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Every month: The result of premenstrual dysphoric disorders

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Abstract

Methods: Research was conducted using self-experience along with scientific literature findings to fully understand the physical and emotional syndromes of premenstrual dysphoric disorders (PMDD).

Findings: Correlation with low progesterone in relation to negative affective and physical symptoms during the follicle and luteal phase were observed. Allopregnanolone, a neurosteroid, as a therapeutic agent can alleviate PMDD symptoms. Specific nutritional sources can also help alleviating the presenting symptoms.

Conclusion: Awareness about PMDD symptoms is warranted in women experiencing them. Providers need to be familiar of the emotional and physical effect of low progesterone and the mechanism of action of Allopregnanolone in treating PMDD, when other interventions such as psychotherapy and other pharmacological intervention failed.

Keywords: Premenstrual Dysphoric Disorder; Low Progesterone; Allopregnanolone; Neurosteroid; Follicle phase and Luteal phase

1 Problem

About 5 to 8 percent of women suffer from severe premenstrual syndrome (PMS). Most of these women also meet the criteria for premenstrual dysphoric disorder (PMDD). Women with PMDD often present as having no control over containing their emotions and somatic symptoms. They present with severe physical complaints such as fatigue, temperature change, such as hot flashes and gastrointestinal disturbances among others. Additionally, they report mood alterations such as depression, irritability and impulsivity. It was not until 2013 that the DSMV decides to admit these debilitating symptoms as a serious disorder.

Design: Ideas, Editorials, Opinions

Purpose: Identify the causal effect of PMDD

The words “every month” became a part of the conversation with loved ones who have gotten hurt by either my harmful actions or verbal expressions every month. Although it is always difficult to acknowledge the pain and headaches caused by the behavior, it is almost impossible to apprehend the raging feeling that controls the body during that specific time of the month.

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The words “every month” generated curiosity. I started to observe my monthly behavior around my menstrual cycle. It did not take long, as a psychiatric mental health provider, for me to realize that the behavior was not based on temperament, but based on a hormonal imbalance.

Premenstrual dysphoric disorder (PMDD) was the monthly battle affecting me for over two decades.

2 What is exactly PMDD?

About 5 to 8 percent of women suffer from severe premenstrual syndrome (PMS). Most of these women also meet the criteria for premenstrual dysphoric disorder (PMDD) (Yonkers et. al, 2008). Women would often describe PMS as a milder version of PMDD. Women with PMDD often present as having no control over containing their emotions. They present with severe debilitating symptoms. They are often lash out at others over the simplest confrontation or discussion. Symptoms of PMS include

- Mile to moderate mood disturbances
- Behavioral symptoms, such as self-isolation
- Somatic complaints such as mild gastrointestinal (GI) disturbances, such as stomach bloating and nausea.

In 2013, the Diagnostic and Statistical Manual of Mental Health Disorders, 5th Edition (DSMV) classified PMDD as a disorder. Before 2013, women described symptoms as emotional presentations as extreme mood disturbances such as

- Depression
- Irritability
- Anger
- Impulsivity

In addition to somatic complaints such as:

- Breast tenderness
- Temperature alteration such as feeling warmer than usual
- Severe GI disturbances

While women were feeling temporarily incapacitated with these symptoms, these complaints were not fully classified as a disorder but were seen as “other disorders.” It was not until 2013 that the DSMV decides to admit these debilitating symptoms as a serious disorder.

According to the DSMV, if a woman describes these symptoms below, then the psychiatric mental health provider must consider PMDD as a possible diagnosis.

- Pronounced mood changes that begin in the week before her menses
- Then her mood decreases within a few days after the onset of menses
- Then finally abate in the week post menses

While it was a relief to discover the long-time self-hormonal battle, it was also the scariest revelation. How will it be next month? Will there be another sorry plea? Will loved ones be hurt and powerless again? The continuous thoughts become overwhelming and, quite frankly, depressing.

Knowing myself to be a genuinely good individual and then being consumed and controlled by such tiny molecules called hormones, it was time for more understanding of the nature of the changes. How can such hormonal changes claim at least two weeks within the month?

3 The Road to Discovering PMDD

The road to discovery and acknowledgment was about to begin after PMDD, or this “hormonal beast,” as I like to call it, once more threatened to destroy valued friendships and relationships. There were a few steps I needed to take to get there.

- Step 1- I reviewed self-behavior towards others over the last 3 decades.

- Step 2- I carefully reviewed the comprehensive revision of family and friends' descriptions of my behavior over the last 3 decades.
- Step 3- I researched the hormones involved during the menstrual cycle.

The results were disturbing. They were painful to face. It took nearly thirty years to realize that part of what is displayed is not a result of temperament, but a hormonal change.

How can such molecules be so powerful in someone's mood, behavior, vital signs and physical symptoms?

4 The Biological Cycle of PMDD

In women, the ovaries' primary functions are to:

- Produce eggs
- Secrete hormones such as estrogen, progesterone and testosterone (Bickley, 2021).

It is worth mentioning the follicle phase. This phase is the start of the first day of menstruation. It lasts till the end of the ovulation phase. The ovulation phase is then proceeded by the luteal phase, where progesterone and estrogen levels drop. These hormones, especially estrogen and progesterone, control the menstrual cycle.

During the ovulation phase, the rise of estrogen helps the eggs develop and release in the ovaries. One egg then gets transported through the fallopian tube to the uterus for the possible chance of catching a sperm to fertilize into an embryo- also known as pregnancy.

During that same cycle comes the luteal phase, which introduces the rise of progesterone. This cycle is important due to its function to mature the uterus and prevent uterine contraction preventing miscarriages in the event of a possible pregnancy.

When pregnancy does not occur in the uterus, the estrogen and progesterone level decrease, the egg does not fertilize, the uterine lining does not mature hence is the start of the menstrual period. At this point, the menstrual flow begins.

In the luteal phase, with the decrease of progesterone, there are physical symptoms such as:

- Breast tenderness or mastalgia
- Body temperature changes
- Gastrointestinal bloating
- Fatigue
- Sleep disturbances

These symptoms are often referred to as PMS. There are also psychological symptoms such as mood changes that happen with low progesterone. It is known that progesterone synthesizes the hormone allopregnanolone. Allopregnanolone plays a pivotal role in regulating emotion and behavior. Therefore, a low level of progesterone will alter the production of allopregnanolone, causing mood dysregulation.

A study of 15 healthy women completed by Brambilla et al., 2010 measured estradiol, progesterone and testosterone across the menstrual cycle. The study revealed a positive correlation between estradiol and verbal aggression during the follicular phase. It also showed a correlation when both progesterone and estrogen are low.

Astonishingly, the evidence of the luteal or premenstrual phase revealed a negative correlation between progesterone and two components of hostility traits that the women often displayed. For example, two traits were suspiciousness and resentment.

In another study completed by Ziomkiwicz et al., 2012, they found that higher levels of progesterone during the luteal phase were associated with low self-reports of aggression and irritability. These studies resonate so personally and highlight the importance of the progesterone hormone.

5 The Discovery of Allopregnanolone

Maintaining a high level of progesterone during the luteal phase may diminish hostility and aggressive behavior, while low levels of progesterone may exacerbate aggression leading women to suffer from PMDD. The discovery of Allopregnanolone is extremely important in the understanding of PMDD.

Allopregnanolone is a neurosteroid and is described as such because of its direct production in the brain (Paul & Purdy, 1992). According to Pinna (2020), it took 80 years of scientific research to discover Allopregnanolone as a neuromodulator that turned into a therapeutic agent.

The food and drug administration (FDA) has now approved intravenous (IV) Allopregnanolone (brexanolone) as the first specific treatment for postpartum depression. During the 80 years of research, the staggering evidence of its therapeutic efficacy in treating postpartum is worth mentioning.

Educating clients to adhere to the hormone responsible for producing progesterone is important because the neurosteroid is beneficial in mood disorders.

6 Natural Options to Alleviate PMDD

This debilitating disorder could be alleviated every month with natural options as well.

Examples of natural progesterone food sources are:

- Beans
- Nuts
- Pumpkin
- Kale
- Spinach
- Whole grains
- Cabbage
- Cauliflower
- Broccoli

Unfortunately, as an individual suffering from such hormonal variation, intake of these food sources is not always enough and therapeutic for everyone. Some individuals will require additional interventions such as:

- Psychotherapy,
- Hysterectomy,
- Contraception,
- Pharmacology intervention such as antidepressant, antianxiety and Allopregnalone when all other medications have failed.

7 Awareness of PMDD

It can be defeating to be in a monthly hormonal battle for at least two weeks within the month, that is, six months of the year. Awareness of PMDD is warranted, and women should not be ashamed of their conditions. This disease places women at risk for depression, and non- treated depression can be a risk for suicide. Women must feel at ease to seek psychiatric mental health guidance for symptoms relief. Psychotherapy maybe a great avenue to help client verbalize their frustrations. Pharmacology maybe required if appropriate.

8 Conclusion

PMDD presents a serious public health problem. Healthcare providers must think outside of the box, when assessing clients for suicidal risks to include affective and physical symptoms during the luteal phase in female clients in order to rule out PMDD. As a change agent, monthly workshops will be conducted to the public in order to encourage women to be aware of the disorder. Perhaps by bringing more awareness about the seriousness of the condition, scientists can further study and create more concrete solutions to the problem.

Compliance with ethical standards

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