Cohort study

Pregnant women screening positive for depressive symptoms at 24–28 weeks may have increased risk of preterm birth but more precise research is needed

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Implications for practice and research

- Screening for prenatal depressive symptoms and pregnancy anxiety is recommended.
- In predicting birth outcomes, essential controls include antidepressant use, medical risk conditions, body mass index and smoking.
- Analyses should consider low birth weight (LBW) and preterm birth (PTB) together to determine any distinct psychosocial risk factors and establish precise pathways.

Context

The prevalence of prenatal depression and anxiety ranges between 5% and 16% and the consequences are extensive. In addition to negative maternal effects, research points to detrimental fetal effects, and higher rates of PTB and LBW. Postpartum symptoms of depression and anxiety are often experienced by women prenatally and may lead to maternal suffering and parenting ineffectiveness. Thus, research attention to prenatal and postpartum affective symptoms and their causes is warranted.

Methods

Straub et al screened a sample of 14,175 pregnant women between 24 and 28 weeks gestation for depressive symptoms using the Edinburgh Postnatal Depression Scale (EPDS). Scores of ≥12 or endorsement of the self-harm item identified those at risk.

Findings

Comparable to past studies, the screen positive rate was 9.1% (N=1298). Multivariate analysis revealed an association between prenatal depression symptoms and PTB adjusting for maternal age, race, history of PTB and insurance status (adjusted OR=1.3). Separate analyses indicated significant effects of depressive symptoms on LBW and small for gestational age (SGA).

Commentary

Strengths of this study include the large cohort of women screened with immediate follow-up and triage for positive screens.

Limitations include lack of control for antidepressant use, pre-pregnancy BMI, or high-risk behaviours (eg, smoking and substance use are often associated with depression and PTB). At least one study suggests that prenatal antidepressant use, not depression symptoms, predicts PTB. Most existing studies also control for a larger number of medical risk conditions associated with PTB. Thus, control of a wider range of confounding factors was needed.

Second, the authors state that the distribution of spontaneous versus medically indicated PTBs did not significantly differ between the at-risk versus the not at-risk cohort. However, analyses should have been conducted for only spontaneous PTBs. In order to understand how psychosocial factors influence the complex phenomenon of PTB, research must distinguish different aetiologies.

Third, recent research has shown that the EPDS is multifactorial and measures prenatal anxiety symptoms as well as depression. Alternative depression screening instruments commonly used in pregnancy (eg, Beck Depression Inventory, Center for Epidemiologic Studies Depression Scale) do not include symptoms of anxiety. Therefore, we would recommend screening for prenatal anxiety separately from depression in future studies.
Furthermore, an EPDS score of 13 or more in pregnancy indicates ‘probable minor depression’ and a higher score (≥15) indicates ‘probable major depression’. Therefore, some of the women in the at-risk group in this study may be at low risk for depression and would not merit follow-up. This should not bias the results, but it has implications for evaluation and treatment.

Finally, the authors emphasise findings regarding PTB and de-emphasise results concerning LBW and SGA. These results should be compared in terms of effect size. The authors cite six studies including a recent meta-analysis supporting their findings; however, they do not mention the small effect sizes found in that meta-analysis. Analyses should also control for gestational age in testing LBW to clarify mechanisms. Depressive symptoms in pregnancy have been associated with fetal growth in several robust studies, but much less often with spontaneous PTB. In contrast, prenatal anxiety has most often been associated with PTB, especially anxiety concerning one’s pregnancy. Thus, the findings of this study are ambiguous as to whether the EPDS would have predicted LBW better than PTB, and whether anxiety may be responsible for the results.

Competing interests None.

References