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Mental Health Corner

Depression in Pregnant Adolescents: Considerations for Treatment

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Abstract. Pregnancy in adolescents continues to be a major public health concern in the US. Depression in adolescent females, is also a major health concern. Adolescence is a time of rapid metabolic, hormonal, physiologic, and developmental changes, and when the physiologic and psychological changes that occur during pregnancy are superimposed upon normal developmental changes, a complex medical picture may emerge which can include depressive symptomatology. Treating depression in the pregnant adolescent is complex due to the concerns about the use of selective serotonin reuptake inhibitors (SSRIs) in any pregnant woman, the fact that only one SSRI (fluoxetine) is FDA-approved for depression in the pediatric population, the concern over the black box warning for antidepressants in the pediatric population, and the reality that untreated depression in pregnancy has been shown to be associated with poor outcomes for both mother and baby. This article discusses these concerns and provides some recommendations/considerations for treatment of depression in pregnant adolescents.

Key Words. Adolescent pregnancy—Selective serotonin reuptake inhibitors—SSRIs—Safety and efficacy—Adolescents—Cognitive-behavioral therapy—Interpersonal therapy

Introduction

Adolescent pregnancy continues to be a major concern in the United States, and the US continues to have the highest adolescent birth rate among developed nations.[1] Thirty-four percent of young women become pregnant at least once before they reach the age of 20.[2] By age 18, one in four young women will become pregnant, and within two years, more than 31% will have a repeat pregnancy.[3] Recent statistics also suggest that 82% of pregnancies in adolescents are unplanned.[4]

Fortunately, there have been significant declines in both pregnancy and birth rates for adolescents in the US over the past decade,[5] although a significant discrepancy exists with pregnancies remaining much higher than actual birth rates, suggesting that many pregnancies are electively terminated.[4]

After reaching 117 pregnancies per 1000 in 15–19 year olds in 1990, the pregnancy rate decreased to 83.6 pregnancies per 1000 in 2000 in this age group, an overall decrease of 28 percent.[6] From 1990 to 2000, the pregnancy rate among 15–17 year olds decreased 33%, from 80.3 to 53.5 per 1000,[5,7] and the US has set a national goal of decreasing the rate of teen pregnancies to 43 pregnancies per 1000 females 15–17 years of age by 2010.[5]

The adolescent birthrate in the US is 40.4 per 1000 in 15–19 year olds[8,9] and has declined from a recent high of 61.8 per 1000 in 1991 to 40.4 (a record low) per 1000 in 2005.[10] In younger adolescents, aged 15–17, birth rates declined 42%, from a peak of 38.6 in 1991 to 22.4 in 2003,[5,7] and more recently, to 21.4 per 1000 in 2005, a record low.[9]

Depression has been estimated to affect from 8% to 25% of females at some point in their lives[11,12] with a peak prevalence occurring during the childbearing years of 25 and 44.[12] Epidemiological studies have shown that major depressive disorder has a prevalence of 4–8% in adolescents,[13] and other data have shown that 14% of 12–17 year olds have had a major depressive episode in their lifetime with 9% having had one in the past year. Females, after puberty, are more than twice as likely as males to experience a depressive episode.[14]

Recent data from the 2005 Youth Risk Behavior Survey, a national self-report measure completed by ninth–twelfth graders[15] indicated that nationwide 36.7% of females had felt so sad or hopeless almost

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every day for more than two weeks in a row that they stopped doing some usual activities. 21.8% had seriously considered attempting suicide during the 12 months preceding the survey; 16.2% had made a plan about how they would attempt suicide, and 10.8% had actually attempted suicide. Of those who had a suicide attempt, 2.9% had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated medically.[15]

Suicide is the fourth leading cause of death in 1−19-year-olds,[16] fifth leading cause of death in 5−14-year-olds,[17] and third leading cause of death in 15−24-year-olds.[17] The 1999 Surgeon General's Call to Action to Prevent Suicide[18] reported a 100% increase in suicide among 10−14-year-olds between the years of 1980 and 1996, and youth suicide has been estimated to reach its peak between the ages of 18 and 24.[19,20] Suicide in youth has increased significantly over the past 50 years with 4.0 suicides per 100,000 in 15−24-year-olds in 1957[21] to a peak of 13.3 per 100,000 in this age group in 1977.[22] From 1950 to 2000, suicide rates in youth increased with each passing decade, even with national goals set for decreasing youth suicide. Depression is the single most important risk factor for adolescent suicide.[23]

Adolescent Pregnancy and Depression

Adolescents are a heterogeneous group who undergo rapid metabolic, hormonal, physiologic, and developmental changes,[24] and pregnancy, with its concomitant physiologic and psychological changes, represents an overlay of complexities. Pregnancy has often been considered a time of emotional well-being,[25] protective against depression and other psychiatric disorders.[26] However, the evidence suggests that relapse or recurrence of an existing depressive disorder, as well as new episode onset, may often occur during pregnancy.[27] Additionally, it has also been found that the risk of relapse to depression is high (75%) for those who stop taking medication during pregnancy.[28]

Studies have shown that up to 16% of pregnant women may suffer from antenatal depression.[11,29] For adolescents, the prevalence of antenatal depression has been estimated to be between 16% and 44%, almost twice as high as among adult pregnant women and non-pregnant adolescents.[30] Longitudinal studies have shown that depressive symptoms among pregnant adolescents become more severe between the second and third trimesters.[31] National studies demonstrate that adolescent mothers are twice as likely to experience depression compared with adult mothers.[32] Recent data has shown that teen depression while pregnant may be independently associated with subsequent pregnancy.[32] Additionally, a recent systematic review has identified suicide as a major reason for maternal death in pregnancy.[33,34]

Untreated depression in pregnancy is associated with poor maternal nutrition, poor attendance at antenatal clinics, and increased use of alcohol and other substances. [25] Further, untreated maternal depression is known to be associated with poor prenatal care, preterm delivery, small infant size in relation to gestational age, and postpartum depression.[34]

General Treatment Considerations in Depression in Adolescents

Treatments for depression include psychopharmacological interventions and/or evidence-based psychosocial interventions, such as cognitive behavioral or interpersonal psychotherapies. Psychopharmacological interventions most commonly include the administration of selective serotonin reuptake inhibitors (SSRIs) or other classes of antidepressants. Discussion of antidepressants other than SSRIs is beyond the scope of this paper.

SSRIs are generally considered to be safe for use for depression in adults, having shown a tolerable side effect profile and less toxicity than other classes of antidepressants in case of overdose, but recent findings have questioned their safety in the pediatric population, specifically with regard to suicidal ideation in children and adolescents. Results from several studies led the Federal Drug Administration (FDA) to require a black box warning regarding use of anti-depressants in the pediatric population, up to age 24. Additionally, fluoxetine is the only SSRI currently approved by the FDA for use in pediatric depression (ages 8−17); thus, any other antidepressants prescribed are considered ''off-label.'' Further, there are no antidepressants currently approved by the FDA for use in pregnancy, so use of such medications in pregnancy with any age group is ''off-label.''

Treatment of Depression with Anti-depressants during Pregnancy

Given the risks noted earlier regarding untreated depression in pregnancy, it seems clear that depressed adolescents should receive treatment for antenatal depression. A number of studies have been conducted over the past 30 years to look at potential harmful effects of the use of antidepressants in pregnancy.[25−29] No studies have been specifically targeted to adolescents, so it is unknown as to whether use in adolescents would increase/decrease any risks associated with use. The studies have aimed their objectives at two primary concerns: (1) congenital abnormalities in newborns, primarily thought to be caused by 1st trimester use,