Moderate	72	27.8
	Sever	89	34.4
	No	38	14.7
(Menstrual Backache) 2 days before	mild	38	14.7
	Moderate	59	22.8
	Sever	93	35.9
	No	69	26.6
(Menstrual Backache) 2 days after	Mild	56	21.6
	Moderate	77	29.7
	Sever	83	32.0
	No	43	16.6

According to BMI , Most patients with dysmenorrhea had normal BMI (137) as shown in table(4).There was insignificant difference between them (p value =0.2)

Table (4): Dysmenorrhea in different BMI groups

BMI	NO	YES	Total
Underweight	33	21	54
Normal	28	137	165
overweight	7	33	40
Total	68	191	259
P value	0.20		

According to age , Most patients with dysmenorrhea with age group 16-20 years as shown in table(5).There was significant difference between them (p value <0.001).

Table (5): Dysmenorrhea in different age groups

Age group	**NO**	**YES**	**Total**
≤15	5	22	27
16-20	39	145	184
21-25	13	20	33
26-30	11	4	15
P value	<0.001		

Most patients with PMS , developed dysmenorrhea (77. 5%) , There was significant difference between them p value (<0.001).as shown in table (6).

Table (6): PMS and dysmenorrhea in studied group

NO		**Dysmenorrhea**		**Total**
		YES		
PMS	No	22	32	54
	Yes	46	159	205
Total		68	191	259
P value		<0.001**		

Discussion

Out of 259 , 205 had PMS (79.15%) with different symptoms ,while the Royal College of Obstetrics and Gynecology published in her Green-top Guideline No. 48 [15] that the prevalence of PMS is 40% depending on Pearlstein et al study [16] this percentage is not the same in all the world and according to Sanctis, , et al [17] study which is held in 2016 he found that the prevalence of dysmenorrhea varied greatly from different countries it was 94% (Oman), 59.8% (Bangladesh), 34% (Egypt) to 0.9% (Korea). This prevalence varied according to many factors which influence the disease occurrence and severity of the disease like the type of food ,degree of knowledge .

Only 11.6% (30 patients) of these girls ask for doctor advice to control their symptoms and only 17% (44 patients) took drugs to relieve symptoms. This finding is compatible to that reported by Chan et al. [18].

Pain is the most frequent symptom experienced by those girls and from the total 259 participants ,191 (73.7%) describe pain and dysmenorrhea in the first 2 days of period

During the period , Out of 259 , 191 (73.7%) developed symptoms in first 2 days of period as shown in table (3),cramps and backache are the main symptoms developed during the 1st two days of the cycle.

We found in our study that females weight and BMI did not affect the symptoms of pain and dysmenorrhea , There was insignificant difference between groups (p value =0.2), this result differ from that obtained from Madhubala and Jyoti Kala in 2012 in Rajasthan – India which reveal a significant relationship between dysmenorrhea and BMI [19] . , he advice to reduce weight because decrease adipose aromatase activity and increase estrogen metabolism and excretion which may modulate the pain during the cycle[20] .

According to age , Most patients with dysmenorrhea with age group 16-20 years as shown in table(6).There was significant difference between them (p value <0.001).In comparison with Dawood [21] recognized dysmenorrhea in half of young women.

58% of studied group between the age group of 11 years to 22 years had dysmenorrhea and 22% and 17% had severe and moderate constituted respectively . This indicates that dysmenorrhea had negative effect on social environment, work and psychological status[22] .

Most patients with PMS , developed dysmenorrhea (77. 5%) , There was significant difference between them p value (<0.001) as shown in (table 7). Orhan Derman et al. , which propose that the diagnosis of PMS is usually underestimated and he advice primary care physicians to be alert of this health insult in order not to underestimate the disease and its consequences on patients life[23] . Backache which usually perceived by the patient as pain correlated to menstrual cycle found to be mild in 17.4%,moderate in 24.3% and sever in 32.4% in the week before the cycle this figure changed to mild 30.1 ,moderate 26.3,sever 26.6 ,the severity of backache slightly decrease after menstruation which may be due to the relief of menstrual tension while mild pain increased which may be correlated to dysmenorrhea .

Conclusion

high rate of young girl had premenstrual syndrome .The diagnosis of PMS is generally undervalued due to different features for PMS are used in different research. Though dysmenorrhea would distort the physicians about the actual giving symptoms from these women .

Ethical Clearance: The Research Ethical Committee at scientific research by ethical approval of both environmental and health and higher education and scientific research ministries in Iraq

Conflict of Interest: The authors declare that they have no conflict of interest.

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