Obsessions and Compulsions in Women With Postpartum Depression

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Objective: The quantity, content, and intensity of the obsessions and compulsions of women with postpartum onset major depressive disorder were compared with those of women with major depressive disorder with non-postpartum onset.

Method: Sequential cases of women with postpartum onset major depression (N = 37) and major depression (N = 28) who presented to our Women's Mood Disorders program were included. Psychiatric examination using DSM-IV criteria and the Inventory to Diagnose Depression established the diagnosis of major depression. Obsessive thoughts and compulsions were reported on the Yale-Brown Obsessive Compulsive Scale and reviewed during the psychiatric examination. Comparisons between groups were performed with chi-square statistics, Fisher exact test and its extensions, and Mann-Whitney U test.

Results: Although more women with postpartum onset major depression (N = 21, 57%) than major depression (N = 10, 36%) reported obsessional thoughts, the difference between the groups was not significant (p = .13). However, for women who endorsed obsessions, those with postpartum onset had a higher median number (median = 7) than women without postpartum onset (median = 2, p = .00). Most of the difference in frequency of thoughts was owing to more women with postpartum onset major depression having aggressive thoughts (N = 20, 95%) than women with major depression (N = 6, 60%, Fisher exact p = .03). The most frequent content of the aggressive thoughts for women with postpartum onset major depression was causing harm to their newborns or infants. The presence or number of obsessional thoughts or compulsions was not related to severity of the depressive episode.

Conclusion: Childbearing-aged women commonly experience obsessional thoughts or compulsions in the context of major depressive episodes. Women with postpartum onset major depression experience disturbing aggressive obsessional thoughts more frequently than women with non-postpartum major depression.

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Women of childbearing age are at high risk for major depression. The lifetime risk for major depression in community samples has varied from 10% to 25% for women, with peak prevalence between 25 to 44 years of age. During this century, major depression is occurring earlier in the life span in successive generations and childbearing is extending over a longer period of time; therefore, an increasing number of women will become ill during their childbearing years.[1]

Several investigators have defined the postpartum period as one of markedly increased risk for the onset of serious mood disorder. Kendell and colleagues[2–4] reported that 87% of women admitted to a hospital within 90 days of birth received diagnoses of affective disorders, and the most common diagnosis was major depression. Although some prospective studies have not confirmed that depression occurs in excess in the period following birth,[5–7] the work of Cox et al.[8] provides an explanation. Cox and colleagues also did not find a significant difference in the point prevalence of depression in women at 6 months postpartum (9.1%) compared with the control women (8.2%), or in the 6-month period prevalence (13.8%, postpartum; 13.4%, controls). However, a 3-fold higher rate of depression onset was found within 5 weeks of childbirth, which demonstrates a clustering of new cases after birth.

There is debate about whether postpartum onset major depression is phenomenologically different from major

depression. Some reviewers[9] have noted that women with postpartum onset major depression are more likely to report energy loss, guilt, agitation, and psychomotor retardation than women with major depression. Women with postpartum onset major depression are significantly less likely to report suicidal ideation. However, data collected by Cooper et al.[10] and our group[11] provided little support for major symptom differences. However, the information we used was interview data obtained through emergency room evaluations. Patients with obsessions and compulsions are often reluctant to reveal them, and an emergency room setting is not ideal for sensitive questioning. Because our patients with postpartum onset major depression have frequently reported violent obsessional thoughts and visual images, we hypothesized that obsessions and compulsions were more common in women with postpartum onset major depression than in women with non–childbearing-related major depression.

Symptoms typical of anxiety syndromes, such as panic attacks, phobias, and obsessions and compulsions, are common symptoms of major depression. With data from the National Institute of Mental Health (NIMH) Collaborative Program on the Psychobiology of Depression, Coryell et al.[12] assessed the significance of anxiety symptoms that occurred in the context of primary major depression. From a sample of 359 subjects with primary major depression, 196 (55%) endorsed anxiety symptoms. They found that 37 (10%) of patients with anxiety symptoms had obsessions or compulsions or both, and that these patients had episodes of major depression that were longer and more severe. They experienced more depressive and functional morbidity during the 5-year follow-up period compared with patients with major depression and other anxiety symptoms (panic attacks or phobias) or major depression without anxiety symptoms. The development of autonomous anxiety disorders was rare. They concluded that when anxiety symptoms were restricted to episodes of major depression, they were prognostically significant epiphenomena rather than indicators of an additional disorder. To our knowledge, no studies that directly compare the occurrence of obsessions and compulsions in postpartum women with the occurrence in non-postpartum depressed women have been published prior to this study.

METHOD

A sequential sample of mothers who were seen in our Women's Mood Disorders Program was studied. Our program is a regional tertiary care consultation and referral resource in Cleveland, Ohio. Women were between the ages of 18 and 45 years. To qualify for inclusion in this investigation, the women had to fit criteria for major depression according to the Inventory to Diagnose Depression (IDD)[13] and psychiatric examination by a board-certified research psychiatrist (K.L.W.). The IDD, a 22-item self-report scale, establishes criteria for DSM-IV diagnosis and symptom severity. Postpartum onset major depression was defined as an episode of major depression that began within 3 months of a live birth. This time frame has been defined by epidemiologic studies[2–4,11] and differs from the definition of onset within 4 weeks of birth as suggested in DSM-IV.[14] The women with major depression in the comparison group had at least one child each, but the depressive episode for which they presented for treatment began neither during pregnancy nor in the first postpartum year.

At the initial evaluation, the self-report Yale-Brown Obsessive Compulsive Scale (Y-BOCS)[15] was completed by the women and reviewed by the psychiatrist. The time of onset of obsessions and compulsions was carefully determined to be certain that women with long-term undiagnosed obsessive-compulsive disorder (OCD) were excluded. Women who had obsessions or compulsions outside of an episode of major depression were also excluded.

We compared the number and content of obsessional thoughts and compulsions in women with postpartum onset major depression with those in women with major depression using chi-square statistics, Fisher exact test and its extensions, and Mann-Whitney U test with Bonferroni adjustment for multiple comparisons. We also compared the participants' ratings of intensity of the obsessional thoughts and compulsions. Each of the following was rated on 5-point Likert scales: (1) amount of time occupied by symptoms, (2) interference with functioning, (3) subjective distress, (4) efforts to resist, and (5) degree of control over the thoughts or compulsions. These measures of intensity of symptoms also were compared between women with postpartum onset major depression and women with major depression by using the Mann-Whitney U test. IDD scores were compared between women with postpartum onset major depression versus major depression and (1) presence of obsessions or compulsions, and (2) presence of aggressive obsessional thoughts with analyses of variance (ANOVAs). We tested for an association between the presence of aggressive obsessional thoughts and checking compulsions with the phi coefficient.

RESULTS

We found that 57% of women with postpartum onset major depression and 39% of women with major depression endorsed obsessional thoughts or compulsions. As shown in Table 1, the results did not support our hypothesis that obsessions or compulsions were significantly more frequent in women with postpartum onset major depression than with major depression. There were strikingly high percentages of women in both populations with

Table 1. Frequency of Obsessions and Compulsions in Women With Major Depression With and Without Postpartum Onset

Symptom	Postpartum Onset (N = 37)	Non-Postpartum Onset (N = 28)	p Value
Any symptom endorsed, N (%)	21 (57)	11 (39)	.21[a]
Any obsession endorsed, N (%)	21 (57)	10 (36)	.13[a]
Any compulsion endorsed, N (%)	17 (46)	8 (29)	.21[a]
Median number (range) for patients who endorsed the following:			
Symptoms (range)	8.5 (1–17)	3.0 (1–12)	.01[b]
Obsessions (range)	7.0 (1–14)	2.0 (1–8)	.00[b]
Compulsions (range)	2.0 (1–4)	1.5 (1–5)	.65[b]

[a]p Values based on χ^2 statistic.
[b]p Values based on exact Mann-Whitney U statistic.

Table 2. Content of Obsessions and Compulsions of Women With Major Depression With and Without Postpartum Onset

Content of...	Postpartum Onset N	Postpartum Onset %	Non-Postpartum Onset N	Non-Postpartum Onset %	p Value[a]
	N = 21		N = 10		
Obsessions					
Aggressive	20	95	6	60	.03
Miscellaneous	14	67	5	50	.45
Contamination	9	43	2	20	.26
Religious	7	33	2	20	.57
Somatic	6	29	3	30	1.00
Hoarding	4	19	2	20	1.00
Sexual	3	14	0	0	.53
Symmetry	2	10	2	20	.58
	N = 17		N = 8		
Compulsions					
Checking	13	76	3	37	.08
Miscellaneous	7	41	4	50	1.00
Cleaning	3	18	2	25	1.00
Ordering	3	18	1	12	1.00
Repeating	1	12	4	24	1.00
Counting	0	0	2	25	1.00

[a]p Values based on Fisher exact test.

Table 3. Content of the Aggressive Obsessions in Women With Major Depression With and Without Postpartum Onset

Obsession	Postpartum Onset (N = 20)	Non-Postpartum Onset (N = 6)	p Value[a]
Median number of aggressive obsessions (range)	3.0 (1–9)	2.5 (1–4)	0.40[b]
Specific aggressive obsession, N (%)			
Fear harming others	12 (60)	3 (50)	1.00
Do embarrassing things	12 (60)	3 (50)	1.00
Harm others if not careful	9 (45)	1 (17)	.44
Fear of terrible happenings	8 (40)	2 (33)	1.00
Violent images	7 (35)	2 (17)	.63
Act on unwanted impulse	6 (30)	1 (17)	1.00
Fear harming self	4 (20)	2 (33)	.60
Blurt obscenities	4 (20)	1 (17)	1.00
Fear of stealing	1 (5)	0 (0)	1.00

[a]p Values based on Fisher exact test unless otherwise indicated.
[b]p Values based on exact Mann-Whitney U statistic.

Table 4. Content of Miscellaneous Obsessions in Women With Major Depression With and Without Postpartum Onset

Obsession	Postpartum Onset (N = 14)	Non-Postpartum Onset (N = 5)	p Value[a]
Median number of miscellaneous obsessions (range)	3.0 (1–5)	1 (1.3)	.09[b]
Specific obsession, N (%)			
Fear of not saying right things	7 (50)	1 (20)	.34
Fear of losing things	7 (50)	0 (0)	.11
Bothered by certain sounds	5 (36)	3 (60)	.60
Bothered by intrusive neutral images	5 (36)	1 (20)	1.00
Need to know things	5 (36)	0 (0)	.28
Intrusive mental nonsense	3 (21)	0 (0)	.53
Certain colors significant	2 (14)	0 (0)	1.00
Superstition fears	2 (14)	1 (20)	1.00
Have lucky numbers	1 (07)	1 (20)	.47
Fear of saying things	1 (07)	0 (0)	1.00

[a]p Values based on Fisher exact test unless otherwise indicated.
[b]p Values based on exact Mann-Whitney U statistic.

these thoughts. We did find that in women who endorsed at least 1 obsessional thought or compulsion, those with postpartum onset endorsed a greater number of obsessions than those with non-postpartum onsets. As shown in Table 2, our clinical observation that the character of the obsessional thoughts differed was supported. Women with postpartum onset major depression were more likely to have aggressive obsessional thoughts. Table 3 shows the frequencies of the specific aggressive thoughts that are contained in the Y-BOCS. The rates of specific types of thoughts did not differ between groups.

We reviewed individual miscellaneous obsessions in women with postpartum onset major depression compared with women with major depression (Table 4). No miscellaneous types of obsessional thoughts were significantly more common in women with postpartum onset major depression compared with women with major depression. The intensity of the obsessions or compulsions also did not differ between the 2 groups. However, 5 types of obsessions occurred only in women with postpartum onset major depression.

The severity of depressive symptoms as measured by the IDD did not differ for women with postpartum onset major depression versus major depression ($F = 0.25$, $df = 1,63$; $p = .62$) or between women who had obsessional thoughts or compulsions and those who did not independent of postpartum status ($F = 0.26$, $df = 1,63$; $p = .61$). Depression severity also did not differ for women with and without aggressive obsessional thoughts (ANOVA, $F = 0.26$, $df = 1,26$; $p = .61$).

We performed an exploratory analysis of the relationship between aggressive obsessional thoughts and checking compulsions. There was a significant association between the presence of aggressive obsessions and checking

compulsions for all women in the study sample ($\phi = 0.63$, $p = .00$) and for women with postpartum onset major depression ($\phi = 0.68$, $p = .00$). Obsessions were not as highly correlated in women with major depression ($\phi = 0.38$, $p = .10$). Of the 20 women with postpartum onset major depression who had aggressive obsessions, 13 (65%) had checking compulsions. When aggressive obsessions related to harming others (harm others, violent images, harm others if not careful) were tallied, and compulsions having to do with checking on harm to others (check no harm, nothing terrible happened, and making mistake) were tallied and compared, 12 (67%) of 18 women with postpartum onset major depression with obsessions reported compulsions.

DISCUSSION

In this study, we found that childbearing-aged women who had ever been pregnant commonly experienced obsessional thoughts or compulsions in the context of major depressive episodes. The proportions of women with these thoughts for both groups were higher than the 10.3% rate found by Coryell et al.,[12] who included both sexes and a broader group of depressed patients (with bipolar and psychotic subtypes) compared with patients in our study. In a British study, Gittleson[16] reviewed 398 diagnostic case notes and found that obsessions were present in 124 cases (31.2%) with World Health Organization diagnoses of depression, a rate similar to that for our non-postpartum subjects. Gittleson noted no sex difference in the rate of obsessions coupled with depression, but women had a longer illness duration than men (16.5 months vs. 10.5 months).

Women with postpartum onset major depression experience disturbing aggressive obsessional thoughts significantly more frequently than women whose depression occurs outside of childbearing. Given the expressed examples of the obsessions such as putting the baby in the microwave, drowning the baby, stabbing the baby, or throwing the baby down the stairs or over a railing, the presence of aggressive thoughts toward the infant is difficult to conceptualize as being adaptive from a survival standpoint. We have reports from mothers that describe gruesome brief obsessional visual images, such as the baby lying dead in a casket, seeing the baby's bleeding head cracked by a ceiling fan, or seeing the baby being eaten by sharks. Aggressive obsessional thoughts have been reported to be highly correlated with checking compulsions.[17] We explored the possibility that aggressive obsessional thoughts were associated with checking compulsions, which could be considered adaptive maternal behavior (vigilance about the infant), and found that checking and aggressive obsessions were significantly related in women with postpartum onset major depression. Women who fulfilled diagnostic criteria for OCD and women who experienced obsessions or compulsions outside of episodes of depression were excluded from this study. However, investigators have provided evidence that OCD begins or worsens more frequently during the postpartum period compared with other times in women's lives.[18,19]

The speculation that puerperal hormonal change affects brain function in a manner that increases risk for both OCD and aggressive obsessional thoughts in postpartum onset major depression is intriguing. It is tempting to speculate that these thoughts may be the result of dysregulated serotonin function in the postpartum period.[20] However, the reason that obsessions are limited to a specific type is challenging to explain.

This observation also raises the possibility that patients with obsessional thoughts in the context of major depression may respond preferentially to serotonergic drugs, as do patients with OCD. To our knowledge, major depression with obsessional thoughts or compulsions has not been considered a separate subtype of depression in terms of pharmacologic responsivity. In the Coryell et al.[12] study, the presence of obsessional thoughts or compulsions in depressed patients was associated with a poor prognosis. This subgroup of patients had lower recovery rates, global assessment scores, and psychosocial function scores than depressed patients with other or no anxiety symptoms across the 5-year follow-up period. This depressive subtype may be less responsive to the interventions used at the time of the NIMH Collaborative Program on the Psychobiology of Depression study (tricyclic antidepressants), and that poor treatment response may have resulted in less favorable 5-year outcomes.

To test the hypothesis that the presence of obsessional thoughts will be correlated with a greater response to the selective serotonin reuptake inhibitor (SSRI), we are currently conducting a randomized clinical trial in women with postpartum onset major depression to compare responses to an SSRI with responses to a standard tricyclic antidepressant.

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