History, Evolution, and Diagnosis of Premenstrual Dysphoric Disorder

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Clinically significant premenstrual problems with mood and behavior have been recognized since ancient times. However, it was not until 1987 that formal criteria for a specific diagnosis were proposed. The history of the development of the DSM-IV criteria for premenstrual dysphoric disorder, as well as the epidemiology and ways in which the condition differs from other mood disorders, is reviewed.

Although the name premenstrual dysphoric disorder (PMDD) is relatively new, the condition has been recognized since ancient times. As noted by Bennett Simon in *Mind and Madness in Ancient Greece: The Classical Roots of Modern Psychiatry,* Hippocrates described a group of conditions that occurred prior to the onset of menstruation in which women might have suicidal thoughts and other severe symptoms. There were other references to severe premenstrual problems with mood and behavior over the years, but it was not until the 1930s that the syndrome was more officially recognized by R. T. Frank in an article in *Archives of Neurology and Psychiatry.* Frank described the relatively severe premenstrual problems experienced by 15 women and coined the term premenstrual tension syndrome. By the 1950s, the simpler term premenstrual syndrome (PMS) was commonly used by the public as well as those involved in health care.

However, the concept of premenstrual syndrome has become very broad and covers conditions that vary from very mild, primarily physical, symptoms to the more severe syndromes involving mood and behavior that are associated with impairment in psychosocial functioning.

By the late 1970s and early 1980s, many investigators were focusing on mood and behavioral changes during the menstrual cycle, and considerable concern was being expressed about methodological issues. A number of issues made an evaluation of the growing literature difficult. There were concerns about the equivalence of studied phenomena, the definitions being used, and the excessive dependence upon retrospective accounts of symptoms when there was considerable evidence that retrospective reports were often not confirmed when daily ratings were obtained. A workshop, sponsored by the National Institute of Mental Health, was held in 1983 to address many of the research issues. Suggestions for criteria and research methods came out of that workshop, among them the requirement that there be documented at least a 30% difference in severity between the mid-follicular and late luteal phases of the menstrual cycle for changes in mood, behavior, or physical condition to be considered a premenstrual "change" or "syndrome." Furthermore, the need to establish a "symptom free" mid-follicular phase was stressed as the major means of differentiating premenstrual changes or syndromes from premenstrual exacerbation or magnification of some other, more chronic, condition. Investigators who were interested in treatment of severe premenstrual changes in mood and behavior and in the biological correlates of such changes tended to adopt the suggested criteria and methods. They also tended to select women for study whose daily ratings and reports clearly indicated clinically significant impairment.

By the late 1980s, criteria for late luteal phase dysphoric disorder (LLPDD) were proposed and published in the Appendix of the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R). Although the name never gained widespread use by clinicians, many investigators used the criteria in their studies. In 1987, criteria for late luteal phase dysphoric disorder (LLPDD) were proposed and published in the Appendix of the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised* (DSM-III-R). Although the name never gained widespread use by clinicians, many investigators used the criteria in their studies. The criteria were included in the Appendix of DSM-III-R in recognition that women often sought treatment for severe premenstrual problems characterized by dysphoric mood states, that a lack of diagnostic criteria often resulted in their being given an inappropriate diagnosis or no diagnosis at all, and that research focused on treatment and pathophysiology should be encouraged. By the early 1990s, when work began on the Fourth Edition of the *Diagnostic and Statisti-
of Mental Disorders, the DSM-IV Work Group on LLPDD had a relatively large number of studies to review. The chapter in the DSM-IV Source Book reviews work published up to 1993. The results of that review and analyses of several large data sets, as well as extensive consultation with clinicians and investigators, led the Work Group to recommend a change in name from late luteal phase dysphoric disorder to premenstrual dysphoric disorder and to propose criteria that were almost identical to those of LLPDD (only 1 item was added).

There was some lack of consensus among the members of the Work Group with regard to the recommendations on inclusion or exclusion in DSM-IV, with opinions ranging from support for full inclusion within the body of the DSM-IV manual to inclusion in the Appendix only to exclusion from the diagnostic system altogether. The DSM-IV Task Force on Nomenclature and Statistics decided to include PMDD as an example of a mood disorder not otherwise specified and to put the criteria in the Appendix.1

In October 1998, a panel of 16 experts from the United States and abroad came together to evaluate whether the evidence then available supported the concept of premenstrual dysphoric disorder as a distinct clinical disorder. Based upon the evidence, the consensus of the group was that PMDD is a distinct clinical entity.2 In November 1999, this evidence was presented to the Food and Drug Administration Neuropharmacology Advisory Committee, and they, in turn, supported the conclusion of the panel.

**CRITERIA**

The major components of the DSM-IV criteria for PMDD stress the timing, nature, and severity of the symptoms and the differential diagnosis from other conditions (Table 1). There must be at least 1 year’s duration of symptoms that have onset during the luteal phase of the cycle and remit during the follicular phase. Most women who seek treatment report that they have had severe changes for many years.3 At least 5 or more of 11 specified symptoms must be present. At least 1 of the 4 dysphoric mood changes must be present to a marked degree of severity. Most women who seek treatment have several of the dysphoric mood changes, with the one most commonly leading to treatment seeking being marked anger or irritability or increased interpersonal conflicts. There must be evidence of psychosocial impairment in that the condition must seriously interfere with their work, social activities, or interpersonal relationships. The premenstrual changes must not be an exacerbation of another disorder. Finally, the diagnosis is made provisionally until it is confirmed by at least 2 consecutive symptomatic cycles documented by daily ratings. The daily ratings help establish the timing of the onset and offset of the changes, their severity, their nature, and their association with impairment and if the woman is essentially asymptomatic during the mid-follicular phase of the cycle. This is the only diagnosis of a mental disorder that requires any kind of systematic daily documentation of symptoms. The requirement was included because of overdiagnosis if retrospective accounts alone are used and the common occurrence of premenstrual exacerbation of mood, anxiety, and personality disorders.

The DSM-IV criteria are in contrast to the ICD-10 criteria of PMS, which stress physical symptoms, do not require psychosocial impairment, and require only 1 symptom.4

Unfortunately the DSM-IV criteria lack rules for differentiating between premenstrual magnification or exacerbation of an ongoing disorder versus having PMDD superimposed on some other ongoing conditions. Most of the research has been conducted with women who currently have PMDD only. To the degree that new symptoms develop during the late luteal phase of the cycle and remit with the onset of menses, one might suspect that the woman has PMS or PMDD in addition to the condition that is present throughout the cycle, particularly if the symptoms are “classical” PMDD symptoms. However, until the ongoing disorder is in remission, such differentiation is difficult if not impossible. In any case, treatment will need to take into account the ongoing condition as well as the increase in symptoms premenstrually regardless of the differential diagnosis.

The relationship of PMDD to the broader concept of PMS is still unclear. Is it best thought of as the more severe end of a continuum of premenstrual problems or as a separate entity?
rate condition entirely? Given the lack of a clear demarca-
tion between PMS and PMDD, and the fact that some
women who experience PMDD during most cycles occa-
sionally have cycles characterized by moderately severe
PMS,15 most clinicians and investigators tend to conceptu-
alize PMDD as a form of severe or extreme PMS.

EPIDEMIOLOGY

Although few community studies have used daily rat-
ings, the findings from those studies are relatively consist-
tent.12 While many women experience some premenstrual
mood changes and physical discomfort, only about 3% to
8% have changes severe enough to meet the DSM-IV cri-
tera for PMDD. Severe premenstrual problems may occur
at any age after menarche to menopause. Women who seek
treatment often report that their symptoms have become
more severe and of longer duration.13 Women with PMDD
report impairment of family and social activities and work
during the symptomatic phase at levels similar to those of
women with major depressive disorder.16,17

Lifetime comorbidity with other mental disorders is
rather high.13,16,18 The most common are the recurrent ma-
jor mood disorders, including those associated with the
postpartum period. The known risk factors for PMDD in-
clude a prior personal history of a major mood disorder
and a family history of mood disorders or premenstrual
depression. Furthermore, women who have premenstrual
dysphoric mood changes are at greater risk for subsequent
episodes of major mood disorder.19

FACTORS DISTINGUISHING PMDD
FROM OTHER MOOD DISORDERS

A number of factors distinguish PMDD from other mood
disorders, and they are reviewed, discussed, and ref-

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