Postpartum paternal depression

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INTRODUCTION

New fathers may develop depressive symptoms or disorders. Postpartum paternal depression can interfere with paternal-infant bonding and is associated with adverse effects upon child development.

This topic reviews the epidemiology, clinical features, and management of postpartum paternal depression, along with its potential adverse effects upon the offspring. The clinical features, assessment, diagnosis, prevention, and treatment of postpartum maternal major depression and postpartum blues are discussed separately.

- (See "Postpartum unipolar major depression: Epidemiology, clinical features, assessment, and diagnosis".)
- (See "Postpartum unipolar depression: Prevention".)
- (See "Postpartum unipolar major depression: General principles of treatment".)
- (See "Mild to moderate postpartum unipolar major depression: Treatment".)
- (See "Severe postpartum unipolar major depression: Choosing treatment".)
- (See "Postpartum blues".)

DEFINITION OF THE POSTPARTUM PERIOD

We define the postpartum period as the first 12 months after birth [1-3]. Definitions of the puerperium range from the first 1 to 12 months following a live birth. (See "Postpartum

unipolar major depression: Epidemiology, clinical features, assessment, and diagnosis", section on 'Definition of postpartum period'.)

EPIDEMIOLOGY

Prevalence — Based upon studies that used diagnostic interviews, the estimated prevalence of postpartum paternal depression ranges from 3 to 5 percent:

- One study interviewed fathers (n >2000) of infants and found that the prevalence of postpartum major depression was about 5 percent [4].
- A study of a clinical database that included new fathers (n >86,000) found that by the time their children were one year old, an episode of postpartum depression had occurred in 3 percent [5].

The prevalence rates in these two studies appear to be comparable to the one-year prevalence rate in the general population of men. Other studies also suggest that the risk of depression is comparable for men who become fathers in the postpartum period and men who do not [6]. Thus, males may experience the birth of their child as a nonspecific psychosocial stressor, comparable to other stressors, such as job loss.

Although other studies have reported higher prevalence rates, these studies may overestimate the true prevalence because nearly all of the studies identified cases of paternal depression with self-report questionnaires, rather than diagnostic interviews [7]. A meta-analyses that included 25 studies (n >10,000 male partners of postpartum women) [8] and a second meta-analysis (42 studies, n >17,000 male partners) [9] suggested that the prevalence of paternal postnatal depression was approximately 8 to 13 percent, depending upon when during the postpartum period the men were assessed. However, both meta-analyses found that the prevalence rate was lower in studies that used diagnostic interviews. As an example, one of the meta-analysis found that in the studies that used interviews, the estimated prevalence of paternal postnatal depression was 5 percent [8].

Additional information about the prevalence of major depression in the general population of men is discussed separately. (See "Unipolar depression in adults: Epidemiology", section on 'Sex'.)

Risk factors — Risk factors for postnatal paternal depression include [5,8,10-14]:

- History of depression prior to the partner’s pregnancy
- Unplanned pregnancy

- Prenatal paternal anxiety or depression
- Fair to poor paternal general health status
- Socioeconomic deprivation and paternal unemployment
- Poor social support
- Termination of relationship with the partner
- Perinatal depression in the partner (maternal depression)
- Other children in the family

A prior history of depression increases the risk for recurrence of depression not only during the postpartum period but in general. (See "Unipolar depression in adults: Course of illness", section on 'Recurrence'.)

In addition, marital discord and postnatal paternal depression are associated with each other such that each increases the risk for the other [15]. Additional information about depression and marital dysfunction, and how each can exacerbate the other, is discussed separately. (See "Unipolar depression in adults: Family and couples therapy", section on 'Theoretical foundation'.)

NEUROBIOLOGY

Postpartum paternal depression may involve decreased levels of testosterone. A prospective study of 149 fathers at nine months postpartum found that lower levels of testosterone were associated more depressive symptoms [16].

Information about the neurobiology of unipolar depression in the general population of patients with depression is discussed separately. (See "Unipolar depression: Neurobiology".)

CLINICAL FEATURES

The clinical features of postpartum paternal depression are comparable to the features in the general population of men with depression. (See "Unipolar depression in adults: Clinical features".)

ADVERSE CONSEQUENCES

Postpartum paternal depression may adversely affect paternal parenting and bonding with the infant, along with child development [12,17]. These effects may be due to genetic factors and/or

interactions with the child and the mother [17].

Impaired parenting and bonding with infant — Postpartum paternal depression can interfere with paternal-infant bonding and is associated with fewer positive parenting behaviors and more negative parenting behaviors. As an example:

- A prospective study enrolled new fathers (n >5000) and assessed them for depressive symptoms nine months after the birth of their children [18,19]. After adjusting for potential confounding factors (eg, maternal education, household income, and number of children in the household), the analyses found that fathers with depressive symptoms were less likely to tell their child stories every day or to read to their child, compared with nondepressed fathers. Depressed fathers were also less likely to play outside with their child.

- A prospective study assessed fathers (n >1700) of one-year-old children for depressive symptoms [20]. After controlling for potential confounding factors (eg, paternal age, education, and substance abuse), the analyses found that depressed fathers were four times more likely to spank their children, compared with nondepressed fathers.

- A literature review identified three studies (total n = 163 new fathers) that found postpartum paternal depressive symptoms were associated with less attachment, engagement, and synchrony with the offspring [21]. The observed effects were moderate to large.

Cognitive impairment in the child — Postnatal paternal depression may be associated with cognitive impairment in the offspring. A prospective study enrolled new fathers (n >4000) and assessed them for depressive symptoms nine months after the birth of their children; the children were assessed at age two years [19]. After adjusting for potential confounding factors (eg, maternal and paternal age, education, and work status), the analyses found that language difficulties were more likely in the children of fathers with depressive symptoms than children of nondepressed fathers.

Psychopathology in the child — Based upon prospective observational studies, postnatal paternal depression is often associated with psychopathology in children [17,22]. However, it is not clear whether the association is due to environmental factors, genetic factors, or both.

Psychiatric problems in children that are associated with postpartum paternal depression can include symptoms of conduct disorder, oppositional defiant disorder, and/or attention deficit hyperactivity disorder (behavioral/externalizing disorders), as well as symptoms of anxiety disorders and depressive disorders (emotional/internalizing disorders). As an example:

- A study of father-child pairs included fathers (n = 139) with depressive symptoms during their partners' pregnancy and during the postnatal period, and fathers (n = 6100) who did not have prenatal or postnatal symptoms; the children were assessed at age 3.5 years [23]. Emotional problems, conduct problems, and problems with prosocial behaviors occurred in more children of fathers with depressive symptoms than children whose fathers were not depressed (24 versus 8 percent).

- A study of children (n >10,000) evaluated at age 3.5 years found that after controlling for potential confounding factors (eg, sex of the child, maternal postpartum depression, paternal depression after the postpartum period), postpartum paternal depression was associated with an increased risk of behavioral problems (odds ratio 1.7, 95% CI 1.1-2.9) and hyperactivity (2.0, 95% CI 1.1-3.4) [24]. Subsequent follow-up of the same children at age seven years found that psychiatric diagnoses (eg, oppositional defiant/conduct disorder and anxiety disorders) were more common in the offspring of depressed fathers than offspring of nondepressed fathers (12 versus 6 percent) [11].

- A third study included a representative sample of families (n >2500) in Australia; the children were assessed at age four to five years [25]. After controlling for potential confounding factors (eg, paternal depression following the postpartum period, maternal depression, and family socioeconomic status), the analyses found that postpartum paternal depressive symptoms were associated with psychopathology in the children (odds ratio 1.9, 95% CI 1.8-2.1), especially problem behaviors and hyperactivity.

One study found that the association between postnatal depression and childhood psychopathology was mediated by paternal and maternal hostility towards others [26].

SCREENING

We suggest screening new fathers for depression when adequate systems are in place to ensure appropriate diagnosis, treatment, and follow-up. This approach is consistent with multiple practice guidelines that recommend screening for depression in the general population of adults. (See "Screening for depression in adults".)

Self-report instruments can be used to screen new fathers for major depression during the postpartum period, including the 10-item Edinburgh Postnatal Depression Scale (figure 1A-B) [13,27,28], as well as the two-item Patient Health Questionnaire (table 1) or the nine-item Patient Health Questionnaire (table 2) [13]. (See "Screening for depression in adults".)

ASSESSMENT AND DIAGNOSIS

The assessment and diagnosis of postnatal paternal depression is similar to that for depression in the general population of men. (See "Unipolar depression in adults: Assessment and diagnosis".)

MANAGEMENT

The management of postnatal paternal depression is similar to that for depression in the general population of men. (See "Unipolar major depression in adults: Choosing initial treatment" and "Unipolar depression in adults: Choosing treatment for resistant depression".)

Information for men about parenting (eg, baby games and father-infant-bonding) may improve their approach to fathering [29].

SOCIETY GUIDELINE LINKS

Links to society and government-sponsored guidelines from selected countries and regions around the world are provided separately. (See "Society guideline links: Depressive disorders".)

SUMMARY AND RECOMMENDATIONS

- We define the postpartum period as the first 12 months after birth. (See 'Definition of the postpartum period' above.)
- The prevalence of postpartum paternal depression is approximately 3 to 5 percent. Risk factors include a history of depression prior to partner's pregnancy, unplanned pregnancy, prenatal paternal anxiety or depression, and perinatal depression in the partner (maternal depression). (See 'Epidemiology' above.)
- The clinical features of postpartum paternal depression are comparable to the features in the general population of men with depression. (See "Unipolar depression in adults: Clinical features".)
- Postpartum paternal depression can interfere with paternal-infant bonding, and is associated with fewer positive parenting behaviors and more negative parenting behaviors. (See 'Impaired parenting and bonding with infant' above.)

- Postpartum paternal depression may be associated with cognitive impairment and psychopathology in the offspring. (See 'Cognitive impairment in the child' above and 'Psychopathology in the child' above.)

- We suggest screening new fathers for depression when adequate systems are in place to ensure appropriate diagnosis, treatment, and follow-up (**Grade 2C**). Self-report instruments can be used to screen new fathers for major depression during the postpartum period, including the 10-item Edinburgh Postnatal Depression Scale (figure 1A-B), as well as the two-item Patient Health Questionnaire (table 1) or the nine-item Patient Health Questionnaire (table 2). (See 'Screening' above.)

- The assessment and diagnosis of postnatal paternal depression is similar to that for depression in the general population of men. (See "Unipolar depression in adults: Assessment and diagnosis".)

- The management of postnatal paternal depression is similar to that for depression in the general population of men. (See "Unipolar major depression in adults: Choosing initial treatment" and "Unipolar depression in adults: Choosing treatment for resistant depression".)

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