Adolescent Pregnancy—A Multifaceted Problem

Elizabeth R. McAnarney, MD, and Donald E. Greydanus, MD

Adolescent pregnancy is a major child health problem in the United States. Nearly one million adolescents became pregnant in 1977. Adolescent pregnancies result from earlier biologic maturity and sexual activity.

The average age of menarche in the United States is approximately 12.6 years and has declined four months during each decade in the last century. Boys also mature earlier than their peers of previous generations. As a result of better nutrition, the minimum age of biologic maturity has probably been attained. More young people are sexually active now than they were 25 years ago. In the late 1940s, 20% of unmarried women between 16 and 20 years of age reported having had intercourse. In 1971, 46% of unmarried women aged 19 years reported having had intercourse at least once and in 1976, 55%.[1] In 1975, 69% of a sample of adolescent males were sexually experienced with black and Hispanic youth having had their first coital experience at the earliest ages.[2]

Of the approximately one million adolescents who became pregnant, 570,622 delivered children and approximately 370,000 had abortions. Birth rates to adolescents decreased between 1965 and 1975 for all ages, except for blacks and whites under 15 years and whites 15 to 17 years of age.

Adolescent pregnancy is a medical and psychosocial high-risk condition, especially for adolescents 15 years of age or younger. Young adolescents often do not receive adequate prepartum care. As is true for adults who delay obstetric care, some experience obstetric complications. In 1975, 13% of babies born to mothers 15 years of age weighed less than 2500 gm compared to 6% born to mothers between 25 and 29 years of age.

Psychosocial problems associated with adolescent pregnancy are multiple. Pregnancy disrupts the education of the adolescent mother and father. A recent study has shown that those who became parents as adolescents finished fewer years of formal education and had lower level jobs as adults than did those who did not become parents during adolescence. Adolescents frequently have subsequent children before they reach adulthood. Those subsequent children have a higher incidence of prematurity than do those born first.[3] Adolescent mothers who have more than one child may become totally dependent on public assistance for a lifetime.

There are few data concerning adolescents as parents. At one time, it was assumed that children of adolescents would return to their extended families where their maternal grandmothers would provide their care. As women's roles change, more are seeking jobs outside their homes and are unwilling to raise a second generation of children. Thus, today's adolescents may be assuming more of the basic childbearing responsibilities for their own children than was true for adolescent mothers in previous generations. In areas where day care is not available as an alternative to the grandmother's care of the child, the adequacy of the care infants receive is highly questionable. The prospect of a "child mothering a child" is a poignant and frightening one.

Adolescents are thought to be abusive parents, but few data support this thesis. Neglect may be a far greater problem than abuse. The adolescent mother's developmental immaturity, passivity, and ignorance about the proper care of children

EDUCATIONAL OBJECTIVES

Counsel an adolescent girl who requests contraceptive advice or a prescription.

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may contribute the most to the problem. Children of adolescent parents may be taken to the clinician's office for injuries and burns because the young mother has failed to protect her child, rather than because the adolescent mother purposefully hurt her child. Conditions such as a diaper rash may be particularly severe in the child as the adolescent mother may not intercede actively to prevent its progression. Basic ignorance about child care often compounds the adolescent mother's passivity.

DIFFERENTIAL DIAGNOSIS

In order to be diagnosed, pregnancy must be suspected.

Adolescents may present in the office with an openly stated concern about pregnancy. Others may complain of vague symptoms of headaches, abdominal pains, or school absences with no stated indication of pregnancy. Clinicians should ask the adolescent about her last and past menstrual periods if they think the adolescent is pregnant. If the adolescent's menstrual period is delayed, practitioners should ask her about her sexual activity, contraceptive usage, and the possibility of pregnancy. Some adolescents have irregular menses normally for the first year following their menarches, so it may be difficult to diagnose pregnancy solely on the basis of a medical history.

If pregnancy is a possibility, the child's physician must decide whether to do the urine screening test and pelvic examination in the office to confirm pregnancy or whether to refer the adolescent to an obstetrical colleague or to an adolescent maternity program for these evaluations. Two-minute urine pregnancy tests may be performed 10 to 14 days after the first missed period. False-negative tests can occur for as long as six weeks after the first missed period. A new serum pregnancy test which detects pregnancies earlier is available in some medical centers. A pelvic examination may confirm pregnancy by demonstrating enlargement of the uterus, but this physical finding is dependent upon the week of gestation.

TREATMENT

Pregnant Adolescents

If the adolescent is pregnant, the clinician should discuss the options of abortion (depending upon the week of gestation), maintaining the pregnancy and placing the child for adoption, or maintaining the pregnancy and keeping the child as a single parent or marrying. Discussion of disposition of the pregnancy beyond the initial phase is best accomplished in the presence of the adolescent's male partner, her parents or both. The physician who may have known the pregnant adolescent's family for several years is in an ideal position to help them during the crisis of pregnancy.

Since adolescent pregnancy is a family crisis, it is ideally managed within the context of the family. The decisions the pregnant adolescent will make, particularly if she maintains the pregnancy and keeps the child, will change her family structure permanently.

The pregnant adolescent's obstetrical care is beyond the expertise of most child health clinicians. Assistance in referral to an obstetrical facility or an adolescent maternity care program and preparing the adolescent for the care she will receive there are important responsibilities for the pediatrician. If the adolescent chooses to have an abortion, she may choose to receive pre- and postabortion psychological counseling, and contraceptive counseling and continuing health care from the pediatrician. If she chooses to carry her pregnancy to term and place the baby for adoption, the pediatrician may want to provide counseling and support concerning this choice. Adoption of the baby represents a significant loss to the young mother. Psychological preparation for this loss and active discussion of the adolescent's feelings may diminish the immediate and subsequent negative effects of adoption on the adolescent. The pediatrician may be knowledgeable about previous losses which the adolescent has experienced and how she has coped with them. Abortion and adoption counseling might also include the girl's male partner if he is still actively involved, as he often experiences similar feelings of loss.

If the adolescent keeps her baby, she needs preparation for labor and delivery and for her future role as a parent. Her male partner and/or family should be encouraged, if at all possible, to provide her this support. The adolescent father is frequently engaged in a crisis of his own and may be able to resolve some of his own feelings about the pregnancy by actively helping his partner.

The very young adolescent may not be able to think about her future role as a parent as developmentally she has not reached full formal operational thinking and is not yet able to think about the future. Most often information provided to the very young adolescent about parenting her newborn should be given at the time of the baby's birth and immediately thereafter, when she can relate concretely to the tasks at hand. Even though, because of her young age, she may not assume the majority of the newborn care of her child after discharge from the hospital, she must be encouraged to parent her child actively. The older adolescent may be much more able to learn about parenting during the course of her pregnancy and apply that knowledge to her future childrearing practices than can the very young adolescent.

Nonpregnant or Previously Pregnant Adolescents

Prevention of first and subsequent pregnancy during adolescence is the ideal solution to the problem of adolescent pregnancy.

An important aspect of preventing pregnancy is to identify which adolescents are sexually active and assist them in the use of appropriate

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contraceptive methods. It is disturbing that the majority of young individuals who experience an unwanted pregnancy do not use any contraception. One study indicated that sexual activity without any protection imposes a pregnancy risk of 58%; regular use of any method may reduce this risk to 11% while use of a medical method may lower it to 6%.

Many adolescents resist using contraception because of a conscious or unconscious motivation to become pregnant.[4] The young adolescent (aged 11 to 14) is often not developmentally prepared to understand the concept of pregnancy. Typically she may use pregnancy as a means of forging closer ties with her mother or possibly, as a way of discovering if her young body is physiologically mature enough to conceive without her thinking further about the consequences of her sexual activity. The middle adolescent (14 to 17 years of age) may use this process as an attempt to compete with her mother, as a means to acquire new autonomy or power, or as a weapon to change attitudes or events about her. The older adolescent (17 to 20 years) may have a specific motivation to solidify her own sexual identity or to improve a perceived weakening sexual relationship.

There are other reasons adolescents do not use contraception. Some think they are "special" and can engage in sexual activity without conceiving. Some equate the use of contraception with an unacceptable admission that they have a keen interest in sex or are planning intercourse. Others wish to proceed through adolescence without restrictions and do not want limitation of their "free spirit" by specific contraceptive planning. Some are unable to use methods requiring self-intimacy (such as the diaphragm) or to use a method which might be discovered by parents (such as a birth control pill packet). The young adolescent who is dating an older male may be unable or unwilling to support his use of condoms and thereby allow him to share in the couple's effective contraception.

The physician can impede the interested adolescent's use of contraception by not offering contraception with assurance of adequate confidentiality. Some young people seek contraceptive counseling and information without their parents' or guardians' knowledge or permission. If physicians cannot assure this confidentiality in their office settings, then they should refer their adolescents to resources where such care is provided.

Recent extensive reviews indicate that the combined birth control pill (with estrogen and progesterone) and injectable medroxyprogesterone acetate (Depo-Provera) are the most effective methods. Both have pregnancy rates of less than one per 100 women years of use.[5–7] Other methods, in general, are not as effective. Although specific failure rates vary, the well-motivated adolescent who is given adequate instruction can successfully use oral contraceptives (combined or progesterone only), intrauterine devices (IUDs) (Copper 7 or Copper T), diaphragms with vaginal creams (or foams), or condoms with vaginal contraceptive foam. Because of its possible carcinogenic effect (as noted by the development of mammary hyperplasia and nodules in dogs), its possible increased association with congenital malformations, and its propensity for producing a high incidence of abnormal menstrual bleeding and amenorrhea, the Federal Drug Administration (FDA) has not approved the use of medroxyprogesterone acetate for contraceptive use in the United States.

The FDA has, however, approved the use of diethylstilbesterol (DES) as a postcoital contraceptive. A dose of 25 mg twice a day given orally for five days commencing within 72 hours of coitus is effective in preventing pregnancy. An antiemetic should be given concomitantly to prevent the severe nausea and emesis associated with high dose estrogen administration. Early pregnancy should be ruled out and informed consent obtained before the use of DES, in view of the DES effect on both male and female fetuses.

TABLE. Use of Contraception Among Individuals 15 to 24 Years of Age*

Method	%
Birth control pill	44.9
Intrauterine device (IUD)	7.2
Condom	5.7
Vaginal foam/cream	2.7
Diaphragm	1.1
Rhythm	1.3
Withdrawal	0.8
Douche	0.2
Other (including sterilization)	5.0
None	31.1

* Data from: Westoff CF: Trends in contraceptive practice: 1965–1973. *Fam Plann Perspect* 8:54, 1976.

A thorough history and physical examination should precede the recommendation or prescription of contraception. Pelvic examination should be performed and a Papanicolaou smear and cervical culture for *Neisseria gonorrhoeae* obtained. We also recommend discussion of the sexually transmitted diseases for which the unwary adolescent may be at risk.

The most frequently used contraceptive method is the birth control pill (see Table). Although there are risks from "the pill," mortality rates from pregnancy and childbirth for women up to age 30 at least are far greater than for women using any form of birth control, including abortion.

Absolute contraindications to combined oral contraceptives include the presence of estrogen-dependent neoplasia, breast cancer, a history of thromboembolism or thrombotic disease, hypertension, active acute or chronic liver disease, pregnancy, or undiagnosed uterine bleeding. The last three conditions are of particular concern to adolescents. The many side effects asso-

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ciated with oral contraceptives have been recently reviewed.[8] In order to reduce these side effects, especially thromboembolism, pills containing 30 to 50 mg of estrogen or those containing only progesterone (minipill) have been recommended for adolescents.

The role of the IUD in adolescent contraception is being carefully reevaluated since there is an apparent increased risk for pelvic inflammatory disease. One report indicated a ninefold risk for IUD users, while another reported a seven times greater incidence of pelvic inflammatory disease for nulliparas using the IUD.

Currently under investigation are several vehicle forms which allow slow absorption of progesterone as it is released from intravaginal rings, IUDs, subdermal implants, or contraceptive bracelets. Another interesting approach to contraception is the development of immunization against pregnancy by the development of a contraceptive vaccine based on a β-subunit of human chorionic gonadotropin (HCG), placental lactogen, or other antigens. Research to expand male contraception beyond the use of condoms, coitus interruptus, or vasectomy for adult males is being conducted. One approach is to isolate and utilize inhibin, which selectively inhibits the production of follicular stimulating hormone (FSH) and thus decreases spermatogenesis. There are also attempts to interfere with epididymal function and to diminish sperm mobility and hence its ability to penetrate the ovum.

FOLLOW-UP

Pregnant Adolescents

The adolescent mother will require ongoing general medical and contraceptive care after the baby is born. The baby of the adolescent mother also requires routine well-child care. The frequency of well-child visits should be greater than that for the child of adult mothers as the young mother is inexperienced and usually requires more guidance. Adolescent mothers, particularly those who are very young, and who are of normal intelligence, will be assisted by explicit, simple, written instructions and diagrams that make the tasks of child care seem more concrete. Adolescents use telephones very effectively, so the young mother should be encouraged to call the child clinician if she has any questions about information exchanged during the well-child visit. Experience indicates that some adolescents assume their mothering responsibilities credibly if they are given guidance and positive reinforcement by supportive child health clinicians.

One child health clinician in a multidisciplinary group practice setting may develop the special skills needed to care for adolescents. A maternal, nurturing, female, particularly if she has had children, is often the most effective person to work with adolescents prior to, and after delivery. Counseling, contraceptive, and pregnancy instruction for adolescents may be most efficiently accomplished through adolescent groups rather than individual sessions. Groups allow adolescents to interact and learn from peers and afford a more efficient utilization of the clinician's time.

Nonpregnant or Previously Pregnant Adolescents

Adolescents who are sexually active, whether previously pregnant or not, are at high risk for conception. Once they are identified and contraceptive measures have been recommended or prescribed, careful follow-up is necessary to maximize compliance and minimize failure rates. Only a few months supply of an oral contraceptive should be given initially so that the patient will be more likely to return often and raise whatever concerns she may have. A Papanicolaou smear should be obtained every six to 12 months on sexually active adolescents. These patients are at high risk for venereal diseases, including mixed infections. Instructions should be repeated frequently, especially if barrier methods (diaphragm, condom, or vaginal contraceptives) are being used. It is often worthwhile to include the adolescent girl's sexual partner in the discussions about contraception to ensure their compliance as a couple. Finally, the adolescent should be encouraged to contact her physician herself in confidence between office visits, if questions arise.

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