paranoid thinking, and fearful regard of his environment. It is during this period that he obtains and begins to carry a concealed weapon. Armed robbery as a means of supporting the drug habit and conflicts over drug dealing also are segments of the setting that derives from chronic drug use.

The second phase, involving a sudden change in emotional arousal and/or a loss of intellectual control, is often secondary to a variety of factors, including a sudden increase in the dosage level (or acute use in a person with low tolerance), chronic loss of sleep, and the use of other drugs, especially sedatives and alcohol. In this emotional and cognitive framework, the person often misinterprets his environment and becomes increasingly fearful. The emotional misinterpretation may be quite subtle; for instance; a sudden and overwhelming interpretation of a minor "clue" that fits into the person's delusional system. (This happened to Mr. A several times.) On the other hand, it may be a very gross misinterpretation of the entire environment; strangers suddenly become sources of persecution. Often the person mistakes a stranger for a persecutor or, alternately, for a friend (11, 12). This phase of sudden misinterpretation of the environment is associated with an intense sense of reality.

Within this framework, a minor incident can trigger the violent act. Often the threatening incident is half real and half misinterpreted. In nine of the cases in this study, the murder was committed on the basis of an instant decision or impulse secondary to a perceived danger. There were, however, four other cases in which some forethought was involved in the intent. (One man "tracked down" his victim.) Even within this context of pursuit of the victim, there is often a singular event that triggers the violence. In fact in Smith's descriptions (4), nonfatal pursuits are not uncommon; Kramer and others (9) have stated that these games are often only half serious. Thus, although chronic amphetamine abuse may set the stage for violence, it is the phase of acute change in sensibilities that is actually associated with misinterpretation and the violent act.

Conclusion

Until there are figures available for comparing the incidence of homicide associated with amphetamines and that associated with such drugs as barbiturates and narcotics, the most definitive answer to questions about the relationship between violence and amphetamine usage may come from such case reports as the three reported here. In these cases, homicide was clearly related to an amphetamine-induced delusional process and/or state of emotional lability. I recently reviewed several cases of amphetamine-induced assaults in which the history of amphetamine abuse was not even considered in the initial evaluation. One wonders whether the reported incidence of amphetamine-induced assault and homicide would not be much higher if physicians were more fully aware of the problem. Indeed, we have no data showing the number of assaults and homicides committed by people under the influence of amphetamines or other drugs. Routine urine examinations to detect the presence of drugs in the system of every person arrested for a violent crime would be of great help in evaluating the incidence of this problem.

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