

## CASE RECORDS of the MASSACHUSETTS GENERAL HOSPITAL

Founded by Richard C. Cabot  
 Eric S. Rosenberg, M.D., *Editor*  
 David M. Dudzinski, M.D., Meridale V. Baggett, M.D., Kathy M. Tran, M.D.,  
 Dennis C. Sgroi, M.D., Jo-Anne O. Shepard, M.D., *Associate Editors*  
 Emily K. McDonald, Tara Corpuz, *Production Editors*



## Case 24-2024: A 30-Year-Old Woman with Postpartum Anxiety and Intrusive Thoughts

Samantha Meltzer-Brody, M.D., M.P.H., Lee S. Cohen, M.D., and  
 Emily S. Miller, M.D., M.P.H.

## PRESENTATION OF CASE

From the Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill (S.M.-B.); the Department of Psychiatry, Massachusetts General Hospital, and the Department of Psychiatry, Harvard Medical School — both in Boston (L.S.C.); and the Department of Obstetrics and Gynecology, Division of Maternal–Fetal Medicine, Warren Alpert Medical School, Brown University, Providence, RI (E.S.M.).

N Engl J Med 2024;391:550-7.  
 DOI: 10.1056/NEJMcpc2312735  
 Copyright © 2024 Massachusetts Medical Society.

CME



*Dr. Rebecca Leval (Psychiatry):* A 30-year-old woman was evaluated in the psychiatry clinic of this hospital 4 weeks after the birth of her first child because of anxiety and intrusive thoughts.

The patient (gravida 1, para 1) had had gestational hypertension, for which she had not received medication; otherwise, her pregnancy had been uncomplicated. Four weeks before the current evaluation, she went into labor at 39 weeks 1 day's gestation and gave birth to a healthy male infant by spontaneous vaginal delivery in the labor and delivery unit of this hospital. Skin-to-skin contact, in which the infant is placed on the bare chest of the mother, was started immediately after the baby was born. During the next 2 days, the patient was engaged and inquisitive during postpartum counseling and education. She was able to initiate breast-feeding and appeared to be bonding appropriately with the infant. On the fourth hospital day, she was discharged home.

At home, the patient breast-fed the infant but noticed that he had a poor latch. One day after discharge, the patient called the obstetrics clinic of this hospital to request lactation advice. She also described having difficulty sleeping and feeling anxious and nervous since giving birth. The patient was advised to start pumping breast milk in addition to breast-feeding. Treatment with sertraline was initiated.

Three weeks before the current evaluation, the patient called the obstetrics clinic again for advice regarding the use of the breast pump. She was also concerned that the difficulties with breast-feeding were interfering with bonding with the infant, and she noted that her blood pressure, which she had measured with an ambulatory monitor at home, was 164/101 mm Hg. The patient was advised to seek evaluation in the labor and delivery unit of this hospital.

On evaluation, the patient described insomnia, anxiety, painful nipples, decreased appetite, and mild headache. She reported no blurred vision or abdominal pain. The blood pressure was 140/84 mm Hg and the pulse 107 beats per minute. The patient appeared worried and anxious. The remainder of the physical examination was

normal. The blood levels of electrolytes were normal, as were the complete blood count and the results of tests of kidney and liver function. The urinalysis was normal. Treatment with nifedipine was initiated for hypertension, along with lorazepam as needed for anxiety. Sertraline therapy was continued. The patient was discharged home.

The next day, the patient awoke and told her husband, "I can't go on like this. I can't do this anymore. I can't wake up feeling like this again." He called the obstetrics clinic and was instructed to bring her to the labor and delivery unit. On evaluation, the patient stated that she had stopped breast-feeding because of bleeding of the nipples and had started feeding with formula. She felt exhausted and "emotionally numb," and she sometimes could not remember whether she had fed the baby. She described feeling lonely, isolated, distressed, and unable to engage in most child care duties. The patient's mother had been visiting her and her husband to assist them with child care.

The patient reported that, during the pregnancy, she had been excited and had felt "ready and prepared," although somewhat nervous in anticipation of the delivery. She had not felt traumatized after the pregnancy or delivery, but when she had returned home, she felt "hit by a ton of trains." She would awaken frequently during the night when the infant made noises. When the infant was quiet, the patient was unable to sleep because of racing thoughts and feeling overwhelmed. She said, "The idea of being this baby's mother for the rest of my life is too much for me to handle. I don't want to do this now or for the rest of my life." She added, "I wish I were dead sometimes" but reported no active suicidal or homicidal ideation or plan.

The patient had a history of intermittent insomnia and migraines. She had had dysthymic symptoms as a teenager when she had moved to the United States from Central America, and she had had mild generalized anxiety and anxiety with public speaking during college, for which she had taken propranolol. She had had no previous suicidal or homicidal ideation or history of self-harm behaviors, and she had never had a psychiatric admission or intensive psychiatric treatment. The patient took prenatal vitamins, nifedipine, and sertraline. She also took lorazepam as needed for anxiety, acetaminophen and ibuprofen as need-

ed for headaches, and docusate for constipation. There were no known drug allergies. She was on maternity leave from her work as an administrator, and she lived in suburban New England with her infant and husband. She felt safe and supported in the home. The patient drank alcohol rarely and did not smoke tobacco or use illicit drugs. Her mother had migraines, her father hypertension and anxiety, her brother anxiety, her maternal grandmother hematologic cancer, and her paternal grandmother hypertension. Her maternal grandfather had died of lung cancer and her paternal grandfather of a stroke.

On the day of the current evaluation, the patient presented to this hospital to establish care with a psychiatrist. On evaluation, the patient repeatedly said, "The baby is a good baby" and stated that she did not want to hurt the infant or other people; however, she described intrusive thoughts of stabbing the infant and had visual hallucinations of herself holding a knife. She noted that the thoughts had started after delivery and had become increasingly vivid and frequent. They caused distress and anxiety and led to episodes of intense crying, rapid breathing, and feeling shaky. She avoided the kitchen because knives were present, and she had stopped cooking — an activity that she had previously enjoyed. The patient did not feel comfortable holding or feeding the infant because of the unwanted, intrusive thoughts and thus avoided physical contact with him. However, she checked on him every few minutes to make sure that he was alive and breathing and frequently asked her husband whether the infant was OK. The patient repeatedly searched on the internet looking for reassurance that she would not act on these thoughts. She contacted other mothers online and talked to her husband and mother to seek reassurance that she was not "a bad mother." However, she had not told them or her clinicians about the intrusive thoughts because she was terrified that the infant would be taken away from her.

On examination, the blood pressure was 138/83 mm Hg and the pulse 68 beats per minute. The patient was tearful and appeared exhausted. Her mood was anxious and dysphoric, and her affect was restricted and congruent with her mood. She did not have disorganized thinking, delusional content, or perceptual disturbances.

A diagnosis was made.

#### DIFFERENTIAL DIAGNOSIS

**Dr. Samantha Meltzer-Brody:** Postpartum psychiatric illness is one of the most common complications of childbirth. Risk factors include a personal history of psychiatric illness, primiparity, stress, adverse birth outcomes, trauma, low partner support, unplanned pregnancy, and a family history of psychiatric illness. However, it is often challenging to determine prospectively whether a person has a risk of having psychiatric illness during the postpartum period.<sup>1</sup>

Evaluation of a patient with symptoms of postpartum psychiatric illness should focus on three main types of symptoms. The first type is mood symptoms, which include feeling down, blue, sad, or depressed; the presence of anhedonia; or evidence of mania, suicidal thoughts, or thoughts of harm to the infant. The second type is anxiety symptoms, which include the presence of ruminating thoughts, intrusive images of particularly focused harm to the infant, generalized anxiety, panic attacks, or acute stress symptoms

if a traumatic event has occurred. The third type is psychotic symptoms, which include evidence of impaired reality testing, delirium-like symptoms, delusional thoughts, or hallucinations. In this patient, the differential diagnosis of postpartum psychiatric illness, particularly given the degree of obsessive thinking, includes generalized anxiety disorder, normal obsessive thoughts that occur during the postpartum period, and coexisting medical conditions that cause psychiatric illness, as well as major depressive disorder, obsessive-compulsive disorder (OCD), and postpartum psychosis (Fig. 1).<sup>2</sup>

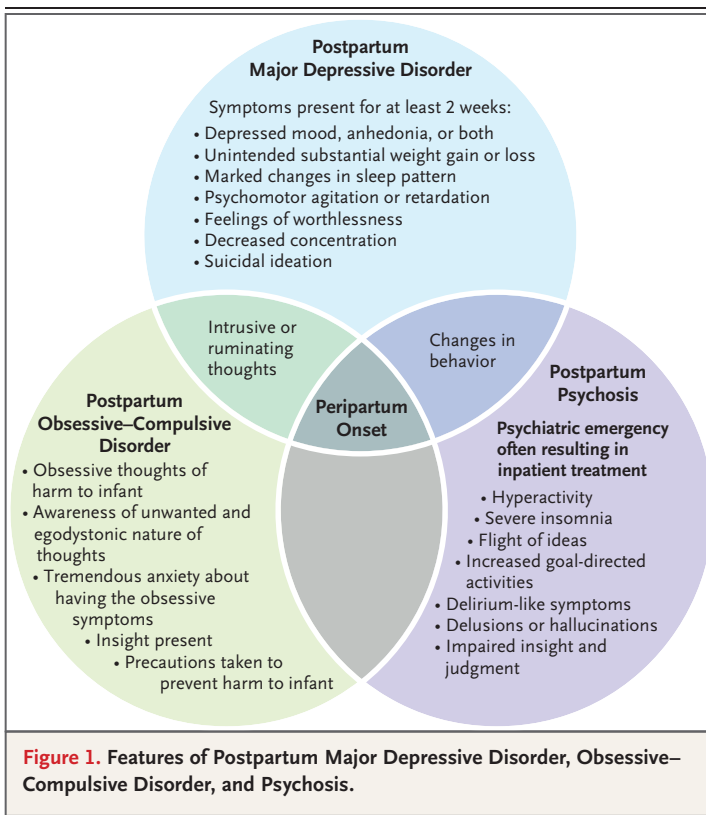
#### POSTPARTUM DEPRESSION

Postpartum depression, a major depressive episode occurring in the early postpartum period, is the most common peripartum psychiatric disorder, and there is growing evidence of a genetic association that is greater than that for the onset of depression outside the peripartum period.<sup>3</sup> However, postpartum depression has a heterogeneous clinical presentation, and subtypes can be differentiated by examination of the timing of symptom onset, the presence of distinguishing clinical characteristics (e.g., the degree of coexisting anxiety, agitation, or suicidal thoughts), concurrent psychiatric illness, and pregnancy and obstetrical complications.<sup>4</sup>

#### OBSESSIVE-COMPULSIVE DISORDER

A careful assessment of the criteria in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5), for both major depressive disorder, with onset in the peripartum period, and OCD is an important exercise when evaluating this patient with postpartum psychiatric illness that includes obsessional thinking.<sup>5</sup> It is crucial to distinguish the symptoms of OCD from normal worries that parents have about their child's well-being; such thoughts occur in the majority of mothers (34 to 65%) after delivery.<sup>2</sup> Having worries about a child's safety is thought to be adaptive and to help protect the baby. These concerns are usually temporary and do not affect the mother's normal functioning, nor do they interfere with appropriate caretaking of the child.

OCD is likely to occur during the childbearing years owing to the effect of reproductive hormonal fluctuations on mental health. The onset of OCD has been observed at the time of onset of menstruation and during the peripartum period.



**Figure 1.** Features of Postpartum Major Depressive Disorder, Obsessive-Compulsive Disorder, and Psychosis.

The peripartum period, in particular, has been associated with an increased risk of worsening of existing OCD and new-onset symptoms of OCD.<sup>6</sup> Concerns about the onset of OCD symptoms during the peripartum period often focus on any behaviors that could lead to harm to the infant, including aggressive thoughts of infant harm. The incidence of new-onset OCD in pregnancy ranges from 2 to 22% and is similar to that in the postpartum period (2 to 24%).<sup>6</sup> It is common for patients with existing OCD to have worsening of symptoms in the peripartum period. Obsessions that start during pregnancy often focus on contamination and may be accompanied by compulsions to clean or wash. By contrast, obsessions that occur during the postpartum period are likely to be focused on preventing infant harm, with compulsions to check the infant.<sup>6</sup>

#### POSTPARTUM PSYCHOSIS

In addition to the assessment of the mood, anxiety, and OCD symptoms that are common in the postpartum period, it is also vital to consider whether this patient has postpartum psychosis — a much less common but potentially devastating complication of childbirth. In population-based registry studies of psychiatric admissions after childbirth, the reported incidence of postpartum psychosis or mania occurring for the first time was 0.25 to 0.6 cases per 1000 births.<sup>7</sup> In total, 20 to 50% of patients with postpartum psychosis will have only a single episode. Others will subsequently have episodes that occur outside the peripartum period, and such episodes usually lead to a diagnosis within the bipolar spectrum.<sup>7</sup> A predictor of postpartum psychosis is primiparity. Therefore, if postpartum psychosis does not develop after the birth of the first child, then the risk is much lower in a subsequent pregnancy. In contrast to postpartum depression, postpartum psychosis is not associated with stressful life events.<sup>8</sup>

Distinguishing between postpartum OCD and postpartum psychosis involves evaluating for important primary differentiating features. In persons with postpartum OCD, there is insight and awareness that the thoughts are unreasonable, unwanted, and egodystonic. Usually, the mother feels intense anxiety about having the obsessive thoughts. Consequently, mothers with postpartum OCD tend to take tremendous precautions to prevent doing harm to their infant.<sup>2</sup> In con-

trast, mothers with postpartum psychosis have markedly impaired insight and may show symptoms consistent with a delirium or bipolar disorder such as a decreased need for sleep, delusions, hallucinations, flight of ideas, or agitated, hyperactive, or reckless behavior. Postpartum psychosis is considered to be a psychiatric emergency that often involves inpatient psychiatric hospitalization to ensure safety for the mother and baby.<sup>2</sup> Given that this patient appeared to have appropriate insight and was markedly concerned about preventing harm to her infant, it is unlikely that she has postpartum psychosis.

#### COEXISTING MEDICAL CONDITIONS

It is also important to assess this patient for possible coexisting medical conditions that could have caused her psychiatric illness, including blood loss–induced anemia, hypertension, infection, or a thyroid or other endocrinologic disorder. Thyroid autoimmune disorders occur in 5 to 7% of patients during the postpartum period, and the incidence is much higher (up to 20%) among patients with postpartum psychosis.<sup>7</sup> The presence of neurologic symptoms (i.e., seizures, decreased consciousness, dyskinesia, overt motor symptoms, or extrapyramidal symptoms) in addition to psychotic symptoms suggests the possibility of anti-N-methyl-D-aspartate receptor encephalitis.<sup>7</sup>

This patient meets the criteria for postpartum OCD. She most likely also meets the criteria for coexisting major depressive disorder, with onset in the postpartum period. We do not have the exact timing to know whether she had 2 weeks of mood symptoms (which would meet the DSM-5 criteria), but this was probably the case, given the timeline presented.

#### DR. SAMANTHA MELTZER-BRODY'S DIAGNOSIS

Postpartum obsessive–compulsive disorder, most likely with coexisting major depressive disorder.

#### DIAGNOSTIC TESTING

*Dr. Lee S. Cohen:* This patient meets the DSM-5 criteria for OCD. For clarity, it should be pointed out that, unlike mood disorder, there is no qualifier for the diagnosis of OCD in the peripartum period in the DSM-5. Nonetheless, during the first month of the postpartum period, the patient



had recurrent intrusive, obsessional thoughts of harming her infant that were egodystonic; these thoughts occurred in the absence of psychotic symptoms. The thoughts not only caused the patient distress but also tormented her. She also compulsively checked to see that the infant was alive and breathing. She spent hours a day searching the Internet for confirmation that she would not harm the baby and sought reassurance from her husband and her mother that she was not “a bad mother.” Her symptoms were clearly associated with distress that was substantial enough to meet the criteria for social impairment, particularly with respect to her new maternal role. Medical evaluation did not reveal any medical condition to which her symptoms could be attributed, and the clinical picture could not be better explained by a different psychiatric disorder.

#### CLINICAL DIAGNOSIS

Obsessive-compulsive disorder with onset in the postpartum period.

#### DISCUSSION OF PSYCHIATRIC MANAGEMENT

*Dr. Cohen:* The treatment of postpartum OCD involves understanding the necessity of mitigating the torment for patients having egodystonic intrusive thoughts that frequently focus on the possibility of causing harm to the newborn or having paralyzing thoughts regarding the well-being of the infant. These thoughts prompt behavior such as obsessional thinking and constant checking on the infant’s physical well-being.

Whereas reliable systematic data on the non-pharmacologic and pharmacologic management of OCD outside the peripartum period are available,<sup>9</sup> evidence-based guidance for the treatment of postpartum OCD is relatively limited. There has been some effort to assess best-practice recommendations regarding the treatment of postpartum OCD,<sup>10</sup> but the extent to which such practices should guide treatment is unclear.

In the absence of evidence guiding specific care of peripartum OCD, treatment of postpartum OCD should align with the treatment of OCD in other contexts, with some modifications given the postpartum context of symptoms, which needs to be underscored. The degree of suffering caused

by untreated or incompletely treated obsessive-compulsive symptoms that occur in the postpartum period can be substantial; thus, for the benefit of both the patient and the family, the goal of treatment interventions should be amelioration of symptoms. There are substantial data supporting the combined use of cognitive behavioral therapy (CBT) with exposure and response prevention therapy for the treatment of OCD symptoms outside the peripartum period<sup>11-13</sup>; however, the rationale for the use of CBT as stand-alone first-line monotherapy for postpartum OCD is limited, particularly in more symptomatic patients. CBT with exposure and response prevention therapy typically involves 12 to 16 weekly sessions to attain a clinically significant abatement of symptoms, and the acceptability and feasibility of such treatment for a symptomatic person in the postpartum period has not been shown.

The availability of CBT resources in a patient’s local area, and the process of locating those resources, can be exceedingly challenging and could be even more difficult for a new mother with postpartum OCD, as described in this patient. As the promise of CBT that is deployed through digital platforms becomes increasingly substantiated for OCD spectrum disorders,<sup>14,15</sup> its critical value in the context of postpartum OCD may be more completely realized in the future and may enhance access to care for these patients at such a critical time.

There are several reports of effective selective serotonin-reuptake inhibitor (SSRI) use in women with postpartum OCD that date back three decades<sup>16-18</sup>; however, the cumulative data from these studies lack sufficient rigor. These findings are in contrast to the extensive data supporting the use of SSRIs in the treatment of OCD outside the peripartum period.<sup>19</sup> Since data supporting the superiority of one SSRI over another in the management of OCD are lacking, close monitoring for the occurrence of side effects associated with the use of particular SSRIs should be prioritized. The history of a patient’s response can also guide selection of antidepressants in this class. The dose of SSRIs for the treatment of postpartum OCD should be based on data obtained from studies that have indicated that higher doses may be required.<sup>20</sup> In patients with postpartum OCD, coexisting anxiety is common; the use of adjunctive benzodiaz-

epines such as lorazepam or clonazepam in such patients is not contraindicated (except in those with a history of substance use disorder) and may facilitate clinical improvement.<sup>21</sup>

OCD can be a disabling illness with clinically significant attendant complications. When OCD is present in a patient during the postpartum period, the amalgam of new parenthood — with its concomitant stressors and challenges — and OCD symptoms involving intrusive thoughts of harming the infant or fear of harm to the infant make the psychological toll of the illness all the more substantial. In that context, an incomplete response to initial treatment with an SSRI or an SSRI in combination with CBT is not acceptable. Data regarding the use of augmentation strategies specifically for postpartum OCD are sparse<sup>22</sup>; however, the use of adjunctive antipsychotic agents (e.g., quetiapine or olanzapine) and of the antidepressants clomipramine and mirtazapine to afford more complete symptom resolution among patients who previously had a partial response has been described.<sup>23</sup> Although the treatment of postpartum OCD follows the relatively standard pharmacologic and nonpharmacologic algorithms used outside the peripartum period, the availability of support groups for patients with postpartum OCD (e.g., groups organized by Postpartum Support International) can be of critical value, since such patients face the novelty of parenthood and the concurrent burden of OCD symptoms.

#### DISCUSSION OF OBSTETRICAL AND GYNECOLOGIC MANAGEMENT

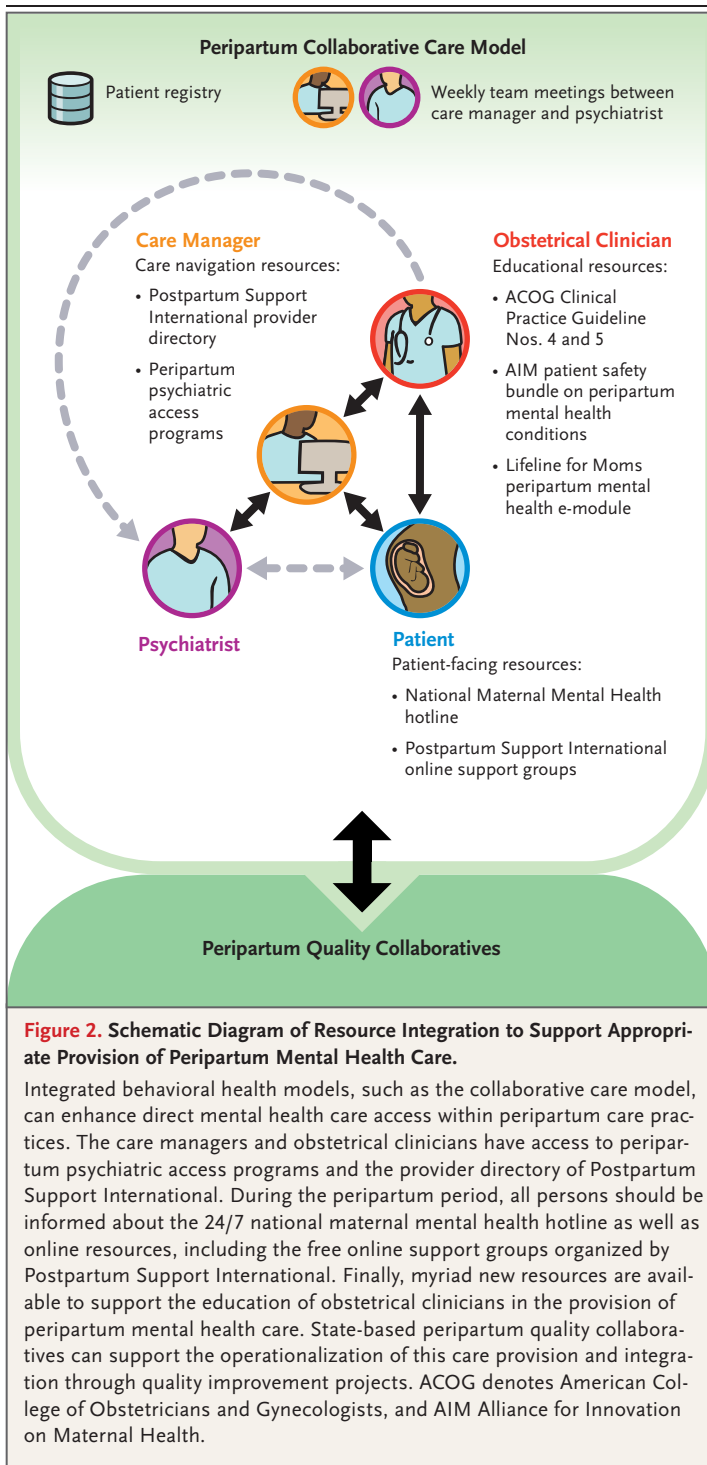
*Dr. Emily S. Miller:* In order for peripartum mental health conditions such as postpartum OCD to be successfully treated (i.e., result in remission of symptoms), the affected patient's condition must first be recognized clinically and diagnosed provisionally; subsequently, a recommendation that the patient receive treatment should be made, followed by the administration of appropriate and adequate treatment. Profound gaps in care currently exist at each step. Although data supporting this care continuum for postpartum OCD are lacking, meta-analytic data have shown that only 3 to 5% of women with peripartum depression have remission of their depressive symptoms.<sup>24</sup> As was the case for this patient, the

first steps in the peripartum mental health care cascade are most often managed by obstetrical clinicians.

Although professional guidelines have long recommended that obstetrical clinicians screen for peripartum depression, the American College of Obstetricians and Gynecologists (ACOG) only recently began recommending universal screening for symptoms of anxiety.<sup>25</sup> The important, but perhaps myopic, focus on peripartum depression has left gaps in the way in which obstetrical clinicians approach the differential diagnosis in a patient with emotional distress. In this patient, no provisional diagnosis was made; specifically, she did not undergo an assessment for bipolar disorder before treatment with sertraline was initiated. The postpartum period is a particularly high-risk time for an incident diagnosis of bipolar disorder, and SSRI treatment without an adequate assessment for previous bipolar disorder symptoms can lead to mania or psychosis.<sup>26</sup> Approaches to systematically integrating screening for bipolar disorder into the clinical workflows of obstetrical clinicians are needed.

In this patient's case, the obstetrical care team prescribed an SSRI; however, many obstetrical clinicians express discomfort in prescribing psychopharmacotherapy owing to their lack of training in the use of psychiatric medication and their concerns about the medicolegal ramifications of providing treatment that is possibly outside their direct scope of practice. Yet, the relative paucity of psychiatrists who specialize in peripartum care renders mental health care during that period often inaccessible. Recognition of mental health as an important component of comprehensive reproductive health care is reflected in an updated ACOG clinical practice guideline,<sup>27</sup> which explicitly states that prescribing psychiatric medication for depression or anxiety is within the scope of the obstetrical clinician's practice. This new affirmation can support these clinicians in initiating psychopharmacotherapy.

Although sertraline therapy was initiated in this patient, it is unclear whether a system was in place to monitor the patient's response. One example of such a system is integrated behavioral health models, such as the collaborative care model (Fig. 2). The collaborative care model embeds a care manager into obstetrics clinics



to coordinate the provision of patient-centered care and to monitor symptom response, under the supervision of a psychiatrist specializing in peripartum care. Another important health service resource is peripartum psychiatric access programs. These programs involve embedded provider-to-provider consultation to support obstetrical clinicians as they navigate mental health diagnoses and treatment planning.

#### FOLLOW-UP

*Dr. Leval:* The patient continued to receive care in the peripartum psychiatry clinic and received extensive psychoeducation about OCD. Treatment with sertraline was discontinued because of gastrointestinal upset, fluoxetine was started, and lorazepam as needed was continued. The patient engaged in both individual therapy with a social worker in the obstetrics clinic and group therapy for patients with peripartum OCD.

The patient also participated in a partial hospitalization program, which includes intensive, daily outpatient psychiatric care; during this time, treatment with olanzapine was started. Subsequently, the patient had a decrease in anxiety and insomnia. In addition, she engaged in exposure and response prevention therapy, including cooking with the baby in the kitchen and reading news articles about postpartum mental illness.

At a recent follow-up visit, the patient reported that the intrusive thoughts are infrequent, fleeting, and only minimally distressing. The compulsive behaviors have resolved, and she described an improved mood and better sleep. She is bonding well with her new baby and has been feeling more confident in motherhood. She resigned from her job to become a stay-at-home mother.

#### FINAL DIAGNOSIS

Postpartum obsessive-compulsive disorder.

This case was presented at Psychiatry Grand Rounds.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

## REFERENCES

1. Bauer AE, Maegbaek ML, Liu X, et al. Familiarity of psychiatric disorders and risk of postpartum psychiatric episodes: a population-based cohort study. *Am J Psychiatry* 2018;175:783-91.
2. Sharma V, Sommerdyk C. Obsessive-compulsive disorder in the postpartum period: diagnosis, differential diagnosis and management. *Womens Health (Lond)* 2015;11:543-52.
3. Guintivano J, Byrne EM, Kiewa J, et al. Meta-analyses of genome-wide association studies for postpartum depression. *Am J Psychiatry* 2023;180:884-95.
4. Postpartum Depression: Action Towards Causes and Treatment (PACT) Consortium. Heterogeneity of postpartum depression: a latent class analysis. *Lancet Psychiatry* 2015;2:59-67.
5. Diagnostic and statistical manual of mental disorders. 5th ed. Washington, DC: American Psychiatric Association, 2013 (<https://psychiatryonline.org/doi/book/10.1176/appi.books.9780890425596>).
6. Hudepohl N, MacLean JV, Osborne LM. Perinatal obsessive-compulsive disorder: epidemiology, phenomenology, etiology, and treatment. *Curr Psychiatry Rep* 2022;24:229-37.
7. Bergink V, Rasgon N, Wisner KL. Postpartum psychosis: madness, mania, and melancholia in motherhood. *Am J Psychiatry* 2016;173:1179-88.
8. Di Florio A, Jones L, Forty L, et al. Mood disorders and parity — a clue to the aetiology of the postpartum trigger. *J Affect Disord* 2014;152-154:334-9.
9. Koran LM, Hanna GL, Hollander E, Nestadt G, Simpson HB, American Psychiatric Association. Practice guideline for the treatment of patients with obsessive-compulsive disorder. *Am J Psychiatry* 2007;164:Suppl 7:5-53.
10. Mulcahy M, Long C, Morrow T, Galbally M, Rees C, Anderson R. Consensus recommendations for the assessment and treatment of perinatal obsessive-compulsive disorder (OCD): a Delphi study. *Arch Womens Ment Health* 2023;26:389-99.
11. Fisher PL, Wells A. How effective are cognitive and behavioral treatments for obsessive-compulsive disorder? A clinical significance analysis. *Behav Res Ther* 2005;43:1543-58.
12. Nakatani E, Nakagawa A, Nakao T, et al. A randomized controlled trial of Japanese patients with obsessive-compulsive disorder — effectiveness of behavior therapy and fluvoxamine. *Psychother Psychosom* 2005;74:269-76.
13. Rothbaum BO, Shahar F. Behavioral treatment of obsessive-compulsive disorder in a naturalistic setting. *Cognit Behav Pract* 2000;7:262-70.
14. Weingarden H, Garriga Calleja R, Greenberg JL, et al. Characterizing observed and effective behavioral engagement with smartphone cognitive behavioral therapy for body dysmorphic disorder: a methods roadmap and use case. *Internet Interv* 2023;32:100615.
15. Wilhelm S, Weingarden H, Greenberg JL, et al. Efficacy of app-based cognitive behavioral therapy for body dysmorphic disorder with coach support: initial randomized controlled clinical trial. *Psychother Psychosom* 2022;91:277-85.
16. Brakoulias V, Viswasam K, Dwyer A, Raine KH, Starcevic V. Advances in the pharmacological management of obsessive-compulsive disorder in the postpartum period. *Expert Opin Pharmacother* 2020;21:163-5.
17. Brandes M, Soares CN, Cohen LS. Postpartum onset obsessive-compulsive disorder: diagnosis and management. *Arch Womens Ment Health* 2004;7:99-110.
18. Sichel DA, Cohen LS, Dimmock JA, Rosenbaum JF. Postpartum obsessive compulsive disorder: a case series. *J Clin Psychiatry* 1993;54:156-9.
19. Goodman WK. Obsessive-compulsive disorder: diagnosis and treatment. *J Clin Psychiatry* 1999;60:Suppl 18:27-32.
20. Pittenger C, Bloch MH. Pharmacological treatment of obsessive-compulsive disorder. *Psychiatr Clin North Am* 2014;37:375-91.
21. Gale C, Glue P, Guaiana G, Coverdale J, McMurdo M, Wilkinson S. Influence of covariates on heterogeneity in Hamilton Anxiety Scale ratings in placebo-controlled trials of benzodiazepines in generalized anxiety disorder: systematic review and meta-analysis. *J Psychopharmacol* 2019;33:543-7.
22. Misri S, Millis L. Obsessive-compulsive disorder in the postpartum: open-label trial of quetiapine augmentation. *J Clin Psychopharmacol* 2004;24:624-7.
23. Bystritsky A, Ackerman DL, Rosen RM, et al. Augmentation of serotonin reuptake inhibitors in refractory obsessive-compulsive disorder using adjunctive olanzapine: a placebo-controlled trial. *J Clin Psychiatry* 2004;65:565-8.
24. Cox EQ, Sowa NA, Meltzer-Brody SE, Gaynes BN. The perinatal depression treatment cascade: baby steps toward improving outcomes. *J Clin Psychiatry* 2016;77:1189-200.
25. Screening and diagnosis of mental health conditions during pregnancy and postpartum: ACOG clinical practice guideline no. 4. *Obstet Gynecol* 2023;141:1232-61.
26. Jones I, Craddock N. Bipolar disorder and childbirth: the importance of recognising risk. *Br J Psychiatry* 2005;186:453-4.
27. Treatment and management of mental health conditions during pregnancy and postpartum: ACOG clinical practice guideline no. 5. *Obstet Gynecol* 2023;141:1262-88.

Copyright © 2024 Massachusetts Medical Society.