



Postpartum Depression in Men

by JONATHAN R. SCARFF, MD

Dr. Scarff is a psychiatrist with the Behavioral Health Service Line at Kenner Army Health Clinic in Fort Lee, Virginia.

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ABSTRACT

Postpartum depression (PPD) is often defined as an episode of major depressive disorder (MDD) occurring soon after the birth of a child. It is frequently reported in mothers but can also occur in fathers. There are no established criteria for PPD in men, although it could present over the course of a year, with symptoms of irritability, restricted emotions, and depression. Risk factors include a history of depression in either parent, poverty, and hormonal changes. It might be associated with anxiety disorders and can adversely affect the father, family unit, and developing child. Treatment includes psychotherapy and pharmacotherapy. Clinicians are encouraged to screen for depression in men during the first year postpartum and to offer treatment or treatment referral if depression is present.

KEYWORDS: Depression, postpartum, fathers, antidepressant, psychotherapy

Numerous studies have examined the epidemiology, risk factors, treatment, and adverse effects of postpartum depression (PPD) in women; however, the condition is less understood in men. There is no universally accepted definition of PPD. *The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* defines depression “with peripartum onset” as a major depressive episode (MDE) during pregnancy or within four weeks after parturition.¹ Criteria for MDE are listed in Table 1. Although these criteria can be used to diagnose PPD in women and men, there might be subtle differences in onset and presentation between men and women. Occurring in approximately 8 to 10 percent of fathers, PPD has the highest prevalence within 3 to 6 months postpartum but might insidiously develop over a year rather than four weeks postpartum.^{2–4} Additionally, irritability, indecisiveness, and restricted range of emotion might be observed more frequently in men.^{5,6} This article discusses PPD in men with a focus on its prevalence, risk factors, adverse effects, diagnosis, and treatment.

HYPOTHETICAL CASE

Mr. M was a 35 year-old attorney who presented to his primary care physician for “not sleeping.” Since the birth of his son four months previously, he reports sleeping only five hours and wakes earlier than desired, which resulted in low daytime energy. He reported a “frustrated” mood and no longer participated in activities he used to enjoy, such as exercising and watching sports with friends. He reported difficulty focusing on work assignments and admitted being more argumentative with family

and coworkers. He reported increased appetite and weight gain over the previous two months. He reported feeling guilty that he was isolating himself from his family, and he questioned his worth and capabilities as a new father. He denied suicidal or homicidal ideation. Mr. M. reported depressed mood “off and on” since his early 20s but has not sought any treatment. Medical history was significant only for diet-controlled hyperlipidemia. Complete blood count, comprehensive metabolic profile, and thyroid function tests were within normal limits. Vital signs and physical examination revealed no abnormalities.

PPD RISK FACTORS

There are numerous potential risk factors that can contribute to the development of PPD in men, including history of depression, marital discord, poverty, maternal depression, and unintended pregnancy.^{5,7–9} Sleep deprivation and disrupted circadian rhythm, which have been positively correlated with depressive symptoms in women, might also increase a man’s risk of developing PPD.¹⁰ According to a review article by Kim and Swain,¹¹ a father can experience hormonal changes during pregnancy and for several months following the birth of the child. Many of these hormonal changes are thought to assist in the formation of a strong father-child relationship. For example, Kim and Swain described studies linking decreased testosterone levels in new fathers to lower levels of aggression and increased sympathetic responses to a crying baby—effects that, in turn, are thought to strengthen the father’s attachment to the child. Kim and Swain also described studies linking increased estrogen

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CORRESPONDENCE: Jonathan R. Scarff, MD; Email: jonathan.scarff.civ@mail.mil

TABLE 1. Criteria for major depressive episode.

| CRITERIA | |
|--|---|
| A. Five (or more) of the following nine symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either 1) depressed mood or 2) loss of interest or pleasure. | |
| 1. | Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observations made by others (e.g., appears tearful). |
| 2. | Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation) |
| 3. | Significant weight loss when not dieting or weight gain (e.g., a change of more than five percent of body weight in a month), or decrease or increase in appetite nearly every day. |
| 4. | Insomnia or hypersomnia nearly every day |
| 5. | Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down) |
| 6. | Fatigue or loss of energy nearly every day |
| 7. | Feelings of worthlessness or excessive or inappropriate guilt (which might be delusional) nearly every day (not merely self-reproach or guilt about being sick) |
| 8. | Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by their subjective account or as observed by others) |
| 9. | Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide |
| B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. | |
| C. The episode is not attributable to the direct physiological effects of a substance or to another medical condition. | |

levels in new fathers to more engaged paternal parenting behaviors. Additionally, increases in other hormones, such as cortisol, vasopressin, and prolactin, might be associated with more engaged paternal parenting and stronger parent-infant attachment.¹¹ These hormonal changes, however, might predispose the father to experience PPD or exacerbate existing symptoms associated with PPD. For example, low testosterone has been directly linked to symptoms of depression in men,¹² whereas low levels of estrogen, prolactin, vasopressin, and/or cortisol in new fathers might cause difficulties in father-infant bonding/attachment, which in turn can contribute to depressed mood in the father.¹¹ Table 2 compares hormonal changes between men and women during prepartum and postpartum periods.^{11–13}

PPD COMORBID CONDITIONS

Comorbid postpartum anxiety might be comorbid with PPD; however, most studies of postpartum men included those who might or might not have had depressive symptoms. There are no studies examining the incidence or prevalence of comorbid PPD and anxiety disorders in men.

In a review of 43 multinational studies, up to 18 percent of postpartum men reported high levels of anxiety that did not meet criteria for a specific anxiety disorder.¹⁴ The incidence of generalized anxiety disorder (GAD) ranged from 3.4 to 4.3 percent, while up to five percent of men experienced symptoms of posttraumatic stress disorder (PTSD) several months postpartum.¹⁴ The incidence of panic disorder was approximately one percent in Australian men.¹⁵ Men might exhibit symptoms of or meet criteria for obsessive-compulsive disorder (OCD), such as excessive worry about the baby's health, preoccupation with caretaking rituals, or intrusive thoughts of inadvertently harming the baby.¹⁶ However, one study found that although 3.4 percent of men met criteria for OCD in the third trimester, this decreased to 1.8 percent postpartum, matching the natural prevalence.¹⁷

TABLE 2. Hormone levels compared to baseline.

| HORMONE | PREPARTUM WOMEN | POSTPARTUM WOMEN | PREPARTUM MEN | POSTPARTUM MEN |
|--------------------|------------------|------------------|---------------|----------------------------|
| Cortisol | Increased | Increased | Decreased | Decreased, then normalizes |
| Testosterone | Mildly increased | Normalizes | Decreased | Decreased, then normalizes |
| Estrogen/estradiol | Increased | Increased | Increased | Increased |
| Prolactin | Increased | Increased | Increased | Increased |

PPD ADVERSE EFFECTS

Preexisting depression in fathers has been shown to result in adverse effects for the father, family unit, and infant. One study found that infants of depressed fathers experienced higher levels of distress.¹⁸ A meta-analysis found that paternal depression adversely affected parenting behaviors and was associated with decreased sensitivity and increased hostility toward children.¹⁹ Children who live with a father with depression or other mental illness have a 33-to-70-percent increased risk of developing emotional or behavioral problems.²⁰ Increases in paternal depression were associated with increased aggression in children from 0 to 4 years of age.²¹ Paternal depression was positively associated with delays in behavioral, emotional, and social development in 4 and 5-year-old children.²² Given the association between pre-existing paternal depression and adverse effects on the family, similar effects might be seen in fathers with PPD.

PPD DIAGNOSIS

Despite no universally accepted diagnosis, PPD is often diagnosed through the clinical interview using DSM-5 criteria. Symptoms generally resemble those in women, with additional possible symptoms of indecisiveness, irritability, and emotional blunting that can present up to one year postpartum.^{2–6} Screening tools can be used to support the diagnosis. The Edinburgh Postnatal Depression Scale (EPDS) assesses postnatal depression and anxiety in men and women. Because men might be less expressive about their feelings and thus underreport symptoms, the scale uses a lower cutoff score for men.²³ Even with this accommodation, its validity is limited by ambiguous items and limited detection of anxiety and depression symptoms in men.²⁴ If the father cannot be directly assessed, the EPDS-Partner (EPDS-P) can be completed by the partner

as a screening tool.²⁵ Alternatively, the Patient Health Questionnaire (PHQ-9) demonstrated validity when screening for paternal PPD.²⁶ Obtaining collateral information from family or friends, inquiring about increased irritability and somatic complaints, assessing for past depressive episodes, and comparing the father's mental health status prior to, during, and after the pregnancy might further assist in diagnosis.

PPD TREATMENT

Because it is often understudied and undiagnosed, it is not surprising that there are no randomized, controlled trials (RCTs) evaluating treatment of PPD in men. However, because the symptoms constitute a MDE, which can present similarly among men and women, recommended treatments are the same for both sexes. Selective serotonin reuptake inhibitors (SSRI), such as sertraline, are recommended as first-line treatments, and they have been extensively studied.^{27–29} However, there is little evidence that antidepressants can prevent an episode of PPD, at least in women.³⁰

Psychotherapy, such as cognitive behavior therapy (CBT) and interpersonal therapy (IPT), have been shown to be effective in alleviating depression, and these therapies were preferred by breastfeeding mothers.^{31,32} Furthermore, CBT demonstrated superiority to sertraline in a small RCT of mothers with PPD, with no reported benefit using combination treatment.³³ Given the correlation between circadian rhythm disturbance and PPD, daily morning light therapy might reduce PPD symptoms, based on results from a small, open-label study of affected women.³⁴ When a group of unaffected men was presented with a hypothetical scenario of PPD and treatment preferences, most preferred individual or couples psychotherapy to pharmacotherapy.³⁵

Other interventions have been proposed to either prevent occurrence or ameliorate symptoms of PPD in men, such as support and acknowledgment of feelings and role conflicts.¹¹ Educational programs incorporating both parents, either with or without PPD, might be beneficial.^{11,36} Support from employers, such as paid paternity leave, might also help fathers adapt to changes and stressors during the postpartum period.¹¹

CONCLUSION

PPD has been associated with adverse consequences, yet it is a treatable condition.

Clinicians are encouraged to screen for depression in fathers, particularly during the first year postpartum, especially if anxiety or risk factors are present. Antidepressant therapy or psychotherapy have been shown to be effective treatment modalities. Recognizing and treating paternal PPD can improve quality of life for the father and the family unit and decrease the risk for emotional and behavioral problems in children. Further studies should determine the prevalence, comorbidity, and efficacy of treatments for paternal PPD while including fathers from various demographic groups. Such groups could include single and two-father households, stepfathers, fathers from various socioeconomic, racial, and ethnic groups, and those residing in urban and rural areas.

DISCLAIMER

The views expressed in this article are those of the author and do not reflect official policy or position of the Department of Defense or the Department of the Army.

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