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Postpartum Depression: Identification, Screening, and Treatment

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ABSTRACT

Depression during the postpartum period is a significant public health concern, affecting 8%-15% of women and resulting in considerable morbidity for women, and their infants and families. Risk, prevalence, and distinguishing features of postpartum mood disorders are provided. Anxiety and depression frequently co-occur, suggesting symptoms of anxiety should also be attended to when screening for postpartum depression. Recommendations include the use of a brief, valid screening instrument as a routine clinical practice and the unique role of the obstetrician/gynecologist, pediatrician, and family practice physician in identification and referral. A summary of evidence-based treatment options for postpartum depression, along with current information about psychotropic medication, is provided to assist in risk-benefit analyses and decision making with patients.

INTRODUCTION

The screening and identification of depression during pregnancy and the postpartum period offers physicians a unique opportunity to impact family health and functioning at the earliest point possible. Postpartum depression represents a significant public health concern, affecting 8%-15% of women and resulting in considerable morbidity for women, their infants, and families.[1] Notably, rates of postpartum depression are over twice as high for women living in poverty, ranging from 22%-34% in this population.[2-5]

The societal portrayal of an idealized motherhood, along with the stigma of mental illness, makes this a problem that is frequently underreported by new mothers who attempt to hide their distress and struggle alone. Physicians often depend on clinical observation, whereas standard screening tools are more effective in identification of this often debilitating condition. Promoting awareness and providing information about postpartum depression, along with the implementation of a screening and referral protocol, can reduce the high rates of under-diagnosis associated with this disorder and can help women obtain the evaluation and treatment necessary at this critical time.

The spectrum of postpartum mood disorders includes the postpartum blues, postpartum depression, and postpartum psychosis, disorders that have a good deal of overlap in symptomotology but also have unique differentiating features. The postpartum blues is the most common of these disorders, affecting 50%-80% of new mothers, with onset occurring within the first 10 days postpartum. Symptoms include emotional lability, anxiety, fatigue, insomnia, anger, sadness, and irritability. These symptoms are transient and generally resolve within 10-14 days postpartum.

Postpartum psychosis is a more severe, but rarer, disorder affecting approximately 1 out of 1000 new mothers. Onset can range from 1 day postpartum throughout the first postpartum year. Symptoms of postpartum psychosis include agitation, racing thoughts, rapid speech, insomnia, hallucinations, paranoia, thoughts of suicide and infanticide, along with the standard depressive symptoms.

SYMPTOMS, ONSET, AND PREVALENCE

Postpartum depression shares the DSM-IV criteria for Major Depressive Disorder (see Table 1).[6] Although the DSM specifies onset within 4 weeks of the birth, clinicians and researchers generally agree that onset can occur any time within the first year after birth.[1] A review of studies looking at onset has found that between 40%-67% of cases begin within the first 3 months postpartum.[1] Without treatment, 30%-70% of these women may experience depression for a year or longer,[7,8] with individual depressive episodes lasting anywhere from 4 weeks to more than 6 months.[9]

In identifying symptoms of postpartum depression,

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it is of note that anxiety may be a prominent feature in a woman's presentation. DiNardo and Barlow found that up to 66% of depressed individuals have a co-morbid anxiety disorder.[10] Symptoms of anxiety disorders may be more apparent to women's physicians than depressive symptoms and should not be overlooked or attributed to more general new mother anxiety. Rather, these symptoms need to be listened to carefully and comprehensively assessed as they may be part of the presentation of postpartum depression.

Though an exact cause is unknown, there are many factors that increase a woman's risk for developing postpartum depression. The greatest associated factor is the presence of symptoms of depression or anxiety during pregnancy. Additionally, women with an individual or family history of a depressive episode or anxiety disorder are at higher risk for postpartum depression. Another factor that may influence whether a woman develops postpartum depression is the amount of social support she receives, including how emotionally supported and satisfied she is feeling in her relationship with her spouse or partner. Finally, recurrent life stressors comprise a global category that can impact risk for postpartum depression; examples of potential stressors include physical health problems in the mother or infant, a significant loss in the past year, or serious financial difficulties.

Postpartum depression is truly a systemic issue, affecting a woman's functioning and sense of well being as well as her relationship with her infant and family. Postpartum depression can impact a woman's capacity for parenting, which in turn can decrease her sense of competence in the mothering role, potentially exacerbating her depression.[11] Depressive symptoms, including lack of energy and capacity to concentrate, may impair a woman's ability to be involved in her child's physical care and play, and may increase her level of irritability and self-preoccupation, resulting in an inability to meet her child's normal needs for attention.[12,13] In addition, mothers who are depressed may experience a lack of affection toward their child, which can lead to feelings of guilt or worthlessness, and they may often feel anxious about doing psychological or physical harm toward their child.

It is important to note that the fact that a mother is depressed alone does not indicate how well she cares for her baby.[14] Some mothers are able to respond sensitively and consistently to their infants, despite their depressive symptoms. Nonetheless, more women experiencing postpartum depression have been found to display an impaired ability to care for their infant, often exhibiting behavior that is either sad and withdrawn or intrusive.[15] Mothers who are depressed also tend to reflect their infant's negative feeling states more often than they respond to or mirror their smiles or positive social initiatives.[14]

Table 1. DSM-IV Criteria for Postpartum Depression[6]

Five or more of the following symptoms, including:

- Depressed mood
- Markedly diminished interest or pleasure in activities
- Appetite disturbance
- Sleep disturbance
- Physical agitation or psychomotor retardation
- Fatigue, decreased energy
- Feelings of worthlessness or inappropriate guilt
- Decreased concentration or inability to make decisions
- Recurrent thoughts of death or suicidal ideation

Symptoms present most of the day, nearly every day, for 2 weeks and must represent a change from previous functioning causing significant distress or impairment.

Disturbances in the quality of a mother's affective and behavioral interactions with her infant can have multiple implications for the infant during this early period when the capacities for emotional regulation and healthy attachment relationships are developing. More infants and young children of mothers with postpartum depression have been found to have delays in cognitive and motor development.[9,15] In addition, studies have shown more insecure attachments, with disorganized-disoriented attachments being 3-4 times more likely in children of depressed mothers compared to children whose mothers were not depressed.[16-18]

Infants of women with postpartum depression have been observed to display more negative affect both with their mother and other non-depressed adults, including increased sober, sad, and/or flat affect and more protest behaviors.[19] In addition, these infants tend to exhibit more regulation difficulties, gaze aversion, less eye contact, fewer vocalizations, delayed language development, lower activity level, and more limited exploration of the environment than infants of non-depressed mothers.[16,19,20] Postpartum depression can have a bi-directional effect on mother-infant interactions.[21,22] The mother's depressed affect can induce a depressed state in the infant, and in turn the infant's subsequent distress and unresponsiveness are likely to maintain and perhaps increase the severity of the mother's depression.

Maternal sensitivity, however, is a moderator and has

been found to reduce the consequences of chronic maternal depression on the child.[23] The father, or other caregiver, can provide contingently responsive care and cognitive, emotional, and physical stimulation that can mediate a lack of maternal responsiveness. The infant's temperament can have the effect of either exacerbating symptoms of depression or minimizing them, depending on characteristics such as sleep patterns, frequency of crying, or being easy going and socially reinforcing.[24,25] Length of maternity leave may also mediate outcomes for mothers with postpartum depression. Clark et al[26] found that mothers who had shorter maternity leaves expressed more negative affect and behavior in interactions with their infants compared to mothers with longer maternity leaves. Women who reported more depressive symptoms but had longer leaves displayed more positive affect, sensitivity, and responsiveness with their infant, thus longer leaves may provide a buffering effect for depressed women.

SCREENING METHODS

The severity of the impact of postpartum depression on maternal and infant functioning makes screening and identification of this disorder an important priority. Many medical professionals rely on their clinical impressions alone to determine whether a woman appears depressed, but several studies have shown that up to 50% of mothers with major depression are missed by primary care physicians when screening instruments are not used.[27-29] Depressed mood during pregnancy has been associated with poor attendance to prenatal clinics, substance misuse, low birth-weight infants, and pre-term delivery.[30] Both during pregnancy and in the postpartum period, depression can interfere with healthy relationships and can even be life threatening if the woman is having thoughts of suicide or infanticide.

There are many reasons that a woman who is experiencing postpartum depression might not be open about her symptoms with her provider. Stigma regarding mental illness may cause a woman to feel shame and therefore underreport her symptoms, or may cause her to fear that if she acknowledges symptoms of depression or difficulty parenting that others may think she is an unfit parent and her child may be taken away from her.

Another reason that standardized screening is important is that the woman herself may be unaware of the seriousness of her symptoms. She or those around her may minimize her symptoms or attribute them solely to factors such as feeling overwhelmed with the demands of a new baby, a lack of sleep, or an infant who is teething, not recognizing her symptoms as signs of a more serious disorder. Additionally, the woman may experience irritability and anxiety as her primary symptoms, and may not recognize that these features can be related to postpartum depression.

The prenatal period is an ideal time to begin screening for depression and to provide early intervention. Research has shown that as many as 23% of women who are diagnosed with postpartum depression had symptoms that started in pregnancy.[31] If identified during pregnancy, these women could be referred for treatment to a mental health provider focused on decreasing depressive symptoms and could be involved, along with their partners, in planning supportive interventions for the postpartum period, which can help to reduce the risk of a postpartum depressive episode.

The hospital post-delivery assessment is often too early to make a diagnosis of postpartum depression, but does provide an opportunity to screen for risk factors associated with postpartum depression. A recent Canadian study[32] found that an Edinburgh Postnatal Depression Scale (EPDS) screen at 2 to 3 days postpartum predicted postpartum depression at 4 to 6 weeks. When the 10 point cutoff was used, sensitivity was 64% and specificity was 85% (using the repeat screen as the standard). The 6-week Ob/Gyn follow-up visit provides an optimal opportunity for screening, as it occurs well after the 2-week point that distinguishes the postpartum blues from postpartum depression and is an appointment that is specifically focused on the woman's well-being.

Pediatric and family practice well-baby visits are opportune times to screen for postpartum depression. Pediatricians and family practice physicians are a mother's most frequent health contact during the period of greatest risk for postpartum depression, putting them in a unique position to assess women and to provide early intervention, education, and appropriate referrals.

Screening for postpartum depression is a brief best-practice intervention that can be implemented easily in a clinic setting. Upon arrival to their appointment, women can be given the screening instrument to complete in the waiting room while they wait for their scheduled appointment. The screening tool can be quickly scored by nurses, medical assistants, or non-medical staff. Results of the screening instrument should be reviewed with the patient by the medical provider during that appointment.

If the woman endorses a significant number of symptoms, which puts her score above the cutoff im-

plying a clinical level of depressive symptoms, a referral should be made for a comprehensive mental health evaluation. This should be conducted by a mental health professional with specialized experience in the evaluation and treatment of postpartum depression. It may be prudent to obtain the woman's permission to call the referral source and have them contact her, as the symptoms of depression create a high probability that if just handed a phone number or brochure, the woman will not follow through with the referral or treatment. If the woman endorses an item indicating suicidal ideation or reports thoughts of harming her infant, the referral should be made immediately while the woman is still in the office with the provider, making sure that she can be seen the same day as an outpatient or, if safety is a concern, evaluated in an emergency room.

It is also important to assess the woman's level of social support, provide family members with information, and involve them in referral and safety planning.[33] Assessing a woman's perceived level of support is critical, along with helping to identify ways to add to or enhance her support system. Involving family members often helps the woman to feel more connected, and assists the family members in decreasing their sense of bewilderment or helplessness.

SCREENING TOOLS

One of the most common self-report screening instruments used for postpartum depression is the Edinburgh Postnatal Depression Scale (EPDS).[34] (See Table 2.) Generally the same screeners used for postpartum women are utilized for pregnancy depression screening. The EPDS has been used internationally and translated into more than 20 languages.[35] Due to findings that women with postpartum depression often have a high level of co-morbid anxiety, it is important that a postpartum depression screener also include anxiety items. The EPDS has a cutoff of 10 to signify probable depression, and has been shown to have a sensitivity of 95% and specificity of 93%.[36] A multinational review of the EPDS validation (with DMS-based standard) in 18 postpartum studies with cutoffs between 8.5-12 points found specificity 49%-100% and sensitivity 65%-100%.[37]

Given the high prevalence rates of postpartum depression, the potential for dire consequences to mother and infant and the high likelihood for successful treatment, the importance of screening for postpartum depression is evident. In *Bright Futures in Practice: Mental Health Volume 1,* the American Academy of Pediatrics encourages screening for postpartum mood

Table 2. Edinburgh Postnatal Depression Scale (EPDS)[34]

Circle the number for each statement, which best describes how often you felt or behaved this way *in the past 7 days…*

I have been able to laugh and see the funny side of things.
- 0 As much as I always could
- 1 Not quite so much now
- 2 Definitely not so much now
- 3 Not at all

Things have been getting on top of me.
- 3 Yes, most of the time I have not been able to cope at all
- 2 Yes, sometimes I have not been coping as well as usual
- 1 No, most of the time I have coped quite well
- 0 No, I have been coping as well as ever

I have looked forward with enjoyment to things.
- 0 As much as I ever did
- 1 Rather less than I used to
- 2 Definitely less than I used to
- 3 Hardly at all

I have felt so unhappy that I have had difficulty sleeping.
- 3 Yes, most of the time
- 2 Yes, sometimes
- 1 Not very often
- 0 No, not at all

I have blamed myself unnecessarily when things went wrong.
- 0 No not at all
- 1 Hardly ever
- 2 Yes, sometimes
- 3 Yes, very often

I have felt sad and miserable.
- 3 Yes, most of the time
- 2 Yes, quite often
- 1 Not very often
- 0 No, not at all

I have been anxious or worried for no good reason.
- 3 Yes, quite a lot
- 2 Yes, sometimes
- 1 No, not much
- 0 No, not at all

I have been so unhappy that I have been crying
- 3 Yes, most of the time
- 2 Yes, quite often
- 1 Only occasionally
- 0 No, never

I felt scared or panicky for no very good reason.
- 3 Yes, quite a lot
- 2 Yes, sometimes
- 1 No, not much
- 0 No, not at all

The thought of harming myself has occurred to me.
- 3 Yes, quite often
- 2 Sometimes
- 1 Hardly
- 0 Never

Total = _____

Table 3. Considerations when Prescribing Any Medication to Lactating Women[38]

1. Determine whether the medication is necessary.
2. Choose the safest medication available, with preferential attention to one that:[39]
   - is safe when administered directly to infants
   - has a low milk:plasma ratio
   - has a short half-life
   - has a high molecular weight
   - has high protein binding in maternal serum
   - is ionized in maternal plasma
   - is less lipophilic
3. Consult with the infant's pediatrician when possible.
4. If there is possibility that the drug may present risk to the infant, monitoring of infant serum drug levels is recommended.
5. Minimize drug exposure by advising the mother to take the medication just after breastfeeding or just before the infant is due for a long sleep period.

disorders.[40] Both the Association of Family Physicians and College of Obstetricians and Gynecologists Web sites have pages advising patients and answering questions about the symptoms and treatment of postpartum depression.

The US Preventive Services Task Force uses evidence-based data in determining screening recommendations for the country, and in its 2002 report recommended the routine screening of adults for depression in primary care.[41] Depression during the postpartum period was not specifically addressed, but given that the consequences of this depressive disorder impact both maternal and infant functioning, the recommended routine primary care screening of adults for depression should clearly include pregnant and postpartum women.

TREATMENT

The most robust risk factor for infant/child outcome is the chronicity of the mother's depression. Chronic depressive symptoms are related to greater delays in language and cognitive development as well as behavioral difficulties at school entry.[23] This makes it imperative that a woman with postpartum depression get treatment as early as possible to both ameliorate depressive symptoms and reduce the likelihood of recurrent depressive episodes.

Research has shown several types of psychotherapy to be effective specific to the treatment of postpartum depression: Individual Interpersonal Psychotherapy, Cognitive Behavioral Therapy, and group or family therapy.[42-45] Clark et al have described a mother-infant therapy group (M-ITG) model for postpartum depression that recognizes the need to treat mother-infant and family relationships as well as the depressive symptoms.[43] Women participating in the mother-infant therapy were found to have fewer depressive symptoms when compared to those in a waiting list control group. In addition, mothers in mother-infant therapy perceived their babies as more adaptable and reinforcing and displayed increased levels of positive affect, sensitivity, and responsiveness in interactions with their infants. This family-focused group model serves to reduce social isolation as well as depressive symptoms, increase coping skills, and improve interpersonal relationships.

Psychotropic medication is another common tool in the treatment of postpartum depression. There is concern, however, on the part of both patients and health care providers regarding the implications of psychotropic medication for pregnant and breastfeeding women and their infants. The recommended practice is to conduct an individualized and careful risk-benefit analysis with each woman in deciding whether medication is the best option for both her and her baby.[46] This individualized risk-benefit analysis should weigh the potential effects of medication on the fetus or infant with the impact that the depression may have on the woman's functioning and capacity for parenting. Thoughts of harm to self or infant should also be assessed and factored into this decision. The FDA has assigned risk categories for medications for depression and bipolar disorder during pregnancy that can be considered when conducting this risk-benefit analysis.[47,48] For additional guidelines regarding prescribing medication to women who are breastfeeding see Table 3.[38,39] When prescribing antidepressant medication, it is imperative to follow up to assess whether the prescribed dose has been effective, possible side effects, and whether her functioning has improved.

For many breastfeeding mothers a non-pharmacological treatment, such as psychotherapy, may be the first order of treatment. Several studies have shown psychotherapy to be equally effective to medication in the treatment of major depression of moderate severity.[49,50] Antonuccio reviewed studies comparing the efficacy of medication and psychotherapy, and, in summarizing his analysis, states "medications result in relatively poorer compliance than psychotherapy, have a higher dropout rate, and result in as much as a 60% non-response rate with some patient populations. Psychotherapy can teach skills to help prevent depression, making such treatment an attractive, cost-effective alternative to drug treatments."[49] In the NIMH

Treatment of Depression Collaborative Research Program, a multi-site randomized controlled clinical trial, Elkin and colleagues compared the effectiveness of cognitive behavioral psychotherapy, IPT, imipramine with clinical management and placebo with clinical management, all of which were associated with a significant reduction in depressive symptoms.[50] Both imiprimine with clinical management and IPT were equally and significantly more effective than the other treatments in treating severely depressed patients. A potential exception to use of psychotherapy alone is a woman who is suicidal, has thoughts of harming her infant, or is so depressed that she cannot function in safely caring for her child. In this case, medication may be a necessary intervention. (For various treatment resources, see Table 4.)

Table 4. State and National Resources

Postpartum Depression Treatment Program and Information Center-UW Medical School Department of Psychiatry—608.263.5000. For information about participation at no cost in a NIMH funded psychotherapy clinical trial, go to: www.psychiatry.wisc.edu/ppd

Maternal and Child Health Hotline—800.722.2295

WI Association for Perinatal Care—www.perinatalweb.org

Postpartum Support International(PSI)-Wisconsin Chapter—www.postpartum.net

Depression After Delivery, Inc. (DAD)—800.944.4773. www.depressionafterdelivery.com

DHFS/Bureau of Community Mental Health—Informational packets and videotapes on postpartum depression for health-care professionals. 608.267.7792

DHFS/Bureau of Family and Community Health—"More Than Just the Blues" pamphlets for consumers on postpartum depression, available in English, Spanish and Hmong, 608.266.8178

ANTI-DEPRESSANT MEDICATION AND LACTATION

A recently published comprehensive review of the available data regarding antidepressant levels in nursing infants offers several guidelines for differentiating between antidepressant medications commonly prescribed to breastfeeding women.[51] This study concluded that infants exposed through breastfeeding to nortriptyline, paroxetine, or sertraline seemed unlikely to develop detectable or elevated plasma levels. Conversely, infants exposed to fluoxetine, and potentially those exposed to Citalopram, appear to be at higher risk of developing elevated levels, especially if they had also been exposed prenatally or if levels are high in the breast milk.

The American Academy of Pediatrics considers lithium to be contraindicated during lactation. Lithium, Valproate, Carbamazepine, Venlafaxine, Citalopram, Nefazodone, Sertraline, Fluoxetine, and Doxepin have been found present in infant serum or have been associated with side-effects in infants.[52] All of the infant serum detectable medications have had adverse effects reported, except Sertraline (which was undetectable in most reports) and Venlafaxine. The only reported case of negative effect of Citalopram was an infant with colic and uneasy sleep.[46,47,52] Pediatricians and Family Practice physicians should know if mothers who are breastfeeding are taking antidepressant medication and should monitor levels in the infant's serum as well as the infant's behavior.[38]

A review by Chaudron indicates several antidepressant medications are undetectable in breastfed infants' serum: Amitriptyline, Nortriptyline, Clomipramine, Desipramine, Paroxetine, Fluvoxamine and Bupropion.[53] However, Weissman et al state that though their research does not currently show that elevated levels have consequences for infants, a conservative approach may be to prescribe only medications that do not appear in infant's plasma.[51] This approach is especially prudent when factoring in the possibility that plasma levels may not accurately predict the biochemical effect of an antidepressant on the rapidly developing brain.

SUMMARY

With a prevalence rate of 8%-15%, depression during the postpartum period is a significant public health problem, affecting the functioning of women, their infants and families. Ob/Gyns, Pediatricians, and Family Practice physicians are in a unique position to identify, refer, and help these women access an appropriate mental health evaluation and treatment. Standardized screening for postpartum depression is a best-practice procedure and should be incorporated into the routine clinical protocol of medical providers working with women during pregnancy and in the first year after birth. Psychotherapy focused on interpersonal relationships and family functioning is a particularly effective treatment for postpartum depression. When considering the use of psychotropic medication to treat depression during pregnancy and lactation, a risk-benefit analysis related to the welfare of both the woman and her baby should be standard practice. Integrating a

focus on a woman's mental health needs during pregnancy and after the birth of a baby into routine clinical care will have a positive impact on the well-being of women, their infants and families.

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