Improving Clinical Monitoring for Potential Postpartum Depression

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Two studies published in the February issue of the Archives of General Psychiatry suggest that taking a careful psychiatric history and performing a timely, routine blood test can predict the likelihood of developing postpartum depression (PPD) and of needing hospitalization. In each article, the authors described some of their findings as being “remarkable.” Given that the focus of this issue of Primary Psychiatry is women’s mental health, I thought it useful to share the published information with you.

As any experienced clinician knows, PPD is both serious and common. PPD may have a prevalence approaching 20% and can have a profound impact on the well being of the new mother and on the cognitive and behavioral development of the newborn infant. In the first study, the investigators looked for long-suspected endocrine risk factors for PPD. Endocrine-associated mood changes have been described in association with reproductive hormones during pregnancy, a history of premenstrual syndrome, and a history of oral contraceptive-induced mood changes. It has already been shown that corticotropin-releasing hormone (CRH) plays an important role in the etiology of depression among non-pregnant individuals and that hyperactivity of CRH neurons and the hypothalamic-pituitary-adrenal (HPA) axis may trigger depressive symptoms.

CRH regulates the HPA axis. According to the authors, this study is the first to identify a point in midpregnancy during which placental CRH (pCRH) maternal plasma “is a moderate and independent predictor of PPD symptoms.” They propose that pCRH be used as a diagnostic test to identify women at high risk for developing PPD symptoms. The presence of depressive symptoms during mid-pregnancy appears to increase the predictive power of pCRH concentrations. Levels of pCRH in maternal plasma increase dramatically throughout and then drop precipitously after delivery. The authors speculate that the onset of PPD may represent pCRH withdrawal, with consequent suppression of hypothalamic CRH release and HPA axis dysregulation. The study data show that elevated pCRH but not cortisol or adrenocorticotropic hormone is a significant predictor of PPD symptoms.

Moreover, pCRH was found to be an independent predictor of PPD symptoms, but it was not associated with concurrent depressive symptoms. Being the only study to report this association, it obviously needs to be replicated. However, among women with family histories of postpartum mood disorders or with personal histories of depression, screening for pCRH is worth considering. Since blood is usually drawn to test for gestational diabetes at 24–28 weeks of pregnancy, this could be conducted at the same time.

The second study examined risks and predictors of readmission for a mental disorder during the postpartum period. To the knowledge of the authors, this study is the first to compare psychiatric readmission rates of mothers and nonmothers with mental disorders. The authors compared mothers and nonmothers to assess whether childbirth increases the risk for psychiatric readmission and to identify predictors of psychiatric readmission during the postpartum period. It was a population-based cohort study merging data from the Danish Civil Registration System and the Danish Psychiatric Central Register. The main outcome measure was readmission rates to psychiatric hospitals during the 12 months after childbirth (first live-born child).
In summary, the study found that the period of highest risk of psychiatric readmission in new mothers was 10–19 days postpartum and the period of lowest risk was during pregnancy. Childbirth was associated with an increased risk of readmission during the first postpartum month, after which risk for readmission was higher among nonmothers. A previous diagnosis of bipolar affective disorder was the strongest predictor of readmissions 10–19 days postpartum. In all, 26.9% of mothers with this diagnosis were readmitted within the first postpartum year.

According to the findings, “mothers with mental disorders have lower readmission rates compared with women with mental disorders who do not have children. However, in the group of new mothers, the first month after childbirth is associated with increased risk of psychiatric readmission.” When applied to clinical practice, these findings should lead physicians to closely monitor women with a history of bipolar affective disorder the first postpartum year.

In addition to the clinical focus articles in this issue, there is a case report of schizophrenia-like symptoms presenting in a patient with a subtype of Niemann-Pick disease. Sami Richa, MD, and colleagues describe the case of a 27-year-old man hospitalized with a diagnosis of paranoid schizophrenia. The authors report that this is only the third published case of Niemann-Pick type B associated with a psychiatric disorder, and the first in which the neurologic disease presented before schizophrenia. Hepatosplenomegaly had developed before the onset of psychiatric symptoms. The authors conclude that psychiatric symptoms without neurologic impairment may be a manifestation of Niemann-Pick disease (intermediate type AB) or a chance association (type B). However, it is important to remember that neurologic causes always need to be excluded as possible causes of new-onset mental status changes, including psychosis.

Also in this issue is a new regular feature that will address a current research article that may (or may not) have immediate implications for clinical decision making. For example, this month, the article discussed is a meta-analysis of studies of the newer antidepressants. As it used an interesting approach to comparing the studies, and also showed some specific differences among the antidepressants, it could influence the way in which clinicians select first-line treatments. My intention for the column is to reach out to experts on each topic and get their take on the findings of each study. This month, I asked Michael E. Thase, MD, at the University of Pennsylvania in Philadelphia to be my expert interviewee. The one constant in this new column is the fact that the selected research paper will have been published after the previous issue of Primary Psychiatry has gone to press. I hope our readers find the information helpful.

REFERENCES