**Postpartum depression or medical problem?**

Watch for fatigue, weight change, other physical signs

Andrea L. Seritan, MD
Assistant clinical professor
Department of psychiatry and Behavioral sciences
University of California, Davis

Many medical conditions common among new mothers can cause depressed mood, fatigue, and other symptoms that suggest postpartum depression. To help you quickly pinpoint the source of a new mother's depressive symptoms and plan treatment, this article reviews:

- New-onset or pre-existing neurologic, cardiovascular, thyroid, and other conditions that mimic postpartum depression
- Risk factors and clinical features that distinguish postpartum depression from other psychiatric disorders
- Laboratory tests that confirm or rule out medical problems.

**CASE: ‘I CAN’T SLEEP’**

Mrs. A, age 40, sleeps 2 hours nightly at most. Awakened by her 3-month-old daughter’s overnight crying, she lies awake and ruminates over the day’s events. Throughout the day, she fears she cannot care for her baby and 2-year-old son, and she depends on a family member to stay home with her. Financial concerns force her back to work 3 months after giving birth, but she is so despondent that she can barely function.

Mrs. A’s primary care physician diagnoses primary insomnia and prescribes mirtazapine and zolpidem, 15 and 10 mg each night, respectively, but her sleep disturbance persists after 6 weeks. The physician adds the hypnotic temazepam, 15 mg at night, and the sedating anticonvulsant gabapentin, 300 mg at bedtime. Both are titrated over 6 months to 45 mg and 1,800 mg at bedtime, respectively, but Mrs. A continues to lose sleep.

After 6 months, the doctor stops mirtazapine because Mrs. A has gained 20 lb. A switch to sertraline, 25 mg/d, has no effect.

Eighteen months after symptom onset, Mrs. A still sleeps poorly, even though her daughter—now age 2—sleeps through the night. Her depressed mood—undiagnosed by the physician—continues to worsen. She sees a psychiatrist after routine blood tests and a sleep study reveal no medical cause for her insomnia.

**IS IT POSTPARTUM DEPRESSION?**

Mrs. A's despondent mood, sleep disturbances, feelings of inadequacy as a parent, and impaired concentration suggest postpartum depression. Ego-dystonic obsessive thoughts of harming the...
Include bipolar disorder in the differential diagnosis. Ask new mothers with depressive symptoms if they feel inexplicably happy, irritable, or unusually energetic at times. Also screen for postpartum psychosis, which can progress to bipolar disorder and—worse—greatly increase the risk of infanticide.

The Edinburgh Postnatal Depression Scale, a 10-item self-report screening tool that takes about 5 minutes to complete, can help identify postpartum depression (see Related resources).

CASE CONTINUED: A POSTPARTUM HEADACHE

During our initial interview, Mrs. A denies thoughts of harming herself or her children, and psychotic symptoms are not apparent. She reports no past depressive or anxiety episodes and does not use alcohol or illicit drugs. Her sister has a history of depression (not postpartum).

During review of systems, Mrs. A gets practical help from family members, but life's pressures are taking their toll.

IS IT ANOTHER MENTAL ILLNESS?

Screen women with postpartum depressive symptoms for anxiety, which is highly comorbid with depression.

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with insomnia as the main symptom, and incomplete response after 18 months of treatment. These findings—plus her elevated prolactin and brain MRI results—suggest a medical cause.

**IS IT A MEDICAL PROBLEM?**

Pre-existing or new-onset postpartum medical conditions can confound the diagnosis.

- Fatigue can mimic depression’s neurovegetative signs (poor energy, decreased appetite, sleep). Common causes include sleep deprivation, thyroid disorders, anemia, cardiomyopathy, and infections (Table 1, page 63).
- Weight change could signal a medical condition whose symptoms resemble postpartum depression—such as diabetes or human immunodeficiency virus (HIV) (Table 2, page 64).
- Other disorders—including neurologic diseases, prolactinomas, systemic lupus erythematosus, diabetes, and rheumatoid arthritis—can cause

### Possible tests if postpartum patient has other physical symptoms

<table>
<thead>
<tr>
<th>Laboratory test</th>
<th>Confirms or rules out</th>
<th>Order if patient presents with:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood urea nitrogen/creatinine</td>
<td>Renal disease, dehydration</td>
<td>Back pain, frequent urination or oliguria, low blood pressure</td>
</tr>
<tr>
<td>Brain MRI</td>
<td>Brain tumors, white matter disease</td>
<td>Focal deficits, headaches, seizures, vision problems, vomiting</td>
</tr>
<tr>
<td>C-reactive protein</td>
<td>Rheumatoid arthritis</td>
<td>Joint pain, morning stiffness</td>
</tr>
<tr>
<td>ECG</td>
<td>Cardiomyopathy</td>
<td>Extremity swelling, palpitations, shortness of breath at night and with exertion</td>
</tr>
<tr>
<td>Erythrocyte sedimentation rate</td>
<td>Rheumatoid arthritis, SLE</td>
<td>‘Butterfly’ facial rash, joint pain</td>
</tr>
<tr>
<td>Folate</td>
<td>Folate deficiency</td>
<td>Ataxia, loss of vibration and position sense, peripheral neuropathy, weakness</td>
</tr>
<tr>
<td>Prolactin</td>
<td>Prolactinoma, hypopituitarism</td>
<td>Amenorrhea/galactorrhea, headache, visual field loss</td>
</tr>
<tr>
<td>Rapid plasma reagin</td>
<td>Syphilis</td>
<td>Ataxic wide-based gait, loss of position, deep pain and temperature sensation, palmar/plantar rash</td>
</tr>
<tr>
<td>Rheumatoid factor</td>
<td>Rheumatoid arthritis</td>
<td>Morning stiffness, symmetric joint pain</td>
</tr>
<tr>
<td>Urinalysis</td>
<td>Urinary infection, diabetes, renal disease</td>
<td>Burning or difficulty with voiding, dark-colored urine, frequent urination</td>
</tr>
<tr>
<td>Urine drug screen</td>
<td>Substance abuse disorder</td>
<td>Erratic behavior, irritability or aggression; violence, mental status changes</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>Anemia, malnutrition, inflammatory bowel disease</td>
<td>Loss of position or vibratory sensation, mood and cognitive changes, tingling and numbness in hands and feet</td>
</tr>
</tbody>
</table>

SLE: Systemic lupus erythematosus
depressive and other psychiatric symptoms (Table 3, page 67).

Recognizing the following disorders’ physical signs is key to uncovering a medical cause for postpartum depressive symptoms. **Thyroid disease.** Postpartum thyroiditis (PPT) can occur 1 to 3 months after delivery; often recurs after subsequent pregnancies, and can progress to permanent hypothyroidism within 5 years. Hypothyroidism can cause cognitive slowing, depression, and psychosis, and acute mania has been reported with severe hypothyroidism secondary to PPT.

Find out if the patient tested positive early in gestation for thyroid antibodies, as this may predict postpartum depression. **Multiple sclerosis (MS)** can cause anxiety, mania, depression, and cognitive impairment. Drugs used to treat MS—such as steroids or interferon—can induce depression. Relapses are infrequent during pregnancy but increase significantly within 3 months after giving birth in about one-third of women with active MS before pregnancy. Gait ataxia, sensory loss, numbness, hyperactive reflexes or spasticity, bladder dysfunction, visual impairment, disordered ocular motility, and fatigue are prominent clinical signs of MS. Women who become pregnant within 1 year after diagnosis run a high risk of MS exacerbation.

Fatigue and muscular weakness caused by MG can mimic depression, and adjusting to this debilitating illness can cause depression. Double vision, droopy eyelids, and muscle weakness alleviated by rest but worsened by activity are pathognomonic signs. **Myasthenia gravis (MG)**. Women who become pregnant within 1 year after diagnosis run a high risk of MG exacerbation.

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**Other neurologic diseases.** Pre-existing seizure disorders can worsen after giving birth and cause depression.

**Subtle presentations of brain tumors include cognitive deficits, mood disturbance, and personality change. A left frontal lobe tumor can cause depression.**

Ask the patient if she has had headaches, visual symptoms, vomiting, seizures, or focal neurologic deficits—any of these could signal a primary brain tumor or intracranial hemorrhage. **Prolactinomas,** the most common pituitary tumor in pregnant and postpartum women, enlarge during pregnancy and regress after delivery. Depression, anxiety, apathy, and personality changes may stem from the pituitary tumor, its treatment, or changes in the hypothalamic-pituitary-end organ axis. Typical amenorrhea-galactorrhea syndrome resembles postpartum physiologic changes.

**Systemic lupus erythematosus (SLE),** most prevalent in young women, might flare during pregnancy and within 6 weeks after giving birth. Headaches, seizures, or cerebrovascular events with comorbid mood disorders, delirium, dementia, psychosis, or anxiety can signal SLE.

**Rheumatoid arthritis (RA).** Because inflammatory activity is heightened after childbirth, postpartum women—particularly after bearing a first child—face a five-fold risk of RA compared with other women. Breast-feeding might worsen RA, presumably by increasing prolactin production.

**Physical limitations caused by RA can cause depression.** Symmetric joint pain associated with morning stiffness—especially in the fingers, hands, or knees—might signal RA.

![Did the patient test positive early in gestation for thyroid antibodies?](image-url)
### Findings that signal a possible postpartum medical problem

<table>
<thead>
<tr>
<th>Laboratory finding</th>
<th>Could signal ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low hemoglobin, hematocrit and mean cell volume (MCV) values</td>
<td>Microcytic anemia</td>
</tr>
<tr>
<td>MCV &gt; 100 mm³</td>
<td>Megaloblastic anemia</td>
</tr>
<tr>
<td>Positive anticardiolipin or antinuclear antibody</td>
<td>Systemic lupus erythematosus</td>
</tr>
<tr>
<td>Blood urea nitrogen &gt; 20 mg/dL, creatinine &gt; 1.5 mg/dL</td>
<td>Acute or chronic renal failure</td>
</tr>
<tr>
<td>Low specific gravity on urinalysis</td>
<td>Diabetes insipidus or renal tubular abnormalities</td>
</tr>
<tr>
<td>Proteinuria with glycosuria</td>
<td>Diabetes mellitus</td>
</tr>
<tr>
<td>Proteinuria with protein or cellular casts</td>
<td>Systemic lupus erythematosus</td>
</tr>
<tr>
<td>Hyponatremia and hyperkalemia</td>
<td>Adrenocortical insufficiency</td>
</tr>
<tr>
<td>Albumin &lt; 3 g/dL</td>
<td>Malnutrition</td>
</tr>
<tr>
<td>SGOT/SGPT &gt; 35 u/L (each)</td>
<td>Alcohol abuse disorder, hepatitis, hepatic encephalopathy</td>
</tr>
<tr>
<td>Alkaline phosphatase &gt; 120 u/L, positive antimitochondrial antibody</td>
<td>Primary biliary cirrhosis</td>
</tr>
<tr>
<td>Erythrocyte sedimentation rate &gt; 20 mm/hr</td>
<td>Systemic lupus erythematosus, rheumatoid arthritis</td>
</tr>
<tr>
<td>Positive rheumatoid factor</td>
<td>Rheumatoid arthritis</td>
</tr>
<tr>
<td>Prolactin &gt; 24 ng/mL</td>
<td>Prolactinoma</td>
</tr>
<tr>
<td>TSH &gt; 5 µu/mL</td>
<td>Hypothyroidism</td>
</tr>
<tr>
<td>TSH &lt; 0.35 µu/mL</td>
<td>Hyperthyroidism</td>
</tr>
<tr>
<td>IgG &gt; 1.4 mg/dL, oligoclonal bands, myelin basic protein in CSF</td>
<td>Multiple sclerosis</td>
</tr>
<tr>
<td>White matter hyperintensities in brain MRI</td>
<td>Multiple sclerosis, CNS vasculitis, tumors</td>
</tr>
</tbody>
</table>

Source: Reference 5

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**Anemia.** Increased need for iron and folic acid during pregnancy can lead to anemia. Neuropsychiatric manifestations of folate deficiency range from mild irritability to severe depression, dementia, psychosis, and confusion. Vitamin B12 deficiency can lead to megaloblastic anemia or neurologic problems such as peripheral neuropathy, as well as depression, delirium, or dementia. Ask the patient about:

- alcohol dependence, malnourishment, chronic illness, inflammatory bowel disease, gas-
HIV infection often leads to cognitive loss and depression with suicidal thoughts. Highly active antiretroviral medications commonly cause agitation, pain, mood changes, and insomnia.

Ask the patient if she is HIV positive. Watch for weight loss, fever, anorexia, and recurrent infections.

Substance abuse. Intoxication, withdrawal, or long-term alcohol or drug use can contribute to depression. Women at high risk for substance abuse disorder might not adhere to psychiatric treatment and may be prone to sexually transmitted diseases. If possible, see the patient every 3 to 4 weeks during the postpartum period.

Pain—if not adequately controlled—can fuel depression. Ask the patient if she has chronic pain or suffered a severe injury.

PERIPHERAL CARDIOMYOPATHY—An acute dilated cardiomyopathy appears ≤6 months after delivery and may cause fatigue. Check for shortness of breath at night and with exertion, palpitations, and extremity swelling.

Gestational diabetes. Pregnancy-induced insulin resistance leads to gestational diabetes mellitus. Women with gestational diabetes can develop type 2 diabetes after giving birth.

Blood sugar fluctuations can cause depression, irritability, or memory problems. Depression can sabotage adherence to diet and treatment, leading to poor glycemic control.

Ask the patient if she was diagnosed with gestational diabetes and if she is experiencing fatigue, excessive thirst, frequent urination, blurred vision, headaches, excessive hunger, or unexplained weight loss. Primary biliary cirrhosis is most prevalent in women ages 35 to 60 and may cause depression. Pruritus, fatigue, jaundice, and liver abnormalities point to this autoimmune disease, and postpartum exacerbations have been reported.
and run errands or relax alone for 2 hours each weekend.

The psychiatrist discusses sleep hygiene and adds quetiapine, 25 mg at bedtime; reduces gabapentin over 3 months to 300 mg nightly, and titrates sertraline to 100 mg/d. The psychiatrist also means Mrs. A off temazepam over 3 months, watching closely for withdrawal symptoms.

At the psychiatrist’s suggestion, Mrs. A resumes exercising at a gym four to five times a week. Mrs. A reduces zolpidem use—taking it only as needed for insomnia—then tapers off gabapentin. Quetiapine is discontinued.

After 4 months, psychotherapy sessions are decreased to biweekly. Prolactin is 66.6 ng/mL at 3 months, then normalizes to 23.4 ng/mL at 6 months. Six months later, brain MRI shows no change in baseline tumor size. The endocrinologist continues semiannual brain MRI and prolactin testing to see if the tumor will shrink without surgery.

Nearly 1 year after presentation, Mrs. A's depression is in remission.

References