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PREMENSTRUAL SYNDROME: FAD, FACT OR FALLACY?
William R. Keye, Jr.* M.D.

About two years ago a local psychiatrist asked me to see a patient who had been resistant to his combination of psychotropic medications and psychotherapy. The patient, a 34-year-old mother of five, had noted for several years that without warning she would wake up in the morning feeling extremely depressed. The depression would last five, seven, sometimes ten days and then leave as suddenly as it began. During these episodes of depression, she would feel extremely tense, irritable, short tempered and “mad at the world”. She would find herself either yelling at her kids in response to the most trivial misdeeds or administering a particularly hard and severe spanking for more major infractions. She found noise (noise of almost any kind) to be almost unbearable. Small tasks became difficult, if not impossible, to carry out because of her inability to concentrate and to think clearly. During these episodes of depression she would cry out for the support, attention and affection of her husband, yet find his touch to be physically uncomfortable, if not repulsive. Unable to find solace in her relationships with her husband and children, she would overindulge in eating. Her appetite became voracious, and it was not uncommon for her to gain 7 to 10 lbs. in just one week. Peculiar to her binge eating was an almost uncontrollable craving for junk food, especially those rich in salt and sugar. In fact, at times she indicated she would almost “kill for a chocolate bar.”

Why, you may ask, did her psychiatrist want her to see me, a gynecologist and reproductive endocrinologist? Well, the reason was that each of these episodes of depression, tension, hostility and binge eating occurred during the week before the onset of a menstrual period. In addition, the psychiatrist was hard pressed to find any significant psychopathology during the rest of the month. The patient even remarked that when these episodes were over it was hard to imagine that she could have ever felt so depressed and angry. It appeared to me that this woman was suffering from premenstrual syndrome.

At that time I had only a superficial understanding of premenstrual syndrome or PMS, first described in the medical literature in 1931 by Frank (1931). In response to the request of the psychiatrist and out of a desire to help this young woman, who was obviously suffering a great deal, I spent the next three months reading as much of the pertinent medical and psychological literature as I could acquire. I traveled to Boston, Massachusetts, and met with Dr. Ronald Norris, a psychiatrist and endocrinologist who had established one of this country’s finest clinics devoted to the evaluation and treatment of PMS. It soon became apparent that we knew precious little more about the nature of PMS than when Frank wrote his article some fifty years ago. In addition, the field of PMS was rich in vitamin pitchmen, entrepreneurs and other “snake oil salesmen.” Disappointed, but not discouraged, I decided to devote a substantial portion of my clinical and research efforts to the study of PMS. Thus, during the last two years I have seen and evaluated almost 400 women with a history of premenstrual complaints. My early days of confusion and skepticism have been replaced with a strong belief that a small but significant number of women suffer a disease that, for lack of a better term, we will call premenstrual syndrome. In addition, I have discovered that premenstrual syndrome often masquerades as other medical or emotional conditions or plays a role in any of a number of physical, personal, sexual or social problems. Thus, I believe, it is important that psychologists, social workers, family and marriage therapists and other counselors be familiar with premenstrual syndrome and its many faces.

What is Premenstrual Syndrome?

Premenstrual syndrome refers to physical, emotional and behavioral symptoms that occur month after month but are confined to the week or two just prior to the onset of menstrual flow and during the time of the flow itself. While there have been dozens of theories proposed to account for PMS, none has withstood close scrutiny in the laboratory or clinic. The most popular and recent theories have suggested PMS is the result of hormone deficiencies or excesses, neurotransmitter abnormalities, or alterations of the body’s immune system.

The clinical presentation of premenstrual syndrome is often confusing. First, patients commonly complain of any of 30 different symptoms. Second, women with severe or long-standing PMS may also develop chronic emotional distress in the form of depression, decreased self-esteem, guilt, poor body image, discouragement, frustration or resentment. Finally, the chronic and recurring nature of PMS may lead to marked disturbances in relationships with children, husband, parents, siblings, neighbors, co-workers or fellow parishioners. Thus, it is not uncommon for women with PMS, often unaware of the premenstrual pattern to their symptoms, to come to counseling primarily for personal or family problems. It often takes an astute and persistent clinician to work through the multiple complaints to discover the premenstrual pattern of the basic symptoms.

While more than half of the PMS sufferers I have seen can trace their problem back to adolescence, many note that severe symptoms did not begin until the birth of a
baby, major surgery such as a hysterectomy or tubal ligation, birth control pill use or an emotional crisis. In general, symptoms become more severe and last longer over the years. Most women report numerous attempts to get help for their problems from physicians, psychiatrists, psychologists, social workers, marriage counselors and other health care professionals, often without success.

The most common symptoms are listed below.

**Physical Symptoms**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatigue</td>
<td>Incoordination</td>
</tr>
<tr>
<td>Headache</td>
<td>Joint Pains</td>
</tr>
<tr>
<td>Bloating</td>
<td>Nasal Congestion</td>
</tr>
<tr>
<td>Breast Tenderness</td>
<td>Constipation</td>
</tr>
</tbody>
</table>

**Emotional Symptoms**

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>Panic</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Intolerance</td>
</tr>
<tr>
<td>Hostility</td>
<td>Altered Libido</td>
</tr>
<tr>
<td>Paranoia</td>
<td>Insecurity</td>
</tr>
</tbody>
</table>

In addition, women with PMS may behave out of character during the premenstrual portion of the month. Some examples include: the craving for or overindulgence in chocolate or other foods rich in carbohydrates, craving for salty foods, suicide attempts, physical abuse of children or spouse, withdrawal from family, alcohol binges, threats of divorce, sexual promiscuity, and absence from school or work.

**How is PMS Diagnosed?**

In the past PMS was either ignored or trivialized by most health care professionals who either did not believe PMS was real or considered it a normal phenomenon that women should learn to endure. As professionals gained more familiarity with PMS, they usually made the diagnosis by history alone, often after a brief telephone conversation or office interview. They prescribed a medication to reduce the severity of the major symptom(s) and sent the patient away in the hope her complaint(s) would be taken care of.

If my experience of the last two years has done nothing more, it has convinced me of the inadequacies of this approach for moderate or severe sufferers. First, it relies on history alone for the diagnosis. Second, it focuses only on the major primary symptoms, ignoring associated and secondary personal and relationship problems. Third, it does not provide the support and continuing care many of these women need.

It appears that a more successful diagnostic procedure involves a multi-disciplinary team and a prospective approach to gathering information and validating the patient's history. The approach I now use consists of four phases: education, data gathering, physical examination, and data review.

The first visit is devoted to group education and instruction. A patient and her husband meet with several other PMS couples and a staff consisting of a health educator, nurse, social worker and physician. Approximately one and one-half hours are devoted to lectures, discussions and videotapes about PMS.

Patients and their husbands are given ample opportunity to ask questions of each of the professionals. Each couple is then interviewed extensively by one of the health care professionals at which time they discuss not only the timing and nature of their symptoms but the impact of PMS on their own lives and those of their families. The couples then reconvene in the group setting where they are instructed in the completion of a PMS Calendar, the MMPI and the Locke-Wallace Marital Adjustment Scale. The PMS Calendar is a graphic form of a daily diary that makes it possible for the patient to record prospectively her symptoms as they occur throughout the month. The patient is instructed to complete the MMPI and Locke-Wallace twice during the month, once just following a menstrual period when symptoms are minimal and once just prior to a period when symptoms are greatest. The patient then returns home where she completes the calendar and tests.

During the next month the patient receives a physical examination from a gynecologist or specialist in internal medicine to make sure her complaints are not the result of an underlying medical problem. The importance of this examination was illustrated recently when a neurologic examination of a woman whose major symptom was premenstrual headaches detected a meningioma, a brain tumor, the removal of which resulted in the disappearance of her headaches. If the physical examination uncovers a new or significant medical problem, the patient may then be referred back to her physician or to an appropriate specialist for further evaluation.

Approximately four to six weeks after the first visit, the patient and her husband return for a review of the history, MMPI and Locke-Wallace results, physical examination and PMS Calendar. A tentative diagnosis is made and a treatment plan outlined. Once the treatment program has been implemented and evaluated, the patient is usually referred back to her physician, counselor or therapist for continuing care. Patients in whom major psychiatric illness or mental discord have been diagnosed are referred to appropriate professionals in their communities.

Unfortunately, just as there is no universally accepted definition of PMS, there are no strict diagnostic criteria. In general, however, I utilize the following:

1. A history of symptoms that occur only during the premenstrual or menstrual phase of the menstrual cycle or is much more severe during those times.
2. A premenstrual pattern of symptoms when charted prospectively.
3. Marked changes in the MMPI from a relatively normal profile in the postmenstrual phase to an abnormal profile in the premenstrual phase.
4. The absence of cyclic environmental stress which could account for the symptoms.
5. The absence of medical disorders which could account for the symptoms.

**How is PMS Treated?**

A review of the literature reveals dozens of different

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therapies for PMS. Frank in 1931 recommended a concoction of calcium lactate, caffeine, theobromine and magnesium citrate to enhance the excretion of excess sex hormones from the body. (Frank, 1931) While androgens, vitamin A and the B vitamins were popular in the 1940's, natural progesterone was advocated in the 1950's. The birth control pill emerged during the 1960's, as did lithium carbonate. Finally, the dopamine agonist, bromocryptine, was studied in the 1970's.

Confused by the apparent success of almost all of these therapies and the marked placebo effect of almost all medications, I decided to acquire my own clinical experience with but a few of the many proposed forms of therapy. Encouraged by the experience of Dalton in England and Norris in this country, I have utilized natural progesterone as my first choice for most women with PMS.

Progesterone is produced by the ovaries and placenta and also is found in certain varieties of yams or sweet potatoes. When administered in large doses, it often has a calming and antidepressant effect in women with PMS. The effect often begins within 20 to 30 minutes and lasts from four to eight hours. Unfortunately, the oral administration of progesterone is not particularly effective, for very low blood and tissue levels are achieved. Therefore, I currently recommend the use of vaginal or rectal suppositories, 200 to 400 mg two to four times a day starting a day or two prior to the onset of symptoms and ending with the onset of menses. An alternative is the rectal administration of a suspension or the intramuscular injection of progesterone in oil. Intramuscular injections are not well tolerated, however, for more than several days because of the irritating effect of the oil vehicle.

As an alternative to progesterone, I have used depomedroxyprogesterone acetate or Depo-Provera, 150 mg intramuscularly every two to three months to abolish ovulation and create a drug-induced amenorrhea. While some women note dramatic improvement, others may experience an exacerbation of symptoms. An occasional woman with pelvic pathology may be a candidate for hysterectomy with removal of her ovaries, although this should be considered for only a few select patients because of the expense and potential morbidity of this major surgery.

Using the above approach to diagnosis and therapy, approximately 60% of diagnosed PMS patients will note a dramatic improvement in symptoms. Another 20% will
note at least 50% improvement in their symptoms and 20% will not experience significant improvement. For those who do not improve, the diagnosis is reviewed as a correct diagnosis may not have been made. The lifestyle of the patient is then reviewed, for often regular and vigorous exercise and a hypoglycemic diet consisting of six small meals and limited refined sugar will help reduce the severity of symptoms. In fact, these “lifestyle changes” are often suggested before any medication is even prescribed.

What Resources Are Available in Utah?
Fortunately, the health care and counseling professionals of Utah are among the most progressive and knowledgeable in the country. Thus, many internists, family physicians and gynecologists are familiar with the use of progesterone. A comprehensive evaluation of PMS sufferers is also available through the Utah PMS Center, (801) 322-5100, by a multidisciplinary staff of counseling and health care professionals. The center also exists to aid other professionals in the community with the more complex or severe cases.

Research into the etiology, treatment and cure of PMS is currently underway at the Utah PMS Center and in my laboratories at the University of Utah.

Finally, a peer support group, the National PMS Society, has many functions for PMS sufferers and their families. For further information, the PMS Society can be contacted at the following address.
Utah PMS Society
P.O. Box 11314
Salt Lake City, Utah 84147

What’s Ahead for PMS?
The title of this paper, “Premenstrual Syndrome: Fad, Fact or Fallacy?” reflects the healthy skepticism with which many view PMS in 1983. The source of this skepticism comes from the lack of a precise definition of PMS, the absence of strict diagnostic criteria, and the apparent success of many different forms of therapy. Yet, others are concerned that PMS is just a fad, the “hypoglycemia” of the 1980’s, to be exploited by some and used as a scapegoat by others. Finally, some are afraid that the concept of PMS may be used to justify discrimination against women.

My hope is that the sincere and sophisticated research efforts of clinicians and basic scientists alike will provide answers to these troubling questions. My beliefs are that PMS is more complex than it would appear from my brief discussion above; that the term PMS will be replaced by several more specific diagnostic terms, each reflecting a different etiology; that PMS results from the interaction of the biology, psychology and environment of the sufferer; and that a more rational basis of therapy will be developed.

Finally, it is essential that we look for and pay attention to the monthly pattern of symptoms and distress which some of our patients may experience. To acknowledge PMS in this way is to reduce the suffering of these tortured women and to free others from the misconception that all women are the victims of their “raging hormones.”

REFERENCES
Frank, R. T. The hormonal causes of premenstrual tension. Archives of Neurology and Psychiatry. 1931, 26, 1053.