Misuse of Anticholinergic Drugs by People With Serious Mental Illness

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This study assessed misuse of anticholinergic drugs in a population of 50 patients with serious mental illness who were assertively managed by a community-based outreach team in Sydney, Australia. One-third of the subjects reported having misused anticholinergics over the previous month. All anticholinergics were misused, and trihexyphenidyl (benzhexol) was misused most frequently. Most subjects misused at least one other drug as well. On direct questioning, the reason given most frequently was "to get high"; on indirect questioning, reasons were related more to peer participation and feelings of futility. Marginalized patients living in the community are vulnerable to the misuse of anticholinergic drugs. (*Psychiatric Services* 51:928–929, 2000)

Before 1980 misuse of anticholinergic drugs among psychiatric patients was rarely reported (1). Since then reported prevalence rates have ranged from 0 percent to 18 percent (2–5). In inner Sydney in recent years we have noticed an increasing misuse of anticholinergic agents among our most marginalized patients.

The aims of this study were to assess the prevalence of misuse of anticholinergics in our patient cohort, the reasons for the misuse, and whether the drugs were misused in combination with other drugs.

Methods

The study was conducted in July 1998 at the Inner City Mental Health Service in Sydney. The service has about 400 active patients, most of whom have a serious mental illness. The mobile community treatment team manages the cases of 50 of the most seriously disturbed patients of our service. Criteria for referral to the program include frequent psychiatric admission, poor compliance with mental health services, and a poor quality of life. Because of their poor financial skills, about half the patients have their finances supervised by staff.

The community treatment team consists of five full-time health professional staff members, who are assigned ten patients each. Patients are visited in their home or at their shelter once or twice a week and are encouraged to attend the local mental health rehabilitation services.

Case managers were asked to refer to the study any patient of the mobile community treatment program whom they considered to be taking excessive amounts of anticholinergic drugs. All patients referred agreed to be interviewed.

We used two methods of seeking reasons for the misuse of anticholinergic drugs. First, patients were asked in face-to-face interviews to respond yes or no to 15 questions developed by Dixon and associates (6). Then they were asked nondirective open-ended questions, such as "Why and in what sort of setting do you take excessive amounts of side effect medications?" Data on the frequency and type of drugs misused over the previous month were recorded using the Opiate Treatment Index (7). After the interviews, the patients' case files were reviewed for prescribed medications and diagnoses.

Results

Twenty-two of the 50 mobile community treatment patients were referred to our study. Of these, 17 reported having misused anticholinergic drugs over the previous month; 13 were men (76 percent), and four were women (24 percent). Their mean±SD age was 35±7.7 years, with a range of 23 to 45 years. All were single and unemployed, and all but two were living in a homeless shelter.

Sixteen patients had a primary diagnosis of schizophrenia or schizoaffective disorder. Thirteen were receiving moderate to high dosages of a depot neuroleptic drug, nine had prescriptions for benztropine (2 to 4 mg daily), and one each had prescriptions for orphenadrine (50 mg twice daily) or trihexyphenidyl (5 mg daily). Four of the remaining subjects were receiving risperidone (range, 4 to 6 mg daily).

All of the anticholinergics were misused. Trihexyphenidyl (benzhexol) was cited the most frequently, by 13 patients, followed by procyclidine

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by ten patients, benztropine by six patients, and orphenadrine by two patients. Typically they reported taking five to ten tablets at a time, often in the company of peers.

On direct questioning, the reasons patients gave most frequently for misusing anticholinergic drugs were to get high (N=13), to increase pleasure (N=12), to decrease depression (N=12), to increase energy (N=11), to relax (N=11), to go along with the group (N=10), and to decrease the side effects of neuroleptic medication (N=9). The reasons patients gave in response to our open-ended questions revealed themes of loneliness, resignation, depression, and peer participation.

Fourteen of the 17 subjects who misused anticholinergics (82 percent) also misused at least one of the following drugs: codeine linctus (N=8), cannabis (N=7), benzodiazepines (N=7), inhalants such as amyl nitrite or glue (N=6), pseudoephedrine (N=4), and cocaine, amphetamine, or heroin (one each). None of the patients consumed alcohol in excess of two standard drinks a day.

Discussion

The prevalence of anticholinergic misuse in our cohort of 50 patients was 34 percent, much higher than in any study of such misuse reported to date. Most subjects were receiving depot neuroleptics in relatively high dosages, and at least some misused anticholinergics to relieve extrapyramidal symptoms; we did not formally assess our patients for extrapyramidal symptoms. Although nine patients cited decreasing the side effects of neuroleptic medication as a reason for misusing anticholinergics, it was not among the main reasons given.

In response to direct questioning, the most frequently given reason was to get high. This motivation would explain why trihexyphenidyl, the most stimulating anticholinergic, was the most frequently misused. Among patients with schizophrenia interviewed by Dixon and colleagues (6) about substance misuse in general, the energizing effects were also the most frequently given reasons for use of cannabis, alcohol, and cocaine. This similarity suggests that the choice of drug to be misused is less important than whether the drug has a stimulating effect.

It may be that the stimulating effect of the drug counteracts depressive symptoms or the negative symptoms of schizophrenia. Some support for such a motivation was revealed by our open-ended questions; amid feelings of hopelessness and futility, the taking of drugs seemed to be a way of filling in the day, of taking one's mind off the present situation, or of sharing experiences with friends. The association between depression and boredom and misuse of drugs by people with schizophrenia has been noted previously (8).

It appears that a culture of anticholinergic misuse evolved after the patients' referral to the mobile community treatment program. Anticholinergic misuse was not considered to be a major issue when these patients were first referred to the program, nor was there an unusually high rate of anticholinergic misuse among the other patients of our mental health service (9). Moreover, the patients' preference for trihexyphenidyl cannot be attributed to the prescribing habits of our medical officers, who rarely prescribed the drug.

One reason for the high rate of anticholinergic misuse after referral to the program may be related to peer pressure. Patients newly referred to the program end up spending much of their time in the company of other enrollees of the program, and a milieu that predisposes them to the influence of others who are already misusing drugs may evolve.

There may be other reasons for misuse of anticholinergics. Patients who misused anticholinergics also misused other drugs. However, surprisingly few misused alcohol, and only three reported use of heroin, cocaine, or amphetamine. The primary reasons for this pattern may be that these patients have poor negotiating skills and little money, and prefer anticholinergics over other drugs because they are readily available and cheap– about five U.S. dollars for ten tablets on the street.

Conclusions

Assertive management in the community of people with severe mental illness is generally regarded to be beneficial (10). The results of this study draw attention to a potential risk apparently related to enrollment in a service that offers intensive community-based treatment to a cohort of patients with severe mental illness.

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