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**P.M SYNDROME (SYMPTOMS, EPIDEMIOLOGY, DIAGNOSIS,
ETIOLOGY, TREATMENT)**

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ABSTRACT

P.M Syndrome or Premenstrual Disorder is one of the most common problems of females in child bearing ages. Its prevalence is about 90 percent which has led to threaten family, marital, social, occupational, and educational relationship and it involves a collection of signs and symptoms such as physical, psychological, behavioral and social signs. The purpose of this survey is acquainting with: psychological aspects of the menstruation, its physical and psychological symptoms, etiology, diagnosis and preventive and therapeutic strategies of P.M Syndrome.

Keywords: *Symptoms and Signs, Causes, Prevalence, Diagnosis, Treatment, Premenstrual Syndrome*

INTRODUCTION

Puberty in Girls

Most of the girls are entered to puberty at the age between 10 -15 years, average age of puberty is 12 year old (Matlin and Margaret, 2008, translation of Mohammadi, 2011). Since last century, the age of first menstruation cycle (Menarche) has increased, but weight of the body at a menarche has stayed surprisingly constant (up to 47 kg). This means that the girls should reach to a certain weight for releasing of prerequisite hormones and spurt growth happens in the body and this is what is called physical readiness or puberty (Matlin, 2000, translated by Ganji, 2011). The term of puberty is called to the first stage of adolescence when sexual maturity appears. Puberty is started with increasing level of hormones and physical manifestation of this increase. Some females believe that menstruation is the beginning of sexual maturity and consider its occurrence as a symbol for feminine identity. However, some of the other women see menses as a problem and trouble. Therefore attitude regarding this issue depend on attitudes, culture, race, ethnicity, beliefs, quality of support and guidance and values of parents and peer groups (NikKhou, 2005). During puberty girls observe obvious cognitive, psychological, sexual, physical and social changes in their life and the most development happens in their secondary sex characteristics (Nevid and Ratus, 2007, translation of Seyedmahammadi, 2009). In addition to the physical, hormonal and brain growth during puberty and with the start of menses, sexual growth also changes that need sexual training and education. Of the other puberty changes during adolescence are cognitive changes, that means alteration in thinking processes and intellectual activities and also growth of self-identity and fight for independency during puberty occur (LotfAbadi, 2005).

Biological Aspects of Menstruation

Every female in her life after menarche has about 450 menstrual cycles that are lasting for 40 years. One part of the brain that has a significant role in menstruation is Hypothalamus because it controls level of estrogen (a group of ovarian hormone which is produced in first part of menstruation cycle (Lutropin hormone or Luteinizing hormone)). when the level of estrogen is low hypothalamus sends a message to hypophysis (Pituitary) which leads to production and release of FSH (Follicle Stimulating Hormone) and LH (luteinizing hormone) from anterior pituitary gland) and causes the creation of corpus luteum in ovary. Overall, 4 hormones are playing role in menstrual cycle: 1- Follicle Stimulating Hormone that affect on the follicles and make them to produce estrogen and progesterone (a kind of hormone that is produced by ovary, cortex of suprarenal gland and placenta. 2- Lutropin hormone (Luteinizing hormone) which is necessary for growth of follicles. 3- estrogen leads the growth and proliferation of Inner layer of

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uterus, this hormone is mainly produced by ovaries (a structure in female sex organ) 4- Progesterone that prevent from over secretion of the Lutropin hormone (Lutenizing hormone) (Matlin, 2000, translation of Ganji, 2011; Dorland, 2000, translation of VizhehHushmand, 1991).

Follicle is a collection of cells around ovum in ovary (Hyde, 2010, translation of Khamseh, 2010). In other words, an important organ that is considered part of the structure responsible for menstrual period is ovaries that contains follicles for keeping ova and produces estrogen and progesterone. In the middle of cycle one of ovum is released from follicle and goes toward Uterotubal and arrives to uterus. Uterus is an organ that fetus is growing inside. Inner layer of uterus (endometrium) is a place for feeding of fertilized ovum so that it can grow during pregnancy. When fertilized ovum is not placed in the endometrium, it will shed and drain out as menstrual bleeding. Ovum is also degraded during moving out of the uterus (Matlin, 2000, translated by Ganji, 2011).

Menstrual Cycle Events

Most important concept in amid of the puberty is this fact that structures of brain, hormones and reproductive system regulate menstrual cycle with precise cooperation. Their function is like a feedback loop. When level of one special hormone is low, structures in brain send message and a chain of events will develop for its secretion (Matlin, 2008, translated by Mohammadi, 2011; Kaplan and Porter, 2006, translation by Zolanvaari, 2009). Events which are repeating in this period every month are: 1- In reaction to the low estrogen level, Hypothalamus send a message to Hypophysis 2- Pituitary gland produces follicle stimulating hormone (FSH) which leads to more growth of follicles and increase in estrogen synthesis 3- Increase in the estrogen leads proliferation of inner layer of internal and gives a feedback to pituitary gland to stop secretion of FSH 4- Hypophysis stops production of FSH and starts to produce Lutropin hormone to stop 5- Lutropin hormone usually prevent growth of all follicles except one 6- in this time ovum is released, a process called ovulation 7- empty follicle is growing and makes a spherical structure is called corpus luteum. This structure produces estrogen and Progesterone. After ovulation level of both hormones elevate 8- the high level of Progesterone causes stoppage of Lutropin hormone synthesis and leads corpus luteum degeneration 9- after degradation of yellow body, level of syntheses of Progesterone and estrogen decline in this time endometrium sheds and menstrual bleeding is formed 10- low levels of estrogen and progesterone send a message to Hypothalamus which leads a new cycle to be started (Matlin, 2000, translated by Ganji, 2011; Speroff, 1999, translation of Mirdamadi, 2003; Kistner, translated by Ghazi, 2009).

Most of people do not know that females lose very low amount of blood during menstruation, but they think that amount of blood loss in this time is much more, however, this relatively small amount of blood loss, is usually accompanied with menstrual cramps and before the menstrual period, various types of reactions like physical, psychological, social are seen in some women, One of these phenomena is called Premenstrual reactions (P.MR) or premenstrual syndrome, which is the topic of this survey (Nevid and Ratus, 2007; translated by Seyedmhammadi, 2009; Speroffl, 2006).

Endocrine Glands and Hormones

Functions of different organs in human body are controlled and regulated by two factors: Nervous and chemical factors. Chemical control is done with hormones or endocrine gland secretions. Endocrine glands have no excretory duct to the outside of the body and their secretions are directly entered into the blood. Endocrine glands have secretory ducts to the cavities and canals inside or the outside of the body (NikKhood and Avadisians, 2008). Hormones cause growth spurt in reproductive organs and play role in all changes at puberty and menstruation. Hormones are chemical substances which are carried to whole body via blood circulation and they transfer messages to various organs regarding their growth and proper function. Those hormones which are responsible for changes during puberty and regulation of the menstrual cycle are produced in the pituitary gland and ovaries (Aram and Hosseini, 2010; Brein, 1993).

Some of the most important endocrine glands and their function are listed here:

Hypophysis: produces following hormones: 1. Adrenocorticotrophic hormone (ACTH) that stimulates hormone secretion from cortex of adrenal glands. 2. Gonadotropin hormone that regulate the function of ovaries. 3. Somatotrop in that causes growth. 4. Prolactin hormone which lead to discharge of milk

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after delivery in women. 5. Thyroid stimulating hormone that causes hormone secretion from thyroid gland. 6. Antidiuretic hormone leads water retention via kidneys. 7. Oxytocin Hormone that helps in uterine contraction during delivery and milk ejection during postpartum.

Thyroid: produces Thyroxin hormone that regulates growth and metabolism of the body.

Suprarenal glands: Produces Renin hormone that regulates blood pressure.

Pancreas: Secrets hormone of insulin that decreases blood sugar and Glucagon hormone that increases blood sugar.

Ovaries: estrogen hormone that regulates the reproductive system and secondary sexual characteristics of female and Progesterone hormone that changes uterus tissues for maintenance of pregnancy. Generally, the secretions of sex hormones that are causing the appearance of menstrual cycles in women during a month are significantly changing (NikKhoo, 2005; NikKhoo and Avadisians, 2008).

Dysmenorrhea

Dysmenorrhea is usually pointed out to the painful cramps in the muscles of abdominal region and also is including: headache, nausea, dizziness, fatigue and lower back pain. Dysmenorrhea is different from premenstrual syndrome. Uterine contractions that cause dysmenorrhea are exacerbated with the releasing of Prostaglandins which are produced before menstruation and cause severe cramps of muscle wall of the uterus (Matlin, 2008, translated by Mohammadi, 2011; Aram and Hosseini, 2010). To reduce menstrual pain there are several different remedies for instance prostaglandin production inhibitors, anti-inflammatory and painkillers, contraceptive with low doses can be useful but they may have uncomfortable side effects. Additionally, exercise, use of warm water compress, muscle relaxation, hot drinks and a change in diet, getting enough sleep can relieve menstrual cramps (Speroff, 1999, translated by Mirdamadi, 2003; Kaplan and Porter, 2006, translation by Zolanvari, 2009).

Menstrual Cycle or Menstruation

In women, an occurrence, that in a best way shows complex relation among activity of endocrine glands and sexual function, menstruation. Menstrual cycle has 5 stages including: Follicular phase, Ovulation stage, luteal phase, premenstrual phase and menstrual phase. This cycle usually lasts 21 to 35 days and is not similar in all females, however, cycles less than 21 and more than 35 days are considered abnormal (Nikkhoo, 2005). Each phases of menstrual cycle is controlled with mutable levels of various kinds of hormones of which are produced and released by ovums, pituitary gland and brain in to the blood. Major tasks of estrogen and progesterone hormones are building and regeneration of inner wall of uterus, in a way that in the case of formation of zygote, this newly formed membrane has nourishing role for zygote. But if zygote is not formed, with decreasing level of hormones in the blood leads this inner layer of uterus to be destroying and shedding in this condition it is called menstruation (Nikkhoo and Avadisians, 2008).

Stages of Menstrual Cycle

A- Follicular phase: is the first stage of menstrual cycle that is started right after the menstrual period (Hyde, 2010, translation of Khamseh, 2010). This stage last about 7 to 19 days. Almost, simultaneously with starting of menstruation cycle, production of feminine sexual hormones Progesterone and estrogen decrease. Low levels of these hormones increase respond and sensitivity of ovaries to FSH. FSH leads to developing of 6 to 12 follicles in ovary and name of this stage comes from this fact. Of these follicles only one reaches to mature stage (NikKhoo, 2005). Concurrent with the growth of follicle, its cell secrete estrogen and after a few days the level of estrogen raise in the blood and affects on hypothalamus and release Gonadotropin-releasing hormone (Gn-RH). Later hormone regulates secretion of FSH is stimulus and Luteinizing hormone (LH) (Nikkhoo and Avadisians, 2008).

B- Ovulation stage: Ovulation is releasing of ovum from ovary, when follicle grows and becomes mature and later is ruptured follicle will release and this stage is called ovulation in menstrual cycle (Hyde, 2010, translation of Khamseh, 2010). Naturally every month only one ovum is released (Aram and Hosseini, 2010).

C- Lutealstage: In this stage a group of yellowish- reddish cells which is called corpus luteum is formed in ruptured follicle (Hyde, 2010, translation of Khamseh, 2010). Length of lutealstage is 8 to 10 days. Ruptured follicle is empty and at the site of rupture, blood thrombosis is formed and inside of this

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coagulated blood, yellowish cells are growing that's why it is called corpus luteum. Corpus luteum produces progesterone and this is beginning of luteal phase (Kar, 2004, translation by Javaheri and colleagues, 2007; Nikkhoo, 2009).

D- Premenstrual phase: the time of beginning of the premenstrual period in women is different. This period last almost 4 to 6 days. Initiation of this phase in some females is accompanied with severe feeling of leg pain in pelvic area and in some of them is with occurrence of depression. If pregnancy doesn't happen in this stage, corpus luteum is destroyed and this condition declines Progesterone and estrogen levels in the blood stream (Nikkhoo and Avadisians, 2008).

E-Menstrual stage I: menstruation is bloody shedding of wall of uterus (Hyde, 2010, translation of Khamseh, 2010). The result is not an illness menstrual moods, (and colleagues, 2009). Menses is not consequence of disease, Its sign and symptoms can be different regarding to its intensity and duration in females with predictable menstrual cycle (Lustyk *et al.*, 2009). If ovum is not fertilized cannot attach to uterus membrane and is easily degraded, therefore no message is sent to ovary and consequently production of progesterone is stopped. When level of progesterone in blood drops, membrane of uterus sheds and spongiform tissues are destroyed from wall of uterus and converted to fluid, this fluid with blood is collected below the uterus and later they drain out through vagina. This shedding of blood and its drainage is known as menstruation (Aram and Hosseini, 2010). The average length of menstrual bleeding is 3 to 7 days. If this period becomes more or less, is considered as abnormal. Amount of blood loss generally is 80 millimeter or less. If the rate of blood loss is more than 80 millimeter anemia will be observed (Kistner, 1917; translated by Ghazi, 2009).

Interval of the Menstrual Cycle

Menstrual cycle is started with bleeding. First day of period is beginning of menstruation. This cycle continues in 2nd, 3rd and next days till starting of next cycle. A complete cycle is initiating from 1st day of one cycle and continues till 1st day of next cycle. Interval of cycle is number of days between cycles, which varies from one woman to another and even it is different from one cycle to another in same female. In matured ladies menstrual cycle is lasting between 21 to 35 days, an average of 28 days. Every woman has her own special pattern. Menstrual cycle of some of the women is more regular compared to other. Generally, Menstrual cycles are more regular at age 20 to 40 years old (Aram and Hosseini, 2010).

Psychological Aspects of Menstruation

Growth of attitude in girls regarding to monthly menstrual cycle has correlation with amount of their readiness for this important physical change. To start this cycle in some cultures, special ceremony is held and in some societies kept as a secret.

After this event, girls imagine them self big and as a young lady and this situation affect on their independence and function against parents. Monthly menstrual cycle is consequence of complex affecting of various factors such as: glands, hormones, structure of reproductive system and physical-psychological signs and complication. This cycle in addition to being affected by physical factors but also is affected by psychological and cultural factors as well. Psychological factors attributed to menses include: deny of feminine role and negative view to the menstrual period and life. Attitude of young girls to this period and its characteristics is important, because this attitude can impress their general sexual insight as a female (NavabiZadeh, 2006).

Reason of such negative ideas is probably originating from negative attitude of surrounding people. Those girls who have early starting menstruation are more sensitive and with negative feeling during premenstrual stage and menses phase. Some of public thoughts about female menses lead to formation of discriminative ideas against females in heavy and stressful occupations. These thoughts give an incorrect imagination from females and consider female to be unable to cope with the life affairs. However if parents, relatives and society of teenage girl encounter correctly with menstrual event, many of negative reactions of these girls withdraws or reduces. If starting of menses is becoming desirable not fearful and for preventing of negative physical and psychological effects, she is referred to a physician, consular and psychologist for proper explaining of this event to her, this will lead to change of attitude of person and society regarding this essential change in female's life (Nikkhoo, 2005).

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If girls and women are placed in ideal and conscious condition regarding menses, fluctuation in activity of nervous system and mood, psychological and behavioral changes during second half part of menstrual cycle and bleeding days won't be reported. Therefore, premenstrual disorders are correlating with negative attitude of family, parents, relatives, society and teenage girls and women which finally create a pathologic idea about menstrual period in them (Magos and Asso, 2012).

Some of the cultures have taboo against menstrual cycle and have negative attitude to some of the issues related to women such as menstrual period. In most of north America territories, menses is not only a negative but also a secret thing and messages of public media have negative advertisement about menstruation and especially target teenage girls indirectly and thus positive feelings about the menstrual period is not creating. Dr. Katharina Dalton in the years of 1950 A. D. has conducted a study regarding P.MS, that time world did not believe that P.MS has negative effects on many of women. In the beginning of 1980 A. D She concluded that most of females have P.MS but they might not notice or recognize that. He caused a great interest in media about P.MS (Matlin, 2008, translation Mohammadi, 2011). Some of the wrong ideas about menses have caused females to be considered unable to cope with life affaires during this time. Difference in attitude and having negative or positive role for females in this period has a great role in occurrence and intensity of symptoms and signs of premenstrual syndrome. Although, in all cultures, hormonal cycles of women are resemble but psychological cycle correlating with hormonal cycles have role in occurrence and intensity of symptoms and signs of premenstrual disturbances (HematiGorgani, 2010).

In general psychological factors have influence in the amount of hormone and developing stages of menstrual cycle. This imagination that females experience mood or personality alterations during menses is completely known by people and scientists.

In the researches it has been shown that there is correlation with behavior changes during menses, so many of suicides, and crime and violent done by female have happened during 4 days before menstrual period and during first 4 days of the menstrual cycle. Percentage of admission of females to psychiatric centers due to stress, anxiety, depression, so on, referring to emergency department due to accidents have occurred about 8 days before the menstrual cycle.

Additionally, studies show that females suffer from mood disorders and symptoms such as anxiety restlessness, depression, fatigue, sensitivity during ovulation and premenstrual stages have less severe symptoms compared to psychiatric patients whom have mood, affective and psychological disorders. Findings of Ievi and Bardyk's study(1968) which scored self-aroused stories of 26 female students via using the amount of verbal stress of Gottschalk & Gleser test, showed that anxiety of death, social inability and separation (disturbance in the interpersonal relations) have highly elevated and self-esteem and self-respect also had some fluctuation especially during ovulation (Hyde, 2010, translation by Khamseh, 2010).

Definition of Premenstrual Syndrome

Premenstrual syndrome is collection of sign and symptoms that some female experience before starting menses (Bronnersuddarth, 2000, translation by Delavar and Bisheh, 1993). P.MS syndrome has known as a psychological disorder in American Psychiatric Association (APA) (Puscher, 2004). This syndrome can be defined as periodic relapsing of a combination of bothering physical, psychic and behavioral alterations during luteal phase of the menstrual period which interfere with family, social, occupational and individual educational activities. This syndrome occurs due to appearance of one or more symptoms from a big collection of symptoms (more than 200) right before menses in some degree that causes disturbing in the work or life of person and after this stage there won't be any symptom (Kistner, 1917, translated by Ghazi and Ghotbi, 2009; Lustyk and Colleagues, 2009; Henshav, 2007; ShirMohammadi, 2009).

Epidemiology of Premenstrual Syndrome

This syndrome is one of the most common disorders in women during age of fertility, in a way that about 90 percent of females are suffering from mood, physical, psychic, behavioral and social symptoms of P.MS (Henshav, 2007; Puscher, 2004; Bhasa and Colleagues, 2009; ShirMohammadi, 2009).

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Etiology and Risk Factors of Premenstrual Syndrome

The reason of P.MS is not known completely. But it thought that this condition develop before menses due to activity of sex hormones estrogen and progesterone and psychic tension. In female who their close relatives suffer from this syndrome are more at the risk; however no known genetic factor has been identified (Karol, 1934, translated by HematKhah, 2011; Revercimedical, 2011).

Inspections of many of the clinical experts show that P.MS worsens in some women who reach to menopause and commonly is seen in females between age of 25 to 45 years, those who length of their menstrual period is 25 to 28 days and those women who had stressful events in one or two years ago, with history positive of migraine, with many children and consuming high level of sweet substances or alcoholic beverages. Some of the mental disorders increases risk of having P.MS, one third women with P.MS are those who experienced mild to severe postpartum depression. In panic, patients number of attacks in premenstrual stage increases. The rate of suffering from P.MS in women with personality disorders is higher than that in the general population of females (Carlson and Colleagues, 1997, translation by Abolmaali and Colleagues, 2010). The dominant view is that negative attitude to menstrual period, for example: a belief that women are not clean during menstrual period worsens menstrual problems (Nevid and Ratus, 2007, translation Seyedmahammadi, 2009; Mahmoudi *et al.*, 2009), also influence of expected P.MS symptoms in the occurrence of it has a role (Matlin, 2000, translated by Ganji, 2011). Therefore psychological, social and cultural factors play role in occurring of P.MS and P.MS is a problem caused by the culture and has been reported among local groups and different communities (Kar, 2004, translation by Javaheri *et al.*, 2007). Gold (1997) believes that cultural differences have an undeniable influence on the symptoms of P.MS (Gonda and colleagues, 2008). There is considerable evidence associated with the impact of culture on the disturbances and problems during menses, therefore, psychological cycle are influenced by culture (Hyde, 2010, translation by Khamseh, 2010).

Since P.MS is physical, psychic and social disorder thus can have medical reasons behind. Today's medicine and psychology know 3 basic hypotheses as cause of P.MS including: ovarian hormones hypothesis, hypothesis of endogenous opioid or Beta endorphin and social psychological theory.

Hypothesis of ovarian hormones: P.MS in this theory develops due to lack of balance in ratio of estrogen to progesterone. Hypothesis of endogenous opioid or Beta endorphin: in this hypothesis it is pointed out that females with P.MS become dependent on or addicted to endogenous Beta endorphin in the last stages of follicular phase and in the beginning or middle of a luteal stage. When at the end of luteal stage, the level of Betaendorphin decreases, patient shows symptoms and signs like symptoms of sudden withdrawal of opioid. These symptoms are depression, irritation, increasing appetite, and so on.

Social psychological: this hypothesis was given by psychiatrists. These specialist believe that P.MS is conscious manifestation of unconscious problem of a female regarding womanhood and motherhood emotions and physical changes before menstrual periods remind to the woman that she is not pregnant therefore she hasn't done her common feminine role (Nikkhoo, 2005; Kens, 1917, translation of Ghazi *et al.*, 2003; Sadock and Sadock, 2003).

Often P.MS has been reported more in these women: women who got pregnant and have children, had pregnancy complications like increased blood pressure, consuming sugary materials, salty and oily stuffs and coffee, don't do sport regularly, have a life style with high psychic pressures (Nikkhoo, 2005; Temple, 2001; Schumpert, 2010), have positive family history of P.MS and depression, lack of vitamins and mineral such as magnesium, manganese, vitamin E and females between 25 to 45 year old (Kistner, 1917, translated by Ghazi Jahani and Ghotbi, 2009; Merieter, 2010).

Clinical Signs and Symptoms of Premenstrual Syndrome

P.MS is a big collection of physical, psychological, behavioral and social signs and symptoms that happen periodically before menstruation and with the starting of menses they are relieved (Henshaw, 2007; Lustyk and Colleagues, 2009).

The most common symptoms reported about P.MS: feeling of depression, irritability, decreasing in concentration and memory, mood oscillations, sensitivity, anxiety, increasing food and alcohol intake,

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pain or edema in the breast, edema (abnormal accumulation of fluid in interstitial space of body tissues), headache, severe fatigue, joint swelling, sweating, weight gain, alteration of normal sleep cycle, lumbago, stiffness of muscles, desire to eat unusual food like ceca, flushing, dizziness, vomiting and nausea (Karol,1934, translation of Hemaatkah, 2011; Nikkhoo, 2005; Schumpert, 2010; HemmatiGorgani, 2010; Revercimedical, 2011; Henshav, 2007; Puscher, 2004).

Generally multiple symptoms of P.MS are classified as follows: physical symptoms of premenstrual syndrome (Kaplan and Porter, 2006, translation of ZolAnvari, 2009; Nevid and Ratus, 2007, translated by Seyedmahamadi, 2009; Nikkhoo, 2005; Meriter, 2010; America Collage Obstetrics Gynecology (ACOG), 2000) and psychological symptoms of premenstrual syndrome (Puscsher, 2004; Fontana and Badadvi, 1997; Chao and Chang, 1999; Lustyck and Colleagues, 2009; Aram and Hosseini, 2010).

Consequences of Premenstrual Syndrome

With regard to multidimensionality of symptoms of P.MS, this disorder has negative influences on the different structure of the life of suffering women such as: decline in the occupational, education, social, daily life functions, disturbance in the sexual, family, parent and child and interpersonal relationships which lead to frequent lawsuits, divorce, murder, suicide, and committing suicide, avoiding to go to the work place and at the end being hospitalized in the hospitals and subsequently decrease job productivity and economic downturn (Nikbakht and JaniEydi, 2004; Dolatian and his Colleagues, 2001; SafaviNaini, 2008; Mahmoudi *et al.*, 2009; Yazdani and Colleagues, 2004; AbedianKasgari and Colleagues, 2008; Akhlaghi *et al.*, 2003; Alavi and Colleagues, 2006; NavabiNezhad, 2006; Schumpert, 2010; Henshav, 2007; Lustyck and Colleagues, 2009; Temple, 2001).

Prognosis of Premenstrual Syndrome

In most women who are under study and treatment of P.MS with help of multidimensional remedies, degree of their signs and symptoms have lowered of which with getting close to menopause and its onset are disappeared and females will enjoy meaningful calmness in their life (Luz and Kwan, 2009; Schumpert, 2010; Kaplan and Porter, 2006, translation of Zolanvaari, 2009). Generally most women with P.MS feel relaxed with treatment, and complications of lack of treatment are including depression and increase of suicide committing during second half of the menstrual period (Kar, 2004, translation of Javaheri and Colleagues, 2007).

Diagnosis and Assessment of Premenstrual Syndrome

This syndrome first diagnosed based on the onset of symptoms. What causes conversion of these symptoms to diagnostic signs of P.MS is intensity of their occurrence in a way causes disturbance in daily routine activities (Carlson *et al.*, 1997, translation of Abolmaali and Colleagues, 2010).

The first step in the diagnosis of P.MS is asking from patient to record daily diary of symptoms for 2 months. If in the investigation of any daily symptoms there is no week free of the signs and symptoms in the early follicular stage (right after menses), should strongly to think about psychiatric disorders such as depression or anxiety. But if the symptoms appear in the stage before menstrual bleeding (at the end of luteal phase) and 2- 3 days after the bleeding began are disappeared we should strongly doubt about P.MS. In addition to the existing signs in the late luteal stage almost it is possible in an affected woman with P.MS, symptoms of P.MS getting worse close to ovulation phase. Diagnosis of P.MS is a two-staged process with. *First stage includes* obtaining the symptoms in a day prospectively and *phase II* includes screening for chronic psychic problems like Major Depression (unipolar). For the diagnosis of major depression, five or more than five depression signs should be exist at least for 2 weeks and diagnosis of Dysphoric mood before the menstrual period require 3 or 4 signs of depression in connection with luteal phase of menstrual cycle (Kistner, 1917, translation of Ghazi Jahani and Ghotbi, 2009).

Diagnostic criteria of the American Psychiatric Association (APA) are as follows:

- A. Symptoms and signs are started temporarily in connection with menstrual period at last week of luteal phase and relief after starting off menses.
- B. to prove the diagnosis of P.MS at least 5 of the following symptoms should be present and one of these 5 signs should be part of 4 current symptoms:
 1. psychological instability

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2. permanent anger or sensitivity
 3. Stress and excitement.
 4. Depression and feeling of disappointment
 5. reduction tendency to the routine activity
 6. the emergence of early fatigue or lack of energy
 7. Lack of concentration
 8. Change in appetite
 9. Increase or loss of the sense of smell
 10. lack of control
 11. Physical signs and symptoms such as: sensitivity of breast to touch, headache, arthralgia or myalgia and increasing of weight
- C. Signs and symptoms interfere with individual's job or activity and usual relations.
- D. The presenting symptoms are not associated with intensification of other psychiatric disorders; therefore for the diagnosis of P.MS, presence of some other mental disorders should be ruled out (Speroff, 1999, translation of Mirdamadi, 2003). Also, in the diagnosis of P.MS, a registered increase of at least 30 percent in intensity of symptoms during 5 days before the starting of menstrual bleeding to 5 days after its starting is necessary (National Institute of mental Health (NIMH), quoted by Speroff, 1999, translation of Mirdamadi, 2003).

Differential Diagnosis of Premenstrual Syndrome

A premenstrual syndrome disorder should be differentiated from worsening and intensifying of psychological disorders before the menstrual period such as mood disorders, anxiety, form physical, psychological overeating, Sleep disorders drugs and personality disorders (APA, 2000, quoted from Nikkhoo and Avadisians, 2005).

Almost 30% of the women, who seek treatment for premenstrual syndrome, probably have an underlying chronic psychiatric disorder. These females can be diagnosed based on one week free from symptoms during follicular phase. Some clinicians believe that all females suffering from P.MS should fill up a screening questionnaire. In addition, some individuals suffering from somatic disorders may experience tiredness which is worsening during premenstrual phase, for instance those who have thyroid or other endocrine disorders, cancer, SLE, anemia and pelvic infections (Konth, 1917, translation of Ghazi *et al.*, 2003).

On the other hand to identify and diagnose women affected with P.MS, we should rule out similar symptoms related to other disease during physical examination, for example PID and inflammation in abdominal cavity (peritonitis), cancer of cervix and pelvic, breast cancer should be considered in differential diagnosis, also suffering females from PID before the menstrual period should be checked out for endometriosis (Operine *et al.*, 2007). Also, it is recommended to do investigation to rule out disorders such as: Chronic Fatigue Syndrome, Auto Immune disorder, CNS diseases and signs of menopause in P.MS patients (Salamat and Esmail, 2007). In general following disorders should be differentiated from P.MS symptoms: mood disorders, major depression, non-psychotic chronic psychiatric disorders, severe depression, disorder of anxiety, hypo- and hyper- thyroidism, migraine, chronic fatigue syndrome, premenopausal symptoms and irritable bowel syndrome (Kar, 2004, translated by Javaheri *et al.*, 2007).

Treatment of Premenstrual Syndrome

With regard to this fact that there is no clear definition for the P.MS and a comprehensive theory is not exist about its origin, therefore it is difficult to speak about coping with P.MS or treatment and dealing with it (Maltin, 2008, translation of Mohammadi, 2011).

Proposed remedies for P.MS are very extensive and different, but main treatments include an alteration in the life style, psychotherapy and pharmacotherapy as it is explained in the continuation:

1- Following a regular and balanced schedule of diet with emphasis on avoidance of simple carbohydrates, eating smaller portion of food in each meal with more frequent meals in a day and reducing or avoiding consumption of salt, caffeine (coffee), sugar, chocolate, cola drinks and alcoholic beverages, and flatulent food.

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- 2- Reducing or quitting of smoking, tobacco use and drug dependency.
- 3- increasing the sport activities especially outdoor at least 20-30 minutes 3 times a week such as aerobic exercise, hiking and bicycling
- 4- decreasing psychological stress level with the use of the method such as Assertive training, engagement in the art activities, relaxing and meditation exercises or yoga
- 5- sleeping enough (between 7 to 8 hours every day)
- 6- Taking a warm bath daily, or before bedtime
- 7- Consuming of foodstuffs that are contained proteins
- 8- using of food full of Magnesium (whole grains, nuts, green vegetables)
- 9- Having a fat low diet
10. Taking various vitamins or mineral supplements as prescribed and recommended by clinician, such as calcium, magnesium, vitamin B1, vitamin E.
11. in addition to the number 10, using medications according to prescription and recommendation of clinical specialist, such as taking antidepressant, anxiolytics, none- steroid anti-inflammatory drugs and hormone therapy and diuretic therapy
12. Utilizing successful alternative methods for pharmacotherapy which are especially effective in reducing depression of P.MS such as intense light therapy or sleep deprivation in the afternoon as soon as symptoms start (Henshaw, 2007; Schumpert, 2010; Loze and Kwan, 2010, 2009; Meriter, 2010; HemmatiGorgani, 2010; Nikbakht and Janieyd, 2004). Other therapeutic cases include: Placebo, Oil of Evening primrose plant, Ovariectomy with use of medicine or surgery (Sproff, 1999, translated by Mirdamadi, 2003), Hysterectomy by a gynecologist whom has an experience in the treatment of P.MS (Carlson *et al.*, 1997, translation of Abolmaali and Colleagues, 2010).

Since P.MS has psychological and physical origin with emotional, affective, mood, social and behavioral signs and symptoms therefore planning for treatment based on these origins is mandatory and successful treatment of P.MS also encompasses counseling and psychotherapy also (Sproff, 1999, translated by Mirdamadi, 2003; Lee, 2006; Henshaw, 2007; Lustyk and Colleagues, 2009; Garcia, 2008). Studies have shown that those females who frequently experience depression or anxiety and generally speaking mood; affective; emotional and behavioral disorders may report signs and symptoms of P.MS more in comparison to other women (Maltin, 2008, translation of Mohammadi, 2011), clinical experts believe that drug taking may be relieving for this group of women, but alone it is not effective for removing of cause of problem which leads to be reporting signs and symptoms of P.MS by females (Maltin, 2000, translated by Ganji, 2011).

Based on this, clinical specialist focus on the on sources of complaints which have psychological origin in occurrence of premenstrual syndrome and they identify the feelings, emotions, thoughts, interpersonal communication and mutual influences and other factors which lead to conflict and loss of control in effected females (Sproff, 1999, translated by Mirdamadi, 2003).

In the area of psychological remedies, studies and researches show that in the control of the psychological symptoms of P.MS control following techniques are very useful including: applying cognitive Behavioral Approach, Relaxation skills training, Problem solving, coping with stressful situations, using mental imagery techniques (Henshaw, 2007; Lustyk and Colleagues, 2009; Temple, 200).

Generally in the treatment of P.MS, psychological interventions are necessary for controlling and management symptoms of this syndrome, because clinical experts believe that P.MS has physical and psychological origin.

Gianbagheri (2012) has conducted a research under the title of comparison the effectiveness of Lazarus Multimodal treatment and Existential therapy and integrating of both on reduction of symptoms of premenstrual syndrome and improvement in quality of life of patients. She concluded that ET, MMT and their combination is impressive in the management of psychological symptoms of P.MS, Therefore it is recommended to apply two psychotherapeutic methods of Lazarus Multimodal treatment and Existential therapy and combination of them in order to control and reduce the symptoms of premenstrual syndrome and improves quality of life of suffering females.

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