

Editorial: The Treatment of Depression During Pregnancy

According to the World Health Organization, major depression is the second leading contributor to the global burden of disease in people 15-44 years old. Unfortunately, pregnancy is not protective against depression with 5-7% of pregnant women suffering significant symptoms (1, 2). Women who are depressed during pregnancy are less likely to get prenatal care and more likely to abuse drugs and alcohol (3-5). Depression during pregnancy is associated with poorer obstetrical outcomes such as preterm birth and low birth weight (6). Importantly, depression during pregnancy often continues into the postnatal period (7) and maternal depression is known to have adverse effects on maternal-infant bonding as well as child development and behavior (8-11).

In 2009, the American Psychiatric Association (APA) and American College of Obstetricians and Gynecologists (ACOG) published consensus guidelines regarding the treatment of women with depression during pregnancy (12). The guidelines recommend that psychotherapy be used for pregnant women with mild to moderate depression and antidepressants be prescribed for pregnant women with moderate to severe depression. Both interpersonal psychotherapy and cognitive behavioral therapy have been shown to be efficacious during pregnancy. Also, pregnant women report psychotherapy is the most acceptable treatment option (13). The large advantage of prescribing psychotherapy during pregnancy, aside from treatment preferences, is that the fetus is not exposed to medications that permeate the placenta. The drawback is that psychotherapy is time-intensive and requires adequately skilled practitioners. In addition, it may not be as effective for more severely depressed women.

For pregnant women with moderate to severe depression, antidepressant medication should be considered alone or in conjunction with psychotherapy. Antidepressants are unlikely to cause major congenital malformations with first trimester use. However, their use has been associated with third trimester risks such as preterm birth (14), poor neonatal adaptation syndrome (15) and persistent pulmonary hyperten-

sion (PPHN) of the newborn (16). On average, infants exposed to third trimester antidepressant use are born a week early and poor neonatal adaptation syndrome generally resolves within a week making these two adverse effects clinically minor. PPHN is more serious but has been associated with only a small (<1%) risk when antidepressants, particularly serotonin reuptake inhibitors, are used in the third trimester. The APA has stated in their depression treatment guidelines that in PPHN "the preponderance of evidence from published studies on this topic does not support an association" (17) because the data have been conflicting. The use of the different classes of antidepressants is beyond the scope of this editorial but we refer the reader to reviews on the topic (12, 18). The long-term impact on children exposed to antidepressants during pregnancy has been incompletely explored but the data to date are reassuring. In general, the use of antidepressants for moderate to severe depression during pregnancy outweighs the risk but this must be decided by each individual patient and her physician. We recommend that patients who are concerned about the use of antidepressants during pregnancy consult with a physician who specializes in reproductive psychiatry.

The recently published APA/ACOG guidelines briefly mention that electroconvulsive therapy (ECT) is safe and effective in pregnancy but do not include specific recommendations for its use in pregnancy. However, in 2001, the APA published guidelines regarding the use of ECT in pregnancy (19). ECT is an effective and safe treatment for severe depression. Its use remains somewhat stigmatized, especially during pregnancy. To determine whether ECT should be prescribed during pregnancy, the physician should consider the psychiatric presentation first and foremost. The trimester of pregnancy should guide the precautions that should be used. ECT is recommended for patients who are acutely suicidal, psychotic, have medication-resistant symptoms or severe depressive symptoms such that the mother is failing to make expected weight gains. In our institution, medication resistance in the context of severe psychiatric symptoms (i.e., self neglect or acute suicidality)

is the most common reason for referral for ECT. ECT is effective for depression during pregnancy. In a review of the literature by Anderson and Reiti, 84% of the pregnant women for whom efficacy data was available (N=37) had at least a partial response (20).

Overall, the risk of ECT in pregnancy appears to be small. The general maternal risks of ECT regardless of pregnancy status are those of memory loss, confusion and headache. Pregnant women receiving ECT should be monitored to make sure they continue taking their prenatal vitamins and attending obstetrical visits which may require the involvement of the women's support system. If she is mothering other children, her cognition also needs to be closely monitored on the day of treatment and in between treatments.

The fetal risk of ECT is the focus of most published case reports and case series. These reports point to five main concerns: fetal bradyarrhythmias, preterm birth, anesthesia risk, maternal aspiration, and maternal seizure. These concerns can be addressed by maternal and fetal monitoring as per the APA guidelines. Fetal heart rate changes are the most common fetal effect of ECT but tend to be self-limited. After 14 weeks gestational age, fetal heart rate monitoring should be done before and after ECT treatments. Preterm birth is a leading cause of long-term morbidity and mortality in children. In 3.5% of reported cases in the Anderson literature review, preterm contractions and labor were observed. In the majority of those cases, a normal neonate was born. Monitoring of uterine contractions is recommended before and after ECT once the fetus is viable (generally agreed to be after 24 weeks GA). An additional case of delayed premature contractions was reported in 2010 but the neonate was born healthy after tocolytics were used to stop premature labor (21). The most commonly used anesthetics, methohexital and propofol, are non-teratogenic but fetal monitoring should be performed to assess fetal heart rate. Succinylcholine, often used as a muscle relaxant, is also non-teratogenic. Pregnant women are at increased risk in the second and third trimesters for gastric reflux. This could lead to aspiration during ECT. Therefore, premedication with an antacid such as H2 blocker should be considered. In the 3rd trimester the risk of aspiration is higher so pregnant women should be intubated during the procedure. If ECT causes status epilepticus, vascular supply to the fetus could be compromised even resulting in fetal death. Pregnancy is a time of increased seizure threshold so the risk of prolonged seizure during pregnancy is low.

The most common reason for avoiding ECT during pregnancy is likely to be stigma among psychiatrists, obstetricians and patients. Education about the low risk procedure is necessary and is best done by a psychiatrist that has experience performing ECT. Other neuromodulation treatments such as transcranial magnetic stimulation may provide patients with another alternative in the future (22). The education of psychiatrists regarding the treatment of depression during pregnancy is an important step in allowing patients to understand the full range of treatment options. Depression can be understood as an endogenous toxin to the maternal and fetal environment. When assessing risk with a patient, it is helpful to remind her that she should not compare her individual risk to a non-depressed, pregnant woman. She should compare the risk of treatment with the risk of remaining depressed. If her depression is mild and not interfering with functioning, she may elect to try psychotherapy or take a "wait and see" approach. If her depression is moderate to severe, she should consider medications and psychotherapy together. If she is suicidal, psychotic or treatment resistant, hospitalization and/or ECT should be strongly considered.

In summary, depression during pregnancy is a common illness and knowledgeable counseling regarding the risk of untreated illness and treatment options should be made available to women and their supports. Psychotherapy, antidepressants and ECT are all reasonable options during pregnancy. The prescribing physician should consider the psychiatric presentation as primary in decision-making regarding treatment. Lastly, a collaborative approach will require that the treating psychiatrist provide accurate psychoeducation to all team members which will allow the pregnancy to be safely monitored during depression treatment.

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