Prenatal Parental Depression and Preterm Birth: A National Cohort Study

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(BJOG. 2016;123(12):1973–1982)

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DOI: 10.1097/01.aoa.0000521241.48878.aa

Topics: Nonobstetric Maternal Disease, Neonatal Morbidity and Mortality, Obstetric Complications

Preterm birth is a major cause of infant mortality and has long-term health consequences for survivors. Maternal psychosocial stress has been suggested as a risk factor for adverse pregnancy outcomes, including preterm birth. Paternal depression may also increase maternal stress levels and indirectly affect the pregnancy outcomes. This national cohort study was undertaken to investigate maternal and paternal depression as risk factors for preterm birth.

In this study from Sweden, data from social and medical national registries were obtained for live births occurring between June 2007 and December 2012. A total of 366,499 singleton births and indications of depression available through information from prescriptions for antidepressants and hospital records from 12 months before conception until 24 completed weeks of gestation were studied. Multinomial logistic regression models were used to estimate the association between both paternal and maternal prenatal depression and very and moderately preterm birth. All statistical analyses were performed using STATA/MP 12.0 for INDOWS (Stata Corporation, College Station, TX). After adjustment for maternal stress and sociodemographic confounding factors (maternal smoking, body mass index, and maternal depression that preceded paternal depression), new paternal depression (indication of depression after 12 mo with no depression) was associated with modest changes in risks of very and moderately preterm birth (odds ratio (OR), 1.38; 95% confidence interval (CI), 1.08-1.83 and OR, 1.12; 95% CI, 1.00-1.26, respectively) and new maternal depression was associated with increased risks of very and moderately preterm birth (OR, 1.51; 95% CI, 1.23-1.84, and OR, 1.34; 95% CI, 1.23-1.46, respectively). It was also noted that maternal recurrent depression was associated with an increased risk of moderately preterm birth (OR, 1.42; 95% CI, 1.32-1.53), whereas recurrent paternal depression was not associated with risks of either very or moderately preterm birth.

In conclusion, the results indicate that new paternal depression during the year before conception or in early pregnancy can affect the mother-fetus dyad, and can increase the risk of preterm birth. Paternal depression and lack of social support from the partner can be a substantial psychosocial adversity for the expectant mother. The results clearly indicate that both maternal and paternal depression can cause preterm birth, and interventions to prevent preterm birth in maternal and child health programs should include the mother-father-child triad.

Methods to Induce Labour: A Systematic Review, Network Meta-Analysis and Cost-effectiveness Analysis

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(BJOG. 2016;123(9):1462–1470)

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DOI: 10.1097/01.aoa.0000521242.56502.14

Topic: Pharmacology, Obstetric Complications

Labor induction rates have been on the rise over the past 20 years in many developed countries, including the United Kingdom and the United States. Various methods are available for labor induction, and choosing 1 method over another depends on several factors, such as a woman’s obstetric and medical history, national guidelines and local protocols. Techniques also differ in their effectiveness and risk of complications. The present study aimed to assess labor induction methods using a comprehensive review and synthesis of the evidence in order to determine which interventions were most clinically effective and most cost-effective.

A systematic review of pertinent randomized controlled trials was conducted to compare interventions for third-trimester labor induction. Pharmacologic, mechanical, and complementary induction methods were included. Outcomes evaluated included vaginal delivery not achieved within 24 hours (VD24), uterine hypertimulation with fetal heart rate changes, cesarean section, serious neonatal morbidity or death, serious maternal morbidity or death, instrumental delivery, neonatal intensive care unit admission, and Apgar score <7 at 5 minutes. Network meta-analyses (NMA) were performed for all outcomes that had adequate data. The NMAs used both direct and indirect evidence to compare each induction method being assessed with all the other methods, even if specific techniques had not been directly compared. A de novo decision-tree model was constructed to calculate the cost-effectiveness of different induction interventions using the data from the NMAs. Cost analysis included costs of the labor induction technique, delivery costs, and costs of...