factors or is related to poorly learned and poorly integrated interaction patterns. The results imply that alcoholism does not have a single etiology.

We found that alcoholics from alcoholic families differ statistically on the MMPI from alcoholics from nonalcoholic families, but interpretation of the MMPI profile is not sufficient to make this differentiation. Profiles of alcoholics apparently require interpretation that includes the family history of alcohol abuse.

It is obvious that the study is not conclusive. Research should be conducted to delineate further the factors that produce these findings. A larger number of profiles should be analyzed to determine if this sample can be generalized to the alcoholic population, and the sample should be compared to a control group. Including women in the sample would enhance our knowledge of sex-related differences in alcoholism. It would also be interesting to use this approach to study other clinical populations, such as schizophrenics who come from schizophrenic families, and those who come from nonschizophrenic families.

If it is true that alcoholics reared in alcoholic families differ clinically from alcoholics reared in nonalcoholic families, this may have important implications in determining the type of treatment needed. Many alcoholics may be destined to treatment failure if the treatment method used does not take into account psychopathologic variables. It appears that correlating the MMPI and family history questionnaires may be useful in overcoming such a deficit.

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Precipitation of Acute Psychotic Episodes by Intensive Meditation in Individuals with a History of Schizophrenia

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The term "meditation" refers to a family of practices that induce the conscious training and directing of attention, with the ultimate aim of controlling the mind and enhancing psychobiological health.

Despite its history as perhaps the oldest psychotherapeutic practice, meditation has gained widespread popularity in the West only within the last two decades and began to receive serious research attention even more recently. However, a rapidly expanding literature on meditation has demonstrated a variety of psychological, physiological, electroencephalographic, and chemical effects, and there now seems little question that meditation is capable of producing a wide range of psychotherapeutic benefits (1).

There have been several reports of adverse meditation effects, including depersonalization, altered reality testing, and the appearance of previously repressed, highly charged memories and conflicts (1-5). However, as yet no clear picture has emerged of the individuals at risk for pathologic reactions.

We have observed several thousand people given intensive meditation training, and we are familiar with three psychotic episodes. We are reporting these cases because they show possible etiologic similarities that may be useful in identifying a population at risk.

Case Reports

Case 1. Mr. A, a 25-year-old man, attended a 1-week meditation retreat that involved many hours each day of sitting and walking meditation and total silence, without communication of any kind (even eye contact). On the 6th day his roommate reported that Mr. A appeared agitated. On the 7th day Mr. A suddenly began to weep and scream; he required physical restraint to avoid hurting himself or others and was clearly psychotic. He was given 150 mg of oral thioridazine and within 4 hours was calm and rational. He then reported that he had been hospitalized four times in the preceding 5 years for acute schizophrenic episodes, that he had been receiving outpatient psychotherapy sporadically, and that he

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had been prescribed a small maintenance dose of phenothiazine, which he had stopped taking. In addition, from the 3rd day of the retreat he had fasted, intensified his meditation as much as possible, and curtailed his sleep to only 1 or 2 hours a night at most. He was returned to his home and did well on small maintenance doses of phenothiazines.

Case 2. Ms. B was a 23-year-old woman who attended a 2-week intensive retreat that involved 18 hours of meditation a day. On the 10th day she began asking bizarre questions and accused people of stealing her possessions. When she was interviewed it became apparent that she was undergoing an acute schizophrenic episode. A unique feature was the remarkable lucidity and detachment with which she was able to observe and describe the process she was going through; this was apparently a result of her meditation training. She reported that she had been hospitalized several times in the past for acute schizophrenic episodes and that she had eaten and slept only sporadically over the previous several days. She was given thioridazine and was instructed to stop meditating and to assist the staff in various tasks. Ms. B resumed eating and sleeping, and after 4 days her condition had improved sufficiently so that she was able to return home.

Case 3. Ms. C, a 23-year-old woman attending an intensive meditation retreat, began to exhibit bizarre behavior on the 4th day of the retreat. When she was interviewed, Ms. C exhibited suicidal ideation and features of an incipient acute schizophrenic episode, and she reported a history of multiple hospitalizations for schizophrenia. Ms. C was instructed to stop meditating and was given oral chlorpromazine. However, within hours of this interview she made a serious suicide attempt with a knife and was hospitalized involuntarily.

Discussion

These cases suggest that the combination of intensive meditation, fasting, sleep deprivation, a history of schizophrenia, and the discontinuation of maintenance doses of phenothiazines can be hazardous. Schizophrenic episodes can be precipitated by almost any severe stress, including a range of intensive therapeutic modalities, and the combination of intensive meditation practice, together with sleep and food deprivation, is certainly demanding. On the other hand, some data suggest that meditation in moderation can be useful in treating a range of psychopathology, including schizophrenia (1, 6–8). The population at risk for the syndrome we have described seems to include only people with a history of schizophrenia, for whom maintenance medication, adequate food and sleep, and a less intensive approach to meditation are indicated. However, even psychologically healthy individuals may experience changes in their perception of reality during the initial phases of intensive meditation (1, 9). Such changes are not necessarily pathologic and may reflect in part a heightened sensitivity to the (usually subliminal) perceptual distortions to which we are all subject (9).

We were interested to note two unique features associated with these episodes. The first was the degree of insight and detachment that Ms. B was able to obtain, especially during interviews, which appeared to be a result of her meditation training. The second was the extraordinarily high degree of skill and empathy with which the retreat staff, all advanced meditators, handled these clients. This seemed to reflect the staff's psychological sophistication and familiarity with altered states. In addition, it is interesting that all three patients recovered rapidly.

An increasing number of people practice brief meditation sessions daily, and tens of thousands of Americans attend intensive meditation retreats each year.[1] Although some of the meditation teaching organizations are beginning to screen retreat applicants for previous psychiatric history, episodes such as those described above are bound to occur from time to time, and clinicians can help by being aware of the population at risk. However, psychotic episodes are rare, and our impression, which is borne out by the classical and research literature (1, 6–8), is that most people show significant gains in a number of areas of psychological well-being.

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