Cocaine and Pregnancy—Time to Look at the Evidence

Wendy Chavkin, MD, MPH

In this issue of The Journal, Frank and colleagues[1] present a systematic review of studies assessing possible relationships between maternal cocaine use during pregnancy and several childhood outcomes. The authors are thoughtful and rigorous in their approach and carefully evaluate the physiological plausibility of the outcomes under question and the methodological strengths and constraints of the studies reviewed. They considered 36 studies worthy of review; these reported on 17 prospectively recruited cohorts with examiners blinded to cocaine exposure status.

At the end of their effort, Frank et al conclude that crack/cocaine exposure in utero has not been demonstrated to affect physical growth; that it does not appear to independently affect developmental scores in the first 6 years (although there are insufficient data to assess this for infants born preterm); that findings are mixed regarding early motor development but any effect appears to be transient and may, in fact, reflect tobacco exposure; and that exposure may be associated with modest alterations of certain physiological responses to behavioral stimuli that are of unknown clinical importance. In sum, the data are not persuasive that in utero exposure to cocaine has major adverse developmental consequences in early childhood—and certainly not ones separable from those associated with other exposures and environmental risks. Since many cocaine users also use other illegal drugs, drink alcohol, and smoke cigarettes, it is methodologically daunting to sort out consequences attributable to cocaine alone. Frank et al conclude that even those studies best designed to tackle this challenge fail to demonstrate that cocaine use by pregnant women leads to childhood devastation.

The authors acknowledge limitations to their approach: data on postnatal sequelae must be considered preliminary, any differential attrition could bias results, and classification of exposure based on interview may be imprecise. Moreover, the studies in the meta-analysis do not include follow-up into middle school years and adolescence. However, even if future research reveals cocaine-related harm to the fetus, the modest and inconsistent nature of the findings to date suggest that these harms are unlikely to be of the magnitude of those associated with in utero exposure to the legal drugs tobacco and alcohol.

Why then all the hullabaloo about crack babies? Why then the prosecution of 200 women who used cocaine while pregnant?[2] Why was a program established to pay $200 to crack-using women as an incentive to become sterilized?[2] What's going on? The answer, perhaps, is 2-fold. The "crack baby" became the poster child for 1 side in each of 2 heated controversies in the United States: the war on drugs and the struggle over abortion.

The war on drugs focused on individual moral failing rather than social circumstance, and comprised several basic approaches: an emphasis on drug law enforcement; an increase in severity of criminal justice penalties, including mandatory minimum sentences; and a comparative deemphasis on treatment of drug addiction. The escalation of this war occurred during the Reagan Administration, coincident with the rise of unemployment, homelessness, and urban poverty that fueled the crack epidemic.[2] While cocaine in inhalation form had been a popular drug for the upper middle class in the 1970s, it did not draw the same media or political attention or severity of criminal justice response as did crack smoking by inner-city youth.[3]

There have been dramatic consequences of the war on drugs. The number of incarcerated individuals in the United States has more than tripled, resulting in the United States having the second highest incarceration rate in the world.[4] Average length of sentence for drug offenders has tripled as well, while the proportion of inmates receiving treatment for substance abuse disorders has more than halved.[4] While men still predominate within the incarcerated population, the proportion of women has increased sharply and at nearly double the rate for men.[5] This increase has been most dramatic for minority women. From 1986 to 1991 the number of women incarcerated in state prisons for drug offenses increased by 828% for black women, by 328% for Hispanic women, and by 241% for white women.[2]

There have also been important public health consequences. Research regarding the physiological and behavioral components of addiction and development of treat-

See also p 1613.

Author Affiliation: Columbia School of Public Health, New York, NY.
Corresponding Author and Reprints: Wendy Chavkin, MD, MPH, Columbia School of Public Health, 60 Haven Ave, B-3, New York, NY 10032 (e-mail: jamwa@columbia.edu).

ment approaches has been underfunded and has languished. Advocates of a criminal justice approach to substance abuse have expressed frustration with the usefulness of drug treatment, pointing to relapse as evidence of lack of efficacy. While it is certainly true that treatment for drug addiction needs improvement that further research should address, its efficacy compares with that of commonly used medical treatments for other chronic relapsing conditions such as type 2 diabetes mellitus, hypertension, and asthma.[6] The choice of a criminal justice rather than a public health approach toward drug addiction has also limited implementation of novel efforts (such as needle exchange programs) to curb the spread of human immunodeficiency virus among drug users, and has resulted in a concentration of the epidemic in drug users and their sexual partners.

The "crack baby" has become a convenient symbol for an aggressive war on drug users because of the implication that anyone who is selfish enough to irreparably damage an innocent child for the sake of a quick high deserves retribution. This image, promoted by the mass media, makes it easier to advocate a simplistic punitive response than to address the complex causes of drug use.

The crack baby also has served as a potent symbol in the ongoing struggle over abortion in the United States. Those opposing abortion generally have done so in the name of fetal personhood. This same assertion underlies the charges brought against women who used drugs while pregnant: child abuse/neglect, homicide, and delivery of drugs to a minor. In 29 of the 30 states where such charges have been brought against new mothers, convictions have been overturned on appeal.[2] However, in the 30th state, South Carolina, the state Supreme Court has departed from the prevailing legal interpretation and has contradicted US Supreme Court precedent by declaring that viable fetuses are "persons" and, thus, covered by the state's criminal child abuse law.[2] A related case, *Ferguson v South Carolina*, is now before the Supreme Court.[7]

This concept of fetal personhood that derives from the abortion debate has led to the depiction of the pregnant woman as one whose selfish negligence or hostility toward the "innocent" fetus must be constrained by the outside intervention of the criminal justice system. These prosecutors have not been deterred by evidence from medical experts that many pregnant addicted women are very concerned about the consequences of their drug use for their future children and are eager for treatment, even though that treatment is difficult to access generally, and often specifically unavailable for pregnant women and for the incarcerated.[8]

The war on drugs and the struggle over abortion are profound multifaceted political controversies. Medical and public health experts can try to temper these heated debates by injecting scientifically garnered data, clinical evidence, and insistence on the importance of therapy. Since medicine unequivocally considers addiction to be a compulsive disorder in need of treatment,[9] many medical organizations (American Medical Association, South Carolina Medical Association, American College of Obstetricians and Gynecologists, American Medical Women's Association and more than 20 others) have filed amici briefs in many of these cases, asserting that addiction is a disease; that maternal and fetal interests are intertwined and that the pregnant woman speaks for those interests; that it is in the medical and public health interest to provide treatment and not punishment; and that criminal punishment is not therapeutic and is likely to deter frightened women from seeking needed care.[10]

This next period is likely to bring its own set of complications. There have been recent signs of abatement in the war on drugs. In New York, the governor and legislators have proposed modification of the Rockefeller drug laws to reduce mandatory sentences, offer treatment alternatives, and return discretion in sentencing to judges.[11] Proposition 36, which passed in California this past November, which substitutes treatment for prison for many nonviolent drug possession offenders, and former President Clinton has called for reconsideration of mandatory sentences for federal drug offenses.[12]

However, the situation for poor addicted women has not abated as treatment opportunities for them have been further compromised by recent changes in welfare policy. Since passage of the Personal Responsibility and Work Opportunity Reconciliation Act in 1996,[13] states can exclude individuals with previous drug felony convictions from receiving cash assistance, and attendance at drug treatment programs does not count toward meeting the work requirement on which receipt of cash assistance is now conditioned. Further, drug and alcohol dependence no longer renders one eligible for Supplemental Security Income (SSI), with the resulting loss of such income for approximately 108 000 SSI recipients and 31 000 Disability Insurance recipients as of December 1997.[13-15] Disagreement over abortion shows no sign of lessening, and there will likely be efforts to further limit access to abortion for the young and the poor.

Although the image of the crack baby has stirred partisan passions, the review of the evidence in the meta-analysis by Frank et al indicates that these images are not based on fact. As citizens, we may fall on different sides of these debates on abortion and drug addiction. Yet, as physicians and public health advocates, we can follow the example of Frank et al and raise a calm steady voice for science and therapy.

REFERENCES

1. Frank DA, Augustyn M, Knight WG, et al. Growth, development, and behavior in early childhood following prenatal cocaine exposure: a systematic review. *JAMA*. 2001;285:1613-1625.
2. Paltrow LM, Cohen DS, Carey CA. *Year 2000 Overview: Governmental Responses to Pregnant Women Who Use Alcohol or Other Drugs*. Philadelphia, Pa: Women's Law Project, National Advocates for Pregnant Women; October 2000.
3. Reinarman C, Levine HG. *Crack in America, Demon Drugs and Social Justice*. Berkeley and Los Angeles: University of California Press; 1997.

4. Mauer M, Huling T. *Young Black Americans and the Criminal Justice System: Five Years Later*. Washington, DC: The Sentencing Project; 1995. Report 9070.
5. Mauer M, Potter C, Wolf R. *Gender and Justice: Women, Drugs and Sentencing Policy*. Washington, DC: The Sentencing Project; November 1999.
6. McLellan T, Lewis D, O'Brien C, Kleber H. Drug dependence, a chronic medical illness: implications for treatment, insurance, and outcomes evaluation. *JAMA*. 2000;284:1689-1695.
7. *Ferguson v South Carolina*. 99-936 UD (1999).
8. Chavkin W, Paone D, Friedmann P, Wilets I. Reframing the debate: toward effective treatment for inner city drug-abusing mothers. *Bull N Y Acad Med*. 1993; 70:50-68.
9. Marwick C. Physician leadership on National Drug Policy finds addiction treatment works. *JAMA*. 1998;279:1149-1150.
10. American Public Health Association, South Carolina Medical Association, American College of Obstetricians and Gynecologists, et al. Brief Amici Curiae in support of the petitioners in *Ferguson v City of Charleston,* (SCT 1999). Available at: http://www.lindesmith.org/about_tlc/legal.html. Access confirmed February 23, 2001.
11. Perez-Pena R. Pataki presents his plan to ease state drug laws. *New York Times*. January 18, 2001:A1.
12. Lindner CL. Is the criminal justice system ready for proposition 36? *New York Times*. December 31, 2000:M6.
13. Personal Responsibility Work Opportunity and Reconciliation Act of 1996, 42 USC §1305 (1996).
14. Contract with America Advancement Act of 1996, 5 USC §601 (1996).
15. Social Security Administration. Policy evaluation and the effect of legislation prohibiting the payment of disability benefits to individuals whose disability is based on drug addiction and alcoholism. Available at: http://www.ssa.gov/policy/policyareas/evaluation/daa/index.html. Access confirmed February 23, 2001.

Screening Mothers for Intimate Partner Abuse at Well-Baby Care Visits

The Right Thing to Do

Robert S. Thompson, MD

Richard Krugman, MD

In this issue of The Journal, Martin et al[1] report on the prevalence of physical abuse before, during, and after pregnancy as determined from a random sample of North Carolina women (1997-1998). Women were surveyed by mail and telephone approximately 3.6 months after they delivered live infants. Reported physical abuse before and during pregnancy exceeded 6% and was 3.2% in the postpartum period. Abuse in an earlier period was strongly associated with further abuse in subsequent periods. Mothers reported a mean of 3 well-baby care visits during the first 3.6 postnatal months.

The findings from this study suggest that intimate partner abuse (also termed intimate partner violence or domestic violence) is occurring in the immediate postnatal period, and an opportunity exists for pediatric health care practitioners to identify this abuse. The American Academy of Pediatrics (AAP) issued a policy statement in June 1998 stating, "Pediatricians are in a position to recognize abused women in pediatric settings. Intervening on behalf of battered women is an active form of child abuse prevention. Knowledge of local resources and state laws for reporting abuse are emphasized."[2] This recommendation could apply to all who provide postnatal child care.

Martin et al suggest that abused mothers may have as many as 3 opportunities to be identified at well-baby care visits in the first 3½ months of their new infants' lives. The AAP recommends 3 visits in the first 3 months and 6 visits in the first 12 months of infancy. Utilization data from Group Health Cooperative (Seattle, Wash) indicate that the mean number of encounters for well-baby care in the first 3½ months is 2.5 and that in the first 12 months of life, there are 4.2 such visits (Virginia Immanuel, MPH, written communication, February 21, 2001). Using data provided by Martin et al,[1] the number of women who would have to be screened to detect 1 abused mother would be 14.5 before pregnancy, 16.3 during pregnancy, and 31 during the first 3½ months postpartum.

It is possible to implement this screening opportunity by building some questions into the standard forms used as a routine part of well-baby care. For instance, Group Health Cooperative includes a question about "family history of physical abuse or sexual abuse" on routine questionnaires for neonates or new child family members. Clearly, more in-depth questions are needed, but this example is a start, and previous work in family violence demonstrated that written questionnaires increased abuse screening by 14.3%.[3]

The second part of the AAP recommendation states that "intervening on behalf of battered women is an active form of child abuse prevention." The literature contains solid links between domestic violence and child abuse, and suggests that the link is approximately 50% in either direction.[4-6] Information on the long-term adverse effects of child abuse is also well documented.[7-9] Despite these links, the US Preventive Services Task Force concluded in 1996 that there was "insufficient evidence to recommend for or against the use of specific screening instruments"[10] for detecting intimate partner abuse. Insufficiency issues boil down to instruments for detection of intimate partner abuse, modes

See also p 1581.

Author Affiliations: Department of Preventive Care, Group Health Cooperative, Seattle, Wash (Dr Thompson); and University of Colorado School of Medicine, Denver (Dr Krugman).
Corresponding Author and Reprints: Robert S. Thompson, MD, Department of Preventive Care, Group Health Cooperative, 1730 Minor Ave, Suite 1600, Seattle, WA 98101-1448 (e-mail: thompson.rs@ghc.org).