

Depression Among Pregnant Adolescents: An Integrated Treatment Approach

Eva M. Szigethy, M.D., Ph.D.

Pedro Ruiz, M.D.

In this report we describe the case of an adolescent girl with a history of multiple early abandonments who developed a depressive disorder in the context of the interplay between developmental factors inherent to adolescence and issues related to pregnancy. It demonstrates many important diagnostic and treatment considerations with respect to treating depression in this population, including 1) the developmental tasks of adolescence, 2) the normal developmental stages of pregnancy and differentiation of normal emotional responses from pathological mood states, 3) the role of psychosocial interventions, which contribute to both the psychotherapeutic alliance and the involvement and utilization of key social support networks for the adolescent, 4) the risk-benefit assessment of using psychopharmacological agents for the treatment of depression during pregnancy, and 5) appropriate integration of psychotherapeutic and psychopharmacological treatment approaches.

*“She referred
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Case Report

History

Ann (a pseudonym) was a 15-year-old black girl when she was referred for treatment of depression by her school counselor and her foster parents. She was treated with weekly psychotherapy and fluoxetine, and while in treatment (6 months later) she became pregnant. Ann was abandoned by her mother during infancy and was then moved around among various relatives until age 12. Information regarding Ann’s early development or family psychiatric history was unavailable. When she was 12, Ann was placed in a nurturing foster home, where she has remained until now. Ann has never met her biological father and has had no further contact with her biological mother. Her current foster parents have been involved in foster parenting for 20 years and, in addition to Ann, have housed five other foster daughters ranging from age 10 to 17 years.

Initial Assessment

When Ann was seen for the first time, she immediately started talking about herself with cheerful but superficial chatter. Her intelligence, good sense of humor, and charm were apparent. In contrast to this outward demeanor, Ann admitted to frequently feeling sad and hav-

ing extended periods of insomnia, fatigue, decreased concentration, and variable appetite. She denied having any neurocognitive depressive symptoms. She also denied having experienced any traumas, including her history of abandonment by multiple caregivers, stating that it was “no big deal.” She did recall being told by her relatives when she misbehaved that “not even your mother wanted you.”

Ann described her foster home as secure and fair. Ann appeared to have some superficial friendships but did not appear to have any intimate, lasting friendships. She enjoyed playing sports and thought of herself as a “jock.” Ann denied having antisocial behaviors, promiscuity, substance abuse, or other dangerous behaviors. Her foster mother described Ann’s biggest problems as having chronically low self-esteem and an extreme fear of intimacy, thus always needing to test limits to see whether she could elicit abandonment. Ann had extremely poor insight regarding either of these latter issues.

Course of Treatment

After the initial interview, Ann was diagnosed with a depressive disorder that did not fully meet the criteria for major depression. It was decided to set a course of 30 weekly psychotherapy sessions to address her symptoms, with both a cognitive/behavioral component, to address maladaptive coping strategies and help her link her feelings to her behavior, and an insight-oriented component, to help her connect her past experiences to her present emotional and social difficulties. Ann appeared both eager to work on her problems and reassured by the time-limited nature of the treatment contract.

Over the first few months of therapy, Ann behaved well at home and school. In this early phase of treatment the therapy focused on her difficulty in trusting new relationships, especially in light of her many abandonments, and her continual need to test limits by missing sessions or showing up late. In this regard, Ann was able to identify several roles that defiance played in her life: a way of being in control, a way of getting her parents to show they cared, and a way of testing the limits of rejection. At times, however, she tended to blame her behavior on external circumstances and resisted any suggestion that her problems could have an internal source.

Ann remained superficially cheerful during the sessions but admitted to worsening depressive symptoms, including intermittent suicidal ideation. Given her inadequate response to a 3-month course of psychotherapy, fluoxetine was prescribed as adjunctive treatment after careful discussion of the options with Ann and her foster parents. Over the next few months, her behavior slowly stabilized, and on return to school in the fall, she began to excel academically. At this time, she denied having any depressive symptoms.

During this period, Ann acquired a boyfriend, with whom she had her first sexual relations. Several sessions were spent discussing her sexual awakening and speculating about an unconscious wish to become pregnant. Ann adamantly denied wanting to become pregnant but became extremely fidgety and irritable when the subject was broached. She agreed to use appropriate birth control methods and regularly visit a gynecologist. After missing two sessions, Ann revealed that she had cheated on a recent pregnancy test and that she had missed her last menstrual period. Ann was convinced that she was 2 months pregnant because she had gained weight, felt fatigued, and craved Spam. She agreed to take a witnessed pregnancy test, the result of which was positive. Ann claimed to be ambivalent about her pregnancy. She stated that she had considered an abortion but that her boyfriend was adamantly against it. Her fantasy was that they would run away together to raise the baby and live happily ever after. Of note, her boyfriend was a musician, as was her biological father; this was the only fact that she knew about her biological father. There was little evidence that her boyfriend, also age 15, was willing to serve in any paternal or relationship capacity.

A meeting with Ann, her foster parents, and her county case worker was arranged to discuss Ann's disposition. Her foster parents were extremely angry about her promiscuous behavior and did not want her back in their home. After a long discussion, during which their love for Ann was evident, they decided to take her back on a trial basis. Their concerns about Ann's ability to manage her impulses without medication were discussed; however, given her good behavior and commitment to attend weekly and, if needed, twice-weekly psychotherapy sessions, it was decided to continue her treatment without medication.

In therapy, we spent the next couple of months exploring Ann's feelings about her pregnancy. She exhibited denial that having a baby would change her life. She saw the baby as an extension of herself, a person who would love her unconditionally. As her pregnancy progressed from the first to the second trimester, Ann showed little evidence of bonding with the baby. She referred to her pregnancy as "it" and often made no reference at all to her pregnancy during the sessions.

Ann missed the next several sessions. Her foster mother was contacted, and she described Ann as irritable, more withdrawn, easily fatigued, and apathetic about the pregnancy; her apathy included failure to seek appropriate prenatal care. Given that her previous depressive symptoms had improved with antidepressants, fluoxetine treatment was reinitiated. It was felt that the risks associated with not treating her depressive episode aggressively were greater than the risks associated with using fluoxetine during the end of the second trimester. Several psychoeducational sessions with the foster parents were held. They held the misconception that if Ann was grown up enough to become pregnant, she could be responsible for all aspects of her life in an adult fashion.

Ann started to attend therapy sessions regularly, reported feeling happier, and was getting along better with her foster family at home. This was confirmed by her foster mother. These reports contrasted with how Ann appeared during her sessions. Her mood fluctuated between superficial cheerfulness and labile anger, the

latter being linked to comments such as "You are always ruining my good mood by making me talk about my pregnancy" and descriptions of the sessions as "stupid and worthless." Over the next few sessions, Ann began to speak more spontaneously about her pregnancy. She reported anger at her foster mother for trying to push Ann into adoption and telling her that she was "unsuited to be a mother." Ann next reported a dream where "my foster mother is holding a baby boy and then gives the boy to me. I am able to care for the baby." Her own ambivalence about being able to care for the baby was questioned during one session, and Ann answered "maybe."

Ann became more excited about her pregnancy as she began to feel the movements of the fetus. She fantasized about having a boy and naming him Victor because "all of the important men in my boyfriend's family are named that." She also proudly reported that she wanted to keep the baby because she felt that with her foster family's support she could handle its care. Ann reported that she felt calmer and was not experiencing any side effects from the fluoxetine. She then quickly added, "I decided to stop the medication a month ago for the baby's sake." She also denied having any depressive or anxious symptoms. She was congratulated about her honesty and thoughtful consideration of her baby's welfare. She expressed being "shocked that you aren't angry at me or rejecting me." This discussion was used as a transition to discussions about her fear of being a "bad mother" like her biological mother and how her parenting would differ from that of her own mother. Ann answered, "My mom abandoned me, I am going to take care of my baby, even if I get held back in school." She continued without fluoxetine through the remainder of the pregnancy.

Ann began to talk about all the things she was doing to prepare for the baby. She expressed how difficult it was to balance these activities with her schoolwork and spending time with her boyfriend. She also began to make statements such as "I'm trying to plan the baby's life into my life," as she grappled with the realities of becoming a mother. Ann also began to speak more tenderly about her interactions with her baby: "I also read him baby books and play light music on my stomach." A recent ultrasound examination had identified the baby's sex as male. Ann expressed her happiness about this and related how her boyfriend was bragging to all his friends about being "man enough to make a boy." She added that her boyfriend had been very supportive and offered to stay home to take care of the baby so she could finish school. Ann had told him that she wanted to stay home herself "at least for the first 6 weeks" so the baby would bond with her and not call anyone else "Mom."

Ann began the next session with a list of somatic complaints that she was experiencing, such as stomach cramps, back aches, heartburn, and a feeling of heaviness. She also expressed worry about how painful labor might be, stating "I feel sorry for myself for having to go through it." She then switched the topic to how much calmer she was feeling. She seemed more peaceful and more mature. Ann worried that her boyfriend would be jealous of the baby because she would need to spend more time with the baby than with him. She continued, "I love him but am afraid of his leaving. I think I love too much, you're not supposed to fall too much in love."

This was the first time that Ann was able to express these feelings directly.

Ann's baby was born 2 weeks later, a beautiful healthy baby boy. She brought the baby to one of her sessions about 1 month later. She held the baby in a very tender way and watched him fondly during the session. She was given positive feedback about her interactions with him, and she said with a beaming smile, "He's perfect." She also spoke about how much she had grown up during the pregnancy.

Over the month following her baby's birth, Ann had felt more irritable, tearful, and tired. She requested that fluoxetine treatment be started again because "it helped to calm me before" and because "it helped my foster mom be a good mother." Given the incipient return of her depressive symptoms and her risk of developing a full-blown postpartum depression, fluoxetine treatment was reinitiated. Ann's symptoms remitted and continued to remain in remission for the next year with continued medication, weekly therapy, and good support from Ann's foster family and boyfriend.

Discussion

Despite abundant access to birth control measures, the United States has one of the highest rates of adolescent pregnancy in the Western world, and 10% of women become pregnant during their high school years (1). Adolescent pregnancy is even more prevalent among black (22.7%) and Native American (20.0%) youth, lower socioeconomic subgroups, and more chaotic family environments (2). In addition to dealing with the physical symptoms and body changes associated with pregnancy, adolescent expectant mothers have not yet completed their own maturation in physical, cognitive-emotional, and social realms. Pubescence is also associated with identity consolidation, separation/individuation from parental figures, and social role transitions toward a more organized, mature character configuration (3). The complex interplay of these factors, confounded by the state of pregnancy, may make transition into adulthood particularly challenging.

Normal pregnancy is also a time of physiological and psychological flux. Hormonal changes may produce unaccustomed mood swings and physical discomforts; psychological changes may contribute to the revival of past conflicts and anxieties (4). Pregnancy superimposed on the transformational period of adolescence can have a positive effect on development. It can help facilitate the resolution of normal developmental changes in puberty such as consolidation of self-esteem (5); in certain cultures, it can also serve as a way to gain status, solidify kin networks, and help the adolescent become independent and responsible (6).

Alternatively, pregnancy during the adolescent period can lead to maladaptive behaviors, including failure to seek medical care and dropping out of school, as well as negative emotional states. How a woman responds to pregnancy is related to her early childhood experiences, coping mechanisms, personality style, psychological

functioning, life situation (including social support network), and physical status (7).

Conceptually, the 9 months of normal pregnancy can be divided into three developmental stages (8). The first stage lasts from conception to approximately 4 months. Progesterone levels are high during this stage, and physical symptoms of fatigue, breast tenderness and enlargement, nausea, and urinary frequency predominate. During this first stage, the woman's main task is to adjust to a change in body image and self-image by incorporating the fetus as an integral part of herself (9). Normal psychological changes include ambivalence, anxiety, mood lability, denial, identification with female figures, regression, preoccupation with self, and magical thinking. Apprehension about miscarriage, the fetus's health, and role changes are common. For the adolescent, pregnancy can be one of the first visible manifestations to the outside world that she has had a sexual relationship.

The second stage starts around the fourth month of pregnancy, with the recognition of fetal movements, and continues to the beginning of the last trimester. It represents the first awareness by the expectant mother that the fetus is a separate identity over which she has no control. The final phase, which corresponds to the third trimester, is marked by increased bodily discomfort, compromised sleep, and fatigue. Also, mood swings, anxiety about labor and delivery, and fears about being an adequate mother and having an abnormal baby predominate. In addition, maternal introspection and nesting behavior increase as the mother prepares herself for a nurturing relationship with her infant.

This case demonstrates that depression must be considered in the context of the biological, parental, social, and cognitive factors that affect the adolescent at any given time. Ann had several predisposing risk factors for depression during pregnancy, including a history of previous depression, history of multiple abandonments and parental neglect, poor peer relationships, and being an unwed mother with an unplanned pregnancy. She also demonstrated many of the cognitive factors common in adolescent depression: a negative self-concept, a passive coping style, and cognitive distortions, including feeling a lack of control over negative events.

This case also emphasizes the importance of differentiating between the normal emotional disequilibrium associated with maturation related to the maternal role and the more pathological mood state of depression, which could be harmful for the mother and for the development of a normal early mother-child relationship (5–8). While approximately 85% of pregnant women develop a relatively mild, self-limited mood disturbance called "baby blues" during gestation (9), at least 10% of pregnant women develop a full depressive disorder (10). The prevalence of depression among pregnant adolescents has been reported to be between 16% and 44%; that is almost twice as high as among adult pregnant women and nonpregnant adolescents (11). Although vegetative symptoms such as fatigue and appetite changes are often present in

nondepressed women during pregnancy, major depression during this period can be reliably identified by using the Research Diagnostic Criteria (12). Longitudinal studies have shown that depressive symptoms among pregnant adolescents become more severe between the second and third trimesters (8). This increase in severity may be associated with stressors such as conflicts with the baby's father, lack of social supports, decisions about abortion and adoption, and concerns about one's ability to care for an infant. Untreated maternal depression is known to be associated with poor prenatal care, preterm delivery and small infant size in relation to gestational age, postpartum depression, and maternal suicide (13, 14). Recent findings suggest that maternal neglect can also impact the development of brain and endocrine systems involved in the mediation of stress responses in animal and human infants (15, 16). For Ann, the severity of her depressive symptoms, her impaired functioning in multiple settings, and her inability to pursue appropriate prenatal care suggested a clinical depression (17).

This case also illustrates the importance of an integrated multimodal treatment program for depression to optimize maternal outcome while minimizing fetal risk. For Ann, individual psychotherapy was initiated as the first-line, least invasive alternative. Controlled clinical trials among nonpregnant depressed adolescents have demonstrated that cognitive behavior therapy and interpersonal therapy are safe and efficacious in the treatment of depression (8, 18). For Ann, a combination of cognitive strategies, to help her reframe maladaptive beliefs and behaviors about herself and the pregnancy, and an insight-oriented approach, to help her relate past abandonments to current difficulties with maintaining intimate relationships, appeared most helpful. With this latter approach, the therapist helped to reconstruct her historical narrative by combining empathy and confrontation so that Ann could develop a more consolidated sense of self and form a healthy mother-infant attachment. The therapy also served to contain her negative emotions in the context of a reciprocal, rewarding relationship.

Psychotherapeutic interventions should involve family members in order to educate them about depression as well as to address occupational and financial concerns related to the pregnancy. Work by Beardslee et al. (19) has shown that parental involvement in treatment helps promote resiliency in children at risk for depression. Support groups, school-sponsored educational programs, and group therapy may also improve the adolescent mother's interpersonal functioning, facilitate normative peer identification, generate realistic expectations about the postpartum period, and enhance social support.

When psychotherapy alone does not result in adequate remission of the depressive symptoms, psychopharmacological treatments must be considered. In the case of a pregnant patient, a risk-benefit assessment for both mother and baby must be discussed, especially because all commonly used psychotropic medications cross the placenta. Given the high rate of relapse when antidepressant

medications are discontinued (20), the decision to stop antidepressant treatment during pregnancy must be carefully assessed. In this regard, the American Medical Association (21) has defined the following physician responsibilities in prescribing drugs for pregnant women: 1) select the drug with the most favorable risk-benefit profile, 2) inform patients about the implications of drug treatment and the priority of birth control measures in the case of inadvertent drug exposures, and 3) determine the exposures and report them if birth defects are observed.

Another general treatment consideration is the need for informed consent: unless the adolescent is an emancipated minor, informed consent must be obtained from legal guardians for all treatment modalities used (8). Informed assent from the adolescent is preferable and will likely improve treatment compliance. Appropriate documentation of clinical decision making, including the patient's and other parties' ability to understand and appreciate the risks and benefits of treatment, is essential.

Although to date we know of no psychotropic medication that has been approved by the U.S. Food and Drug Administration for use during pregnancy, a series of antidepressant medications for the treatment of depression in adults during pregnancy have been well studied (8). Tricyclic antidepressants have been the most studied for pregnant women and have been found to be effective with careful dose monitoring (8). There does not appear to be a higher than average risk of major fetal malformations or detrimental effects on behavior, global intelligence, language development, or temperament of the newborn from the use of tricyclic antidepressants (22). A neonatal withdrawal syndrome was noted in the offspring of a mother treated with tricyclic antidepressants until delivery; this condition consisted of cyanosis, tachypnea, tachycardia, irritability, hypotonia, tremor, feeding difficulties, urinary retention, bowel obstruction, and profuse sweating (23). In general, depressed adolescents show a less robust response to tricyclic antidepressants than depressed adults do, which may be due to the influence of pubertal hormones or an immature noradrenergic system (24). Given reports about the possible cardiotoxic effects of tricyclic antidepressants in children, ECGs and plasma level checks should be performed regularly.

Several studies (8, 25) have suggested the efficacy of serotonin reuptake inhibitors (SSRIs) in the treatment of adolescent depression. In the adult literature (8, 26), prenatal exposure to SSRIs, including fluoxetine, fluvoxamine, paroxetine, and sertraline, has generally not been associated with a high risk of major birth defects. In one study (26), fluoxetine was associated with a higher than normal rate of minor fetal anomalies. Reports of prenatal complications include one case (27) of fluoxetine toxicity in a newborn, which consisted of agitation and tachycardia. Also, Chambers et al. (26) found a higher risk of prenatal complications in women who took fluoxetine during the third trimester than in women who stopped taking it before 25 weeks of gestation. These complications included premature delivery, lower birth weight, and poor neonatal adap-

tation as evidenced by respiratory difficulties, cyanosis, feeding problems, and jitteriness. It is important to note that this study did not control for maternal depression, which may have contributed to the premature delivery and lower birth weight. In another study (28), fluoxetine exposure in utero did not appear to produce significant differences in IQ, temperament, mood, activity, or distractibility in children studied up to 86 months of age. However, long-term effects of SSRIs on neurobehavioral development or other effects on the infant's developing central nervous system have not been well studied to date.

While new information concerning the use of atypical and novel antidepressants—including trazodone, nefazodone, bupropion, and mirtazapine—has become available, the safety and efficacy of these agents for pregnant adolescents has not yet been systematically explored. The monoamine oxidase inhibitors phenelzine and tranylcypromine should be avoided during pregnancy because of the greater risk of congenital malformations and the potential for hypertensive crisis (29).

In the present case, Ann was treated with psychotherapy alone during the first trimester, the time of highest teratogenic risk to the fetus. Fluoxetine, an agent that she had responded to in the past, was reinitiated during the second trimester in response to exacerbation of depressive symptoms. There was no evidence of fetal distress or anatomical anomalies or of physiological or behavioral problems in her newborn. If Ann had responded only partially to fluoxetine during her pregnancy, switching to another SSRI would have been a reasonable alternative.

If Ann had developed a more refractory depression, augmentation of her antidepressant with a mood stabilizer (e.g., lithium, carbamazepine, or valproic acid) or ECT could have been considered. Although a comprehensive risk-benefit analysis of mood stabilizers during pregnancy is beyond the scope of this article, all three agents are relatively safe during the second and third trimesters but should be avoided during the first trimester, given a higher risk for birth defects (30). If effective, all three agents should be slowly tapered a few weeks before delivery, to minimize neonatal toxic effects, and resumed as necessary in the postpartum period.

ECT has been found to be useful during pregnancy in situations in which aggressive treatment is required, psychopharmacological approaches are contraindicated, or intensive psychotherapeutic interventions have failed. Few complications of ECT have been described at any stage of pregnancy, although it is not frequently used for adolescents (31).

In summary, in this case a combination of developmentally appropriate psychotherapy and carefully justified and documented psychopharmacological treatment appeared to be most efficacious in helping Ann's depressive symptoms during pregnancy. The main therapeutic objective of Ann's integrated treatment was to treat her depression while also helping her with the enormous task of making the role transition into adulthood and motherhood. Given that pregnancy, particularly during adoles-

cence, represents a complex and ever-changing interplay between physiological and psychological factors, both psychiatric symptoms and treatment interventions must be continually reassessed throughout the pregnancy. In this case, Ann's depressive symptoms initially responded to psychotherapeutic intervention; later on, she developed a relapse that necessitated the addition of an antidepressant after a careful risk-benefit analysis. While fluoxetine appeared to help Ann with the neurovegetative symptoms of depression and affect regulation, continued psychotherapy was crucial in helping her to grow emotionally and cognitively, as well as in improving her ability to form mature relationships both within the psychotherapy setting and in her life. It is imperative that when psychopharmacological intervention becomes necessary, it be integrated with psychotherapeutic intervention to assure optimal outcome for both mother and baby. The determination of which of the components of the therapy (i.e., therapeutic alliance, cognitive techniques, insight-oriented interpretations, or family psychoeducational approach) and/or medication use (i.e., physiological effects, expectations about medication) could be considered the "active ingredient" in the successful treatment of depression in pregnant teens would require larger-scale comparative studies. As our knowledge about the etiology of depression in pregnant adolescents continues to evolve, it is hoped that it will translate into more effective preventive strategies, in terms of both teen pregnancies and teen-onset depression.

Received July 20, 2000; revision received Oct. 20, 2000; accepted Oct. 25, 2000. From the Department of Psychiatry, Harvard University Medical School, Boston; the Department of Psychiatry, Children's Hospital, Boston; and the Department of Psychiatry and Behavioral Sciences, University of Texas Medical School at Houston. Address reprint requests to Dr. Ruiz, Department of Psychiatry and Behavioral Sciences, University of Texas Medical School at Houston, 1300 Moursund St., Houston, TX 77030; pedro.ruiz@uth.tmc.edu (e-mail).

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