e1563 Depression in Women: Windows of Vulnerability and New Insights Into the Link Between Estrogen and Serotonin [Commentary]

1531 First-Onset Psychosis Occurring in the Postpartum Period: A Prospective Cohort Study

1538 Prevalence of Mood Disorders and Service Use Among US Mothers by Race and Ethnicity: Results From the National Survey of American Life

1546 Decreased Nocturnal Oxytocin Levels in Anorexia Nervosa Are Associated With Low Bone Mineral Density and Fat Mass

1552 Raloxifene as an Adjunctive Treatment for Postmenopausal Women With Schizophrenia: A Double-Blind, Randomized, Placebo-Controlled Trial

Biopsychosocial Vulnerabilities in Women

With this month's Focus on Women's Mental Health offering, we are pleased to include the online commentary "Depression in Women: Windows of Vulnerability and New Insights Into the Link Between Estrogen and Serotonin." You can find this commentary by Lokuge and colleagues at PSYCHIATRIST.COM. In this timely and thoughtful commentary, the authors discuss biologically driven vulnerabilities that account for an increased risk of depression in women. These "windows"—or time frames—of vulnerability include the parts of the female reproductive lifespan that are characterized by hormonal changes or fluctuations. These events include menarche, the luteal phase of the menstrual cycle, pregnancy and the postpartum, and the menopausal transition. The authors summarize our current understanding of the complex interplay between sex differences in mood disorders and the relationship between estrogen and neurotransmitter expression and function. This commentary provides a wonderful foundation for the data provided in the original research articles in this Focus on Women's Mental Health section.

Postpartum psychosis is the subject of an article by Bergink and colleagues. In their research, they prospectively followed a cohort of women who experienced a first psychotic episode during the postpartum period. Earlier research has identified a previous diagnosis of bipolar disorder and history of psychiatric hospitalization as risk factors for postpartum psychosis,[1] therefore marking known risks in women with previous histories of psychiatric disorder, but being less helpful in understanding first onset of illness as postpartum psychosis. The objective of the study by Bergink et al was to prospectively characterize the risk factors, phenomenology, and clinical course of postpartum psychosis. Due to a relatively rare incidence at 0.1%–0.2% of deliveries,[2] prospective data on postpartum psychosis have been sparse. Of the 51 women with first-onset postpartum psychosis, 32 presented with symptoms of mania (63%). Of the rest, 7 had depressive features, 8 had mixed features, and only 4 had psychotic symptoms without prominent mood symptoms. Median onset of psychotic symptoms was 8 days postpartum. Among their interesting results, the investigators found a higher risk of new-onset postpartum psychosis in primiparous women and suggested that the finding supports childbirth as a "neurobiological stress test," a finding that also fits with the high recurrence rate of postpartum psychosis among women who have had it after previous pregnancies. The investigators propose that further study is needed into whether psychosis confined to the postpartum context is a distinct entity or not, as opposed to the often held view that a bipolar disorder diathesis underlies postpartum psychosis in most cases.

Maternal depression beyond the postpartum period is a compelling public health problem, as a great deal of research has associated depression in mothers with a multitude of risks in their children, and more recent prospective data have demonstrated that treatment of maternal depression to remission is associated with improvement in the mental health of the children.[3,4] Therefore, accurate identification of mothers suffering from depression is paramount to children's mental health. Boyd et al conducted an epidemiologic study to assess racial groups and prevalence of mood disorders in women in the United States. More than 2,000 African American women over the age of 18 participated, as did almost 800 Caribbean black women and 400 non-Hispanic Caucasian women. Boyd and colleagues found that the prevalence rates of mood disorders were higher for white mothers (22%) compared to African American (17%) and Caribbean black (16%) mothers. Among black women with depression over the previous year, African American women were less likely than Caribbean women to utilize mental health services, suggesting ethnic variation in utilization of services.

In another article in this section, Lawson and colleagues investigated the neuroendocrinology associated with anorexia nervosa, bone loss, and body fat. Anorexia is a severe eating disorder that is more common in women than men and is associated

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with severe medical complications that include bone loss. In this study of 17 women with anorexia and 19 controls, participants were hospitalized overnight and oxytocin levels were obtained every 20 minutes for a 12-hour period. Patients with anorexia were demonstrated to have significantly lower oxytocin levels than controls. Mean overnight oxytocin levels were associated with lower bone mineral density, fat mass, and leptin levels, independent of estradiol levels. The investigators suggest that oxytocin is an important hormone for study in anorexia, as it appears to play a pivotal role in appetite, food intake, social behavior, and bone remodeling. They also recommend prospective studies to build upon the data demonstrated in this cross-sectional study.

As summarized in the introduction of the article by Usall and colleagues, estrogen appears to play a protective role in the development and manifestation of schizophrenia. In a small randomized, placebo-controlled trial, the investigators assessed the efficacy of raloxifene on the positive and negative symptoms of schizophrenia. Raloxifene is a selective estrogen receptor modulator, with agonist and antagonist effects at estrogen receptors depending on the tissue, and it does not effect breast or uterine tissue as does estrogen. Therefore, women who cannot or prefer not to use estrogen treatment may consider raloxifene a reasonable treatment option. The investigators recruited 33 postmenopausal women with schizophrenia into a 12-week treatment trial. The active treatment group experienced significantly more improvement on the positive, negative, and overall symptoms of schizophrenia, as assessed by the primary outcome measure, the Positive and Negative Syndrome Scale. Adverse events were not different between the active and placebo groups. These results lend credence to the role of sex-specific disease state differences influenced by sex hormones and support a treatment individualized for a subsample of patients, postmenopausal women. Further research in this area is certainly warranted.

As always, we are grateful to the authors who have contributed to this special Focus on Women's Mental Health section, and to our peer reviewers. To provide feedback about this section, please contact me at mfreeman@psychiatrist.com.

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