Psychopathological Effects of Solitary Confinement

Stuart Grassian, M.D.

Psychopathological reactions to solitary confinement were extensively described by nineteenth-century German clinicians. In the United States there have been several legal challenges to the use of solitary confinement, based on allegations that it may have serious psychiatric consequences. The recent medical literature on this subject has been scarce. The author describes psychiatric symptoms that appeared in 14 inmates exposed to periods of increased social isolation and sensory restriction in solitary confinement and asserts that these symptoms form a major, clinically distinguishable psychiatric syndrome.

(Am J Psychiatry 140:1450–1454, 1983)

There have been several legal challenges to the use of solitary confinement in the United States penal system based on allegations that such confinement can cause serious psychopathological reactions (1–3). The present article describes clinical observations of 14 prisoner plaintiffs in a lawsuit alleging that the conditions they were exposed to in solitary confinement were violations of Eighth Amendment protection against "cruel and unusual punishment."

REVIEW OF THE LITERATURE

Despite the obvious legal and humanitarian importance of this issue, there has been a scarcity of recent medical literature on the subject beyond a flurry of theoretical interest generated by concerns about "brainwashing" of American prisoners of war in Korea and the experimentation on profound sensory deprivation precipitated by those concerns (4–8). In the recent literature, reports of clinical observations of prisoners in solitary confinement have been virtually nonexistent. However, with the exception of the only *experimental* study in the literature (9), these reports (10–12) have indicated psychopathological effects. One report noted "restlessness, yelling, banging and assaultiveness" in some prisoners and in others "a kind of regressed, dissociated, withdrawn hypnoid state" (10). Another report cited two cases of reactive psychosis marked by initial agitation and behavioral dyscontrol, leading to a hallucinatory, incoherent, confusional state (11).

There was, however, extensive interest in the problem of psychopathological syndromes among prisoners in late nineteenth- and early twentieth-century Europe. During that period, solitary confinement was extensively used in both Europe (13) and the United States (14); in many prisons it was the exclusive mode of incarceration. Indeed, the American penitentiary became world famous; important visitors journeyed to the United States specifically to observe this system and bring it back to Europe for emulation. Perhaps the best known of these visits, that of Alexis de Tocqueville, gave rise to a classic study of American social institutions (15).

This enchantment with solitary confinement was relatively short-lived, however. As early as the 1830s statistical evidence began to indicate an increased incidence of physical morbidity and mortality, as well as of insanity, among prisoners exposed to especially rigid forms of solitary confinement (14, p. 87). The system's openness to public scrutiny brought forth vivid descriptions of the effects of such confinement. Charles Darwin, for example, observed inmates "dead to everything but torturing anxieties and horrible despair. . . . The first man . . . answered . . . with a strange kind of pause . . . [he] fell into a strange stare as if he had forgotten something. . . . [Of another] Why does he stare at his hands and pick the flesh open, . . . and raise his eyes for an instant . . . to those bare walls? (8, p. 66). By 1890, the United States Supreme Court entered an opinion explicitly condemning solitary confinement on psychiatric grounds, indicating that "a considerable number of prisoners . . . fell into a semi-fatuous condition . . . and others became violently insane" (1).

In the United States, unfortunately, these experiences did not give rise to a body of clinical literature. However, in Germany, whose penal system had emulated the American model, major clinical concern developed about the incidence of psychotic disturbances among prisoners. Between 1854 and 1909, 37 articles on this subject appeared in German journals,

Received Oct. 24, 1980; revised March 5 and Oct. 20, 1982; accepted Nov. 30, 1982. From the Department of Psychiatry, New England Memorial Hospital, Stoneham, Mass.; Tufts University School of Medicine, Boston, Mass.; and Harvard Medical School, Boston. Address reprint requests to Dr. Grassian, 401 Beacon St., Chestnut Hill, MA 02167.

The author thanks Dr. Dan Buie for his review of the manuscript. Dr. Frank Rundle conducted half of the psychiatric evaluations on which this report is based.

collectively describing hundreds of cases of psychoses that were deemed to be reactive to the conditions of imprisonment. A review of this literature appeared in 1912 (13) and will be only summarized here.

The literature described a hallucinatory, paranoid, confusional psychosis in which characteristic symptoms included 1) extremely vivid hallucinations in multiple sensory modalities, including the visual, auditory, tactile, and olfactory; 2) dissociative features, including sudden recovery "as from a dream," with subsequent amnesia for the events of the psychosis; 3) agitation and "motor excitement" with aimless violence; and 4) delusions, usually described as persecutory. Onset was often described as sudden and, in some reports, as precipitating at night. In other cases, initial manifestations included "humming and buzzing, unpleasant noises and inarticulate sounds [leading to] hallucinations." Rarer, only occasionally noted symptoms included *Vorbereiden* ("the symptom of approximate answers," usually associated with Ganser [16], although described as well by others) and hysterical conversion symptoms.

Of this large body of literature, only Ganser's contribution (16) remains well-known, and Ganser failed to comment on the form of imprisonment to which his prisoner subjects were exposed. However, in more than half the total body of literature, solitary forms of confinement were specifically cited as responsible for precipitating the psychosis, and rapid recovery was often noted when the prisoner's solitary confinement was terminated.

CIRCUMSTANCES OF THE CLINICAL OBSERVATIONS

The present observations developed as a consequence of a court order mandating psychiatric evaluation of 15 inmates at the Massachusetts Correctional Institution at Walpole, all of whom were plaintiffs in a class action suit against the Department of Corrections that alleged violations of Eighth Amendment protection against "cruel and unusual punishment" because of the conditions to which the prisoners were exposed in solitary confinement.

The correctional institution at Walpole is the maximum security state prison for the Commonwealth of Massachusetts. It is divided into 13 cell blocks. Block 10 is reserved for solitary confinement and is divided into four tiers, each housing 15 cells approximately 1.8 m × 2.7 m in size, each cell containing an open toilet and sink, a steel bed, and a small, fixed steel table and stool. The cells in the lower tiers have double doors. The inner door is barred; the outer door is solid steel except for a small Plexiglas window. There are no other windows in the cells; each cell has one 60-watt light bulb to provide light.

While these structural features have remained constant, administrative decisions have determined other features of the confinement. Until August 20, 1979, the outer steel doors were left open, permitting natural light and air to enter the cell and permitting inmates to speak with other inmates in adjoining cells; on August 20 the steel doors were closed on the cells of all inmates in isolation. At the same time, correctional officers removed personal belongings from these cells, including radios, television sets, and all reading materials except a Bible.

Suit was brought not against the conditions in Block 10 generally but specifically against the conditions prevailing in the lower tiers since August 20, 1979. Of the 15 plaintiffs in the suit, 14 were interviewed; the 15th was no longer in Block 10 at the time of the interviews and was not available. All of the plaintiffs were men, and their mean age was 28 years (range, 22–38 years). Median duration of confinement in isolation was 2 months (range, 11 days to 10 months). Each prisoner was interviewed for approximately one-half hour by one of two psychiatrists, with the exception of one prisoner who, because of concern over his clinical state, was seen twice over a 3-week period. History was obtained of incarcerations, previous experience with solitary confinement, and previous and current psychiatric symptoms and treatment. Due to the pressure of time, we made no active attempt to cover other areas of a full clinical history, e.g., assessment of object relations, defenses, and family history.

In the interviews, conducted in an open-ended manner, careful attention was paid so that suggesting possible symptoms was avoided. The circumstances of the interviews, however, were clearly seen by the prisoners and guards as adversarial. Access to the prisoners for the interviews was obtained only through court order; all prisoners interviewed were informed of the purpose of the interviews and told that data from them might be used in court testimony. In addition, there were several guards stationed just outside the interview room, prompting several prisoners to resort to whispering as a means of avoiding being overheard.

FINDINGS

It might be expected that the adversarial circumstances of the interviews would have biased the prisoners' reports in the direction of exaggeration of whatever symptoms they might have experienced. Such was not the case. In fact, contrary to expectation, the prisoners appeared to mobilize multiple defensive operations—rationalization, avoidance, denial, distortion, and repression—in an effort to minimize the quality of their reactions to isolation. The interviewer was required, therefore, actively to encourage disclosure of information, to provide reassurance, and persistently to confront and explore gaps in the reported accounts. Numerous interviews began with statements such as "Solitary doesn't bother me" or "Some of the guys can't take it—not me," or even with the mention of a symptom and simultaneous denial of its significance: "As soon as I got in, I started cutting my wrists. I figured it was the only way to get out of here." As the

interviews progressed, these facile, superficial accounts gave way to descriptions of experiences that were troublesome. For example, one inmate was unable to describe the events of the several days surrounding his wrist slashing, nor could he describe his thoughts or feelings at the time. His overt anxiety increased markedly upon questioning, and only after some time was he able to describe an apparent acute confusional state, panic, and subsequent partial amnesia for those events. Similarly, the prisoner who said he could "take it" eventually came to describe panic, fears of suffocation, and paranoid distortions while he had been in isolation.

Indeed, the general pattern was for inmates initially to downplay reactions to the solitary confinement situation, then, after being carefully questioned, to become overtly anxious and, frequently, overtly reluctant to elaborate on significant details. Upon confrontation, several inmates acknowledged the reasons for their reluctance. They feared that the guards would discover their primitive fantasies of revenge or that the guards were waiting to see a weakness that they could exploit to make the inmate "crack up." Furthermore, in several cases, the inmate's dread was that he was in fact going insane.

The specific psychiatric symptoms reported were strikingly consistent among the inmates.

Perceptual Changes

Generalized hyperresponsivity to external stimuli. This symptom was most commonly associated with dysesthetic responses to certain stimuli (11 prisoners). Instances of this included "You get sensitive to noise—the plumbing system. Someone in the tier above me pushes the button on the faucet, the water rushes through the pipes—it's too loud, gets on your nerves. I can't stand it—I start to holler. Are they doing it on purpose?" "Everything gets exaggerated. After a while, you can't stand it. Meals—I used to eat everything they served. Now I can't stand the smells—the meat—the only thing I can stand to eat is the bread." "What really freaks me out is when a bee gets into the cell—such a small thing." "Difficult to breathe, stale, awful smell from the toilets—the stench starts to feel unbearable." All 11 inmates denied ever having experienced such symptoms except during confinement in isolation.

Perceptual distortions, hallucinations, and derealization experiences. These symptoms were experienced by seven prisoners and are grouped together because under the peculiar circumstances of solitary confinement there were often inadequate means to distinguish them. Thus, experiences described by five of these seven prisoners included hearing voices—often in whispers, often saying frightening things to them—but usually the prisoners had no means by which to corroborate what they thought they heard; for example, "I hear sounds—guards saying, 'They're going to cut it [his nerve-damaged leg] off.' I'm not sure. Did they say it, or is it my imagination?" If they did say it, the prisoner is suffering from derealization; if they said something else, or something not directed at him, he is suffering a (paranoid) perceptual distortion; if they said nothing, he is having a hallucination. There is no independent corroboration. Another inmate described the dilemma poignantly: "I overhear the guards talking. Did they say that? Yes? No? It gets confusing. I tried to check it out with ___ [the prisoner in the adjoining cell]; sometimes he hears something and I don't. I know one of us is crazy, but which one? Am I losing my mind?"

There were, in addition, two reports of noises taking on increasing meaning and frightening significance; for example, "I hear noises, can't identify them—starts to sound like sticks beating men. But I'm pretty sure no one is being beaten. . . . I'm not sure."

Perceptual illusions with loss of perceptual constancy were more readily identifiable in the visual sphere (three cases), and there were reports such as "The cell walls start wavering," and "Melting, everything in the cell starts moving; everything gets darker, you feel you are losing your vision."

In one of the prisoners the illusions became more complex and personalized: "They come by [for breakfast] with four trays; the first has big pancakes—I think I'm going to get them. Then someone comes up and gives me tiny ones—they get real small, like silver dollars. I seem to see movements—real fast motions in front of me. Then seems like they're doing things behind your back—can't quite see them. Did someone just hit me? I dwell on it for hours." This prisoner also described overt, frightening, visual hallucinations: "There's a guard in my cell; he's holding a noose." He acknowledged having experienced perceptual distortion with psychedelic drug abuse. Otherwise, all seven inmates denied ever experiencing perceptual symptoms like those they described, except during confinement in isolation.

Affective Disturbances

Ten prisoners described massive free-floating anxiety during their incarceration in solitary, accompanied in eight cases by recurrent acute episodes of tachycardia, diaphoresis, shortness of breath, panic, tremulousness, and dread of impending death. One prisoner reported "shortness of breath a lot. My heart pumps real fast. I feel like I don't get enough oxygen. Get frantic." Another said, "I start to feel dizzy. I can't breathe," and another, "I start to dwell on things—too many roaches—get scared one might get into my ear. Start to feel hot—extreme heat—then I can barely breathe, start sweating, heart races, can't sit still, shaking, get a headache—real bad."

Of these 10 prisoners, three had experienced acute anxiety reactions prior to confinement in isolation, and they reported intensification of symptoms. The other seven denied any previous history of such symptoms.

Difficulties With Thinking, Concentration, and Memory

Of the eight inmates who mentioned these symptoms, four reported acute confusional states with subsequent partial amnesia for events during the episode. There was, again, a problem with independent corroboration of these symptoms, especially important because the prisoners were only vaguely aware of what had happened to them. However, one prisoner slashed his wrists during such a state, and thus his confusion and disorientation were noted in the prison medical record.

One prisoner's description particularly suggested dissociative features with mutism: "I went to a standstill psychologically once—lapse of memory. I didn't talk for 15 days. I couldn't hear clearly. You can't see—you're blind—block everything out—disoriented, awareness is very bad. Did someone say he's coming out of it? I think what I'm saying is true—not sure. I think I was drooling—a complete standstill."

Four others reported milder symptoms of difficulty in concentration and memory; for example, "I can't concentrate, can't read. . . . Your mind's narcotized . . . sometimes can't grasp words in my mind that I know. Get stuck, have to think of another word. Memory is going. You feel you are losing something you might not get back."

Several described attempts they made to focus their concentration by self-discipline: "Got to try to concentrate. Remember list of the presidents. Memorize the states, capitals, five boroughs, seven continents, nine planets."

Disturbances of Thought Content

Emergence of primitive, ego-dystonic fantasies. Six prisoners reported the emergence of primitive aggressive fantasies of revenge, torture, and mutilation of the prison guards. In each case, the fantasies were described as ego-dystonic, frightening, and uncontrollable; for example, "I try to sleep 16 hours a day, block out my thoughts—muscles tense—think of torturing and killing the guards—lasts a couple of hours. I can't stop it. Bothers me. Have to keep control. This makes me think I'm slipping my mind. Lay in bed too much—scare yourself with thoughts in bed. I get panicky—thoughts come back—picture throwing a guard in lime—eats away at his skin, his flesh—torture him. Try to block it out, but I can't."

Ideas of reference, paranoia. Six prisoners reported ideas of reference associated with persecutory fears; e.g., "Sometimes get paranoid—think they meant something else. Like a remark about Italians. Dwell on it for hours. Get frantic. Like when they push the buttons on the sink. Think they did it just to annoy me." The prisoner's reality testing in this instance was especially shaky: "Spaced out. Hear singing, people's voices—'Cut your wrists and go to Bridgewater and the Celtics are playing tonight.' I doubt myself—is it real? . . . I suspected they're putting drugs in my cell. . . . the reverend, the priest—even you—you're all in cahoots in the Sacred Straight program. Drive them crazy."

Problems With Impulse Control

Five prisoners reported episodes of lack of impulse control with random violence. One prisoner said, "I snap off the handle over absolutely nothing. Have torn up mail and pictures, throw things around. Try to control it. Know it only hurts myself." Three of these prisoners reported impulsive self-mutilation; for example, "I cut my wrists—cut myself many times when in isolation. Now, it seems crazy. But every time I did it, I wasn't thinking—lost control—cut myself without knowing what I was doing."

Rapid Subsidence of Symptoms on Termination of Isolation

The legal statute in Massachusetts requires relief from isolation status with closed solid steel doors for at least 24 hours each 15 days. Certain prisoners had additional periods of relief for medical consultation and, in one case (peroneal nerve injury), hospitalization.

All prisoners interviewed reported a very rapid (usually within the first few hours) diminution of their symptoms during periods of relief. No correlation was apparent between severity of symptoms and the time required for them to subside.

DISCUSSION

The observations reported here suggest that rigidly imposed solitary confinement may have substantial psychopathological effects and that these effects may form a clinically distinguishable syndrome. The full syndrome described here has not been previously reported in the recent medical literature, although there have been observations consistent with those that I have reported.

The present observations are, however, strikingly consistent with earlier German reports. The German literature reported only on prisoners who suffered gross psychotic symptoms, some of whom were observed in hospitals or "insane departments" of prisons. The Walpole population, on the other hand, was not preselected by overt psychiatric status. Despite this, all of the major symptoms reported by the German clinicians, except *Vorbereiden* and hysterical conversion symptoms, were observed in the Walpole population. In addition, less severe forms of this solitary confinement syndrome were observed in the Walpole population, including 1) sensory disturbances: perceptual distortions and loss of perceptual constancy, in some cases without hallucinations; 2) ideas of reference and paranoid ideation short of overt delusions; 3) emer-

gence of primitive aggressive fantasies, which remained ego-dystonic and with reality-testing preserved; 4) disturbances of memory and attention short of overt disorientation and confusional state; and 5) derealization experiences without massive dissociative regression.

The observations at Walpole also suggest that solitary confinement cannot be viewed as a single entity. The effects of solitary confinement situations vary substantially with the rigidity of the sensory and social isolation imposed.

CONCLUSIONS

The present observations, coupled with those in the earlier German literature, suggest strongly that the use of solitary confinement carries major psychiatric risks. I have not attempted in this paper to define or classify this psychopathological syndrome, but, as mentioned earlier, there have been speculations in the literature linking solitary confinement with the formal experiments on profound sensory deprivation. A review of this literature and an elaboration of the variables that may explain the particular pathogenicity of rigidly imposed solitary confinement will be presented in another paper.

REFERENCES

1. In Re Medley, 134 US 160, 167–168 (1890)
2. Bono v Saxbe, 450 F Supp 934–948 (1978)
3. Libby v Hogan, Suffolk Superior Ct, Mass, Civil No 37699 (1979)
4. Brownfield C: Isolation: Clinical and Experimental Approaches. New York, Random House, 1965
5. Biderman A, Zimmer H (eds): The Manipulation of Human Behavior. New York, John Wiley & Sons, 1961
6. Solomon P, Kubzansky P, Liederman P, et al: Sensory Deprivation: A Symposium Held at Harvard Medical School. Cambridge, Mass, Harvard University Press, 1961
7. Scott GD, Gendreau P: Psychiatric implications of sensory deprivation in a maximum security prison. Can Psychiatr Assoc J 14:337–341, 1969
8. Liederman P: Man alone: sensory deprivation and behavior change. Correctional Psychiatry and Journal of Social Therapy 8:64–74, 1962
9. Walters RH, Callagan JE, Newman AF: Effect of solitary confinement on prisoners. Am J Psychiatry 119:771–773, 1963
10. Meltzer M: Solitary confinement, in Group for the Advancement of Psychiatry Symposium Number 3: Factors Used to Increase the Susceptibility of Individuals to Forceful Indoctrination, Observations and Experiments. New York, GAP, 1956
11. Suedfeld P, Roy C: Using social isolation to change the behavior of disruptive inmates. International Journal of Offender Therapy and Comparative Criminology 19:90–99, 1975
12. Kaufman E: The violation of psychiatric standards of care in prisons. Am J Psychiatry 137:566–570, 1980
13. Nitsche P, Williams K: The History of the Prison Psychoses, Nervous and Mental Disease Monograph Series, number 13. New York, Journal of Nervous and Mental Disease Publishing Co, 1913
14. Rothman D: The Discovery of the Asylum. Boston, Little, Brown and Co, 1971
15. de Tocqueville A: Democracy in America. New York, Vintage Books, 1945
16. Ganser J: Uber einen eigenartigen hysterischen dammerzustand. Arch Psychiatr Nervenkr 30:633–640, 1898