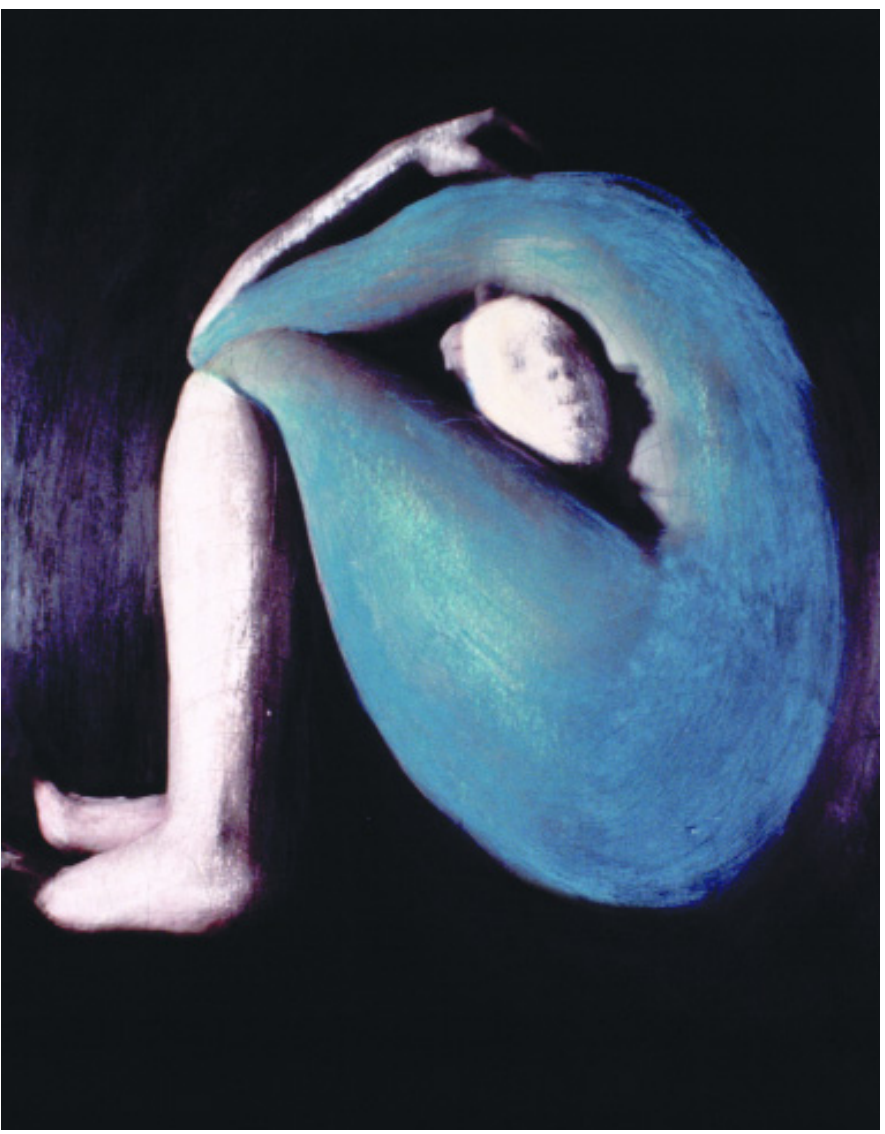
Current Psychiatry

Postpartum depression
Is there an Andrea Yates



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The tragedy of Andrea Yates, the Texas mother convicted of methodically drowning her five children in the bathtub, provides stark evidence for the need to recognize and treat women with severe postpartum depression. Here is up-to-date information psychiatrists can use to help mothers and their partners make informed decisions about treatment.

ANDREA YATES: WARNING SIGNS WERE MISSED

Andrea Yates, 37, of Harris County, Texas, was convicted of two counts of murder in the June 2001 bathtub drownings of her five children. The jury deliberated less than 4 hours to reach the verdict March 12. The next day, she was sentenced to life in prison. She had pleaded not guilty by reason of insanity.

It is not known why Mrs. Yates discontinued her antipsychotic medication a few weeks prior to this tragedy and why those around her did not heed the numerous warning signs of her mental illness.

Roughly 30% of women with postpartum depression experience thoughts of suicide or infanticide/homicide. Mrs. Yates showed evidence of such thoughts shortly after the birth of her first child, but she did not receive psychiatric care until her third child was born. Although she was hospitalized several times, no follow-up psychiatric care was provided. It was reported that she twice attempted suicide.

During the trial, defense attorneys presented testimony by psychiatrists that Mrs. Yates was suffering postpartum psychosis and schizoaffective disorder. Her severe illness produced the delusional belief that killing the children would save them from eternal damnation. Prosecutors convinced the jury that Mrs. Yates, although ill, was capable of distinguishing right from wrong at the time of the slayings and therefore did not meet the strict Texas standard for insanity.

Mental illness during pregnancy or the postpartum period is poorly understood by new mothers and their families. The verdict and sentence in this case represent an enormous step backward.

The media treatment of Andrea Yates and her imprisonment—rather than hospitalization for proper treatment of her mental illness—may deter mothers from telling their physicians about any negative feelings they may be experiencing. As a result, women who could benefit from treatment of depressive illness will not be identified, and they and their children will be at risk.

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in your practice?

Women face increased vulnerability to the onset of major depression during the childbearing years. Between 12% and 16% of women experience a major depressive episode in the postpartum period.[1] Postpartum depression (PPD) can have severe and long-lasting consequences for maternal and infant functioning.[2] If left untreated, it can impair maternal-infant bonding and infant attachment and can hinder the child's cognitive and emotional development.

Based on our experience in caring for women with PPD, this article is intended to help you detect and diagnose PPD more quickly and make appropriate treatment recommendations to family physicians, obstetricians/gynecologists, and other clinicians. We will review the key risk factors for PPD, address screening and diagnostic strategies, and look at the latest evidence on psychosocial and pharmacologic treatment.

Risk factors

Key risk factors, such as a history of PPD or depression, have been identified as predictors of PPD (*Table 1*).[3,4] In the diagnostic criteria for depression, the DSM-IV includes a specifier that states the onset of PPD must occur within 4 weeks after giving birth.[5] Our clinical experience, however, indicates that PPD can occur up to 1 year after giving birth. The essential feature of major depressive disorder, according to the DSM-IV, is "a clinical course that is characterized by one or more Major Depressive Episodes" (*Table 2*).

PPD is often associated with comorbid anxiety disorders, which manifest in many ways. Panic attacks are often the first indication of an existing or impending depression. A

Table 1

RISK FACTORS FOR POSTPARTUM DEPRESSION

Major factors	Contributing factors
• History of PPD	• Poor social support
• History of depression	• Adverse life events
• Family history of depression, especially PPD	• Marital instability
• Depression during pregnancy	• Younger maternal age (14 to 18 years)
	• Infants with health problems or perceived poor temperaments
	• Unwanted or unplanned pregnancy
	• Being a victim of violence or abuse
	• Low self-esteem
	• Low socioeconomic status

small percentage of women will experience intrusive obsessional thoughts of harming their infants.

Screening and diagnosis

Many women will not report depressive symptoms to their primary care physicians or obstetricians during the routine postpartum visit. This reticence by mothers to volunteer any negative information about themselves may be due to the brevity of the typical postpartum visit or its usual focus on the welfare of the infant.

A recent study of 391 outpatients in an obstetrical practice demonstrates the value of using a screening instrument to identify possible PPD cases during the 6-week follow-up visit. When the women were screened with the standardized Edinburgh Postnatal Depression Scale (EPDS), the rate of detection of PPD was 35.4%, whereas the rate of spontaneous detection was 6.3%.[6]


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The EPDS (*Box 1*), a 10-item self-report questionnaire developed by Cox and colleagues, is used specifically to detect PPD.[7] A minimum score of 12 or 13 warrants a diagnosis of PPD. The EPDS can be used as a screening tool at 6 to 8 weeks postpartum and can be repeated over several visits to track symptoms. This tool has been validated, computerized, and translated into more than 12 languages and can be copied and used free of charge.

A new screening tool, the Postpartum Depression Screening Scale (PDSS), was recently developed and validated by Beck and colleagues to help clinicians identify and respond to PPD as early as possible.[8] Depressive symptoms are rated on a 5-point scale, and the total score is used to determine overall severity of depressive symptoms. Higher PDSS scores correspond to increasing severity of symptoms and indicate that the patient should be referred for additional evaluation. The PDSS is published by Western Psychological Services (www.wpspublish.com).

Psychosis in PPD

Psychotic depression in the postpartum period is sometimes associated with chronic mood disorders, especially untreated depression. The most prevalent psychotic features include paranoid delusions that incorporate the newborn. Hallucinations are rare. Psychotic depression places the postpartum patient at a heightened risk for suicide and/or infanticide and is considered a medical emergency that requires immediate hospitalization and treatment to ensure the safety of the infant and the ill mother (see "Andrea Yates: Warning signs were ignored," page 23).

If a patient with psychotic PPD is experiencing delusions centered on harming her infant, a family member or members should assume responsibility for the child's care, and the patient should not be left alone with the infant. When the mother is hospitalized, visitation between the mother and infant should be restricted, particularly if the infant's presence precipitates anxiety in the mother. The goal of hospitalization is to achieve symptom remission and stability in the mother so that bonding and attachment can occur. Maternal-infant bonding is difficult, if not impossible, if the mother is out of touch with reality.

Treating mild to moderate PPD

Psychosocial therapies are first-line treatment for mild-to-moderate PPD symptoms or when a patient refuses pharmacotherapy. These therapies include cognitive-behavioral therapy (CBT), interpersonal therapy (IPT), group therapy, fam-

Table 2

DSM-IV CRITERIA FOR A MAJOR DEPRESSIVE EPISODE

A. Five or more of the following symptoms must be present daily or almost daily for at least 2 consecutive weeks:

1. Depressed mood*
2. Loss of interest or pleasure*
3. Significant increase or decrease in appetite
4. Insomnia or hypersomnia
5. Psychomotor agitation or retardation
6. Fatigue or loss of energy
7. Feelings of worthlessness or guilt
8. Diminished concentration
9. Recurrent thoughts of suicide or death

*At least one of the five symptoms must be #1 or #2

B. The symptoms do not meet the criteria for other psychiatric conditions.

C. The symptoms cause significant impairment in functioning at work, school, and social activities.

D. The symptoms are not caused directly by a substance or general medical condition.

E. The symptoms are not better accounted for by bereavement after the loss of a loved one.

Adapted from: *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. Text revision. Washington: American Psychiatric Association, 2000.

ily and/or marital therapy, supportive psychotherapy, and peer support groups. Psychosocial therapies also should be used as adjunctive treatments to pharmacotherapy.

CBT. A preliminary study examining short-term cognitive-behavioral counseling for postpartum depressed women reported that participants who received six CBT sessions showed the same degree of improvement in functioning as did a group receiving fluoxetine. Both groups showed greatly improved functioning when compared with a group that received a placebo.[9]

IPT. In pregnant and postpartum women, the focus of IPT is on role transitions and the acquisition of skills applicable to motherhood. Preliminary studies of IPT in pregnant and postpartum women have shown encouraging results.[10] A recent controlled study of 99 women provided additional evidence that IPT helps decrease depressive symptoms and promote social adjustment in women with moderate PPD.[11]

Group therapy. One of the most valuable benefits of group therapy in PPD treatment is that it may help women who are feeling socially isolated to increase their support networks. Several psychosocial therapy methods may be adapted to a group model, including interpersonal and supportive psychotherapy.

Family and marital therapy. The roles of the partner and family are critical to treating women with mood and anxiety disorders during pregnancy or the postpartum period. A recent study found that postpartum depressed women recover more rapidly and appreciate their partners' contribution to the relationship more when the partner is supportive.[12]

Supportive psychotherapy involves offering patients and their families support, reassurance, and psychoeducation. This type of therapy is used to augment other psychosocial interventions and/or pharmacotherapy. In some cases, supportive therapy may be the only treatment a woman receives if her depressive symptoms are too severe for her to engage in CBT or IPT and she refuses pharmacotherapy. Then supportive psychotherapy is used to monitor her mental state.

Peer-support groups. Several groups formed by consumers and health care providers offer support and education to women with reproductive-associated mood and anxiety disorders. (See "Related resources," page 29).

> The roles of the partner and family are critical to treatment

Pharmacologic treatment

Pharmacotherapy is indicated in women with moderate-to-severe symptoms who do not respond to psychosocial treatment alone. Because all psychotropic medications are excreted in breast milk and passed on to the nursing infant, one must weigh the potential risks of the infant's exposure to medication against the risks of untreated maternal depression.

Selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs) are used most commonly to treat PPD. Monoamine oxidase inhibitors (MAOIs) are not recommended as they have been reported to exacerbate hypertension, and their extensive interaction profiles with food and other medications can complicate treatment.

Box 1

HOW TO ADMINISTER THE EDINBURGH POSTNATAL DEPRESSION SCALE

1. Ask the mother to underline the response that comes closest to how she has been feeling in the previous 7 days.
2. All 10 items must be completed.
3. Avoid the possibility of the mother discussing her answers with others.
4. The mother should complete the scale herself, unless she has limited English or difficulty with reading.
5. The EPDS may be used at 6 to 8 weeks postnatal. A visit to the child health clinic, a postnatal check-up, or a home visit may provide suitable opportunities for its completion.

As you have recently had a baby, we would like to know how you are feeling. Please CHECK the answer that comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

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

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

3.* I have blamed myself unnecessarily when things went wrong.
- ○ Yes, most of the time
- ○ Yes, some of the time
- ○ Not very often
- ○ No, never

4. I have been anxious or worried for no good reason.
- ○ No, not at all
- ○ Hardly ever
- ○ Yes, sometimes
- ○ Yes, very often

5.* I have felt scared or panicky without a good reason.
- ○ Yes, quite a lot
- ○ Yes, sometimes
- ○ No, not much
- ○ No, not at all

6.* Things have been getting on top of me.
- ○ Yes, most of the time I haven't been able to cope at all
- ○ Yes, sometimes I haven't been coping as well as usual
- ○ No, most of the time I have coped quite well
- ○ No, I have been coping as well as ever

7.* I have been so unhappy that I have had difficulty sleeping.
- ○ Yes, most of the time
- ○ Yes, sometimes
- ○ Not very often
- ○ No, not at all

8.* I have felt sad or miserable.
- ○ Yes, most of the time
- ○ Yes, quite often
- ○ Not very often
- ○ No, not at all

9.* I have been so unhappy that I have been crying.
- ○ Yes, most of the time
- ○ Yes, quite often
- ○ Only occasionally
- ○ No, never

10.* The thought of harming myself has occurred to me.
- ○ Yes, quite often
- ○ Sometimes
- ○ Hardly ever
- ○ Never

Responses to statements 1, 2, and 4 are scored 0, 1, 2, and 3 according to increasing severity of symptoms, and statements marked with an asterisk (*) are reverse-scored (3, 2, 1, and 0). Total score is calculated by adding the scores of all 10 items. A score of 12 or 13 has been found to identify most women with a diagnosis of PPD.

Adapted from Cox JL, Holden JM, Sagovsky R. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. *Br J Psychiatry* 1987;150:782-6.

Table 3

SSRI DRUG THERAPY FOR POSTPARTUM DEPRESSION

Medication	Starting daily dosage (mg)	Maximum daily dosage (mg)	Precautions
Fluoxetine	10	80	Very long half-life of active metabolite may lead to accumulation in infants Inform parents of possible side effects, and include a pediatrician in routine clinical evaluations of the infant
Sertraline	25	300	Benign neonatal sleep myoclonus has been documented in one case of sertraline exposure during breast-feeding Inform parents of possible side effects, and include a pediatrician in routine clinical evaluations of the infant
Paroxetine	10	60	No adverse effects have been reported
Fluvoxamine	50	300	Data limited
Citalopram	10	60	Data limited

Further, only limited evidence is available on the effects of MAOIs during pregnancy and the postpartum period.

Use of SSRIs

The literature on use of SSRIs in lactating women has expanded rapidly in recent years (*Table 3*). But because these agents have been on the market a relatively short time, the long-term developmental effects of infants' exposure to SSRIs through breast milk have yet to be evaluated.

Fluoxetine is the SSRI with the most published data on use by breast-feeding women. To date, nine studies have reported the outcomes of a total of 57 infants exposed to fluoxetine during breast feeding.[13,14] Norfluoxetine, the potent metabolite of fluoxetine, has a long half-life that may predispose to accumulation in the serum of nursing infants.

Adverse effects such as colic, fussiness, crying, seizure activity, and reduced weight gain have been reported in two cases.[15,16] The remaining studies on the use of fluoxetine by breast-feeding women have reported low drug levels in both mothers and infants, and no other adverse effects have been documented.

Sertraline. To date, seven published reports of sertraline exposure have documented 46 infant outcomes. In all of these reports, sertraline and its weak metabolite have been detected in low or trace amounts in the sera of nursing infants.[13,14,17-19] A recent study of 19 breast-feeding mother-infant pairs found that platelet serotonin uptake in these infants was unaltered, despite the detection of low serum levels of sertraline and its metabolite.[19]

Paroxetine. Paroxetine is also excreted into the breast milk of lactating women, although—unlike the other SSRI medications—the agent does not have an active metabolite that could potentially accumulate in the serum of nursing infants. Five reports totaling 60 infant outcomes have been published regarding paroxetine exposure during breast feeding. Low or undetectable serum levels were reported in all of the infants, and no adverse effects were noted.[13,14,20]

Fluvoxamine, citalopram. Two small case studies of fluvoxamine have each reported very low drug levels in breast milk and no adverse events in the exposed infants.[21,22] Only three case studies examining five infants exposed to citalopram during breast feeding have been published.[13] As information is limited regarding the effects of these medications on nursing infants, caution is advised when prescribing either agent to breast-feeding women.


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Use of TCAs and other antidepressants

TCAs are useful for treating PPD when SSRIs have failed or the patient has shown a previous good response to TCAs. All TCAs are excreted into breast milk in low concentrations, and a wide range of infant serum levels have been reported.

No adverse effects have been documented for

infant exposure to amitriptyline, clomipramine, desipramine, imipramine, or nortriptyline.[13,14,23,24] The active metabolite of doxepin has the longest half-life (37 hours) among the TCAs and may be potentially hazardous to nursing infants because of high serum accumulations. Because two reports have associated doxepin exposure with respiratory distress, poor sucking, drowsiness, and vomiting in infants, the use of medications with a shorter half-life and better-documented effects in infants is recommended.[13]

Educating the patient and her partner/family can increase awareness about PPD and ensure compliance

Limited evidence is available on the use of newer antidepressants such as bupropion, trazodone, and nefazodone by breast-feeding women.[25-27] When possible, therefore, such patients should be prescribed an antidepressant with more documented use in breast-feeding mothers.

Venlafaxine is a newer antidepressant that inhibits reuptake of both serotonin and norepinephrine. The only case report published to date regarding venlafaxine levels in nursing infants found high drug levels in the sera of three exposed infants but no adverse effects.[28]

Use of antipsychotics, ECT

Postpartum psychosis is rare and requires immediate intervention. Treatment with antipsychotics is one of the most effective methods for controlling a psychotic episode. Most women with postpartum psychosis will be too disorganized to consider breast-feeding, but for those who may wish to breast-feed, a discussion with her partner about infant exposure issues is recommended.

Effects of infant exposure through breast milk to the typical antipsychotics (e.g., chlorpromazine, trifluoperazine, haloperidol) include drowsiness, lethargy, and possible developmental delays.[13] Nursing infants should be monitored for sedation and other adverse effects during long-term maternal use of these medications.

Evidence on the use of atypical antipsychotics during breast-feeding is limited. One report described cardiomegaly, jaundice, and sedation in one of three infants exposed to olanzapine through breast milk. But the effects could not be attributed directly to breast milk, as that infant was exposed both in utero and during breast-feeding.[13]

One report of a nursing infant exposed to risperidone indicated no adverse effects,[29] and there is no published data on quetiapine use during breast-feeding.

ECT If the patient with psychotic PPD cannot tolerate or does not respond to antipsychotic medication, electroconvulsive therapy (ECT) may be indicated. ECT in the postpartum period is safe for both mother and infant. It is particularly useful when rapid treatment is imperative, such as severe depression with psychotic symptoms, acute mania, and in mothers who are at risk for suicide or infanticide.[30]

Management guidelines for PPD

Based on our experience and the available evidence, we offer these recommendations to psychiatrists managing patients with PPD:

1. During the initial psychiatric assessment, use screening tools such as the EPDS or the PDSS to assist with diagnosis and to identify symptom patterns.
2. Next, schedule a conjoint visit with the patient's partner, family members, and/or social supports. Provide educational materials about PPD and exchange information about treatment options to help the patient make informed decisions. Reading lists, appropriate research articles, lists of local resources, and Web sites can increase awareness about PPD and drive home the importance of compliance with treatment.
3. If pharmacotherapy is to be used, discuss honestly and openly the medication's benefits and potential risks for both mother and infant in the short and long term.

Bottom Line

Psychosocial therapies are first-line treatment for mild-to-moderate postpartum depression (PPD) and useful adjuncts to pharmacotherapy. When psychotropic medications are indicated for moderate-to-severe symptoms, consider the potential risk of medication exposure to the breast-feeding infant. Psychotic PPD, with its increased risk of suicide and/or infanticide, is a medical emergency that requires immediate hospitalization.

4. Outline a treatment plan with the patient and her partner. This should include 6 weeks of treatment during the acute phase, as well as maintenance and long-term therapy.
5. If applicable, discuss with the woman and her partner pregnancy planning during pharmacotherapy. In women who experience repeated episodes of depression, discontinuing an antidepressant during pregnancy almost always results in relapse of depressive symptoms.

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Related resources

- Misri S. *Shouldn't I Be Happy? Emotional problems of pregnant and postpartum women*. New York: Free Press, 1995.
- Sichel D, Driscoll JW. *Women's moods: What every woman must know about hormones, the brain, and emotional health*. New York: William Morrow & Co., 1999.
- Depression After Delivery, Inc. www.depressionafterdelivery.com or 1-800-944-4773 (4PPD)
- Postpartum Support International. www.postpartum.net
- Pacific Postpartum Support Society. www.postpartum.org

DRUG BRAND NAMES

Amitriptyline • Elavil
Bupropion • Wellbutrin
Citalopram • Celexa
Clomipramine • Anafranil
Desipramine • Norpramin
Fluoxetine • Prozac
Fluvoxamine • Luvox
Imipramine • Tofranil
Nefazodone • Serzone
Nortriptyline • Aventyl
Paroxetine • Paxil
Sertraline • Zoloft
Trazodone • Desyrel
Venlafaxine • Effexor

DISCLOSURE

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