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Baclofen Suppresses Alcohol Intake and Craving for Alcohol in a Schizophrenic Alcohol-Dependent Patient

A Case Report

To the Editors:

Alcohol use disorders (AUDs) are common in patients with schizophrenia. The Epidemiologic Catchment Area Study[1] indicated that approximately one third of patients with schizophrenia have a lifetime diagnosis of AUDs. An excessive alcohol intake produces negative consequences on schizophrenic patients, such as increased relapses, more hospitalizations, and increased violence and suicide attempts.[2] Therefore, decreasing alcohol consumption in patients with schizophrenia should be considered a major goal in their treatment programs. It has recently been demonstrated that the prototypic agonist of the γ-aminobutyric acid (GABA) B receptor, baclofen, widely used to control spasticity,[3] reduced alcohol consumption and obsessive thinking of alcohol,[4,5] as well as symptoms of alcohol withdrawal syndrome[6] in human alcoholics. A recent paper also reported that higher doses of baclofen completely suppressed alcohol consumption and craving for alcohol.[7] These studies also reported that use of baclofen in alcohol-dependent patients appeared to be safe and manageable. Baclofen was tested in schizophrenic patients to evaluate its effect on tardive dyskinesia, an adverse effect of neuroleptic drugs, or schizophrenic symptoms.[8–10] The results of these studies suggested that baclofen was similar to placebo in both effects. However, baclofen administration—up to 90 mg daily—did not result in any worsening of schizophrenic symptoms.[8,9,11–13] Moreover, a recent case report described the efficacy and safety of baclofen in decreasing craving for cocaine in a patient with cocaine dependence and schizoaffective disorder.[14] Considering the efficacy of baclofen in reducing alcohol intake in alcoholics and in view of the fact that it did not worsen schizophrenic symptoms, baclofen administration to the patient described here was aimed at evaluating the effectiveness and safety profile of baclofen in an alcohol-dependent schizophrenic patient.

CASE REPORT

In 1999, a 49-year-old male outpatient was admitted to the Division of Psychiatry, University of Cagliari, Italy, having persecutory and referential delusions, visual hallucinations, affective flattening, and avolition. Details provided by his relatives revealed an early onset of heavy alcohol drinking and schizophrenic symptoms at approximately the age of 28 years. Daily alcohol intake, as reported by both the patient himself and his relatives, averaged approximately 2 L of wine (approximately 16 drinks per day). After frequent episodes of alcohol intoxication and/or exacerbation of schizophrenic symptoms, he had been admitted several times to medical and psychiatric hospitals with a diagnosis of alcohol dependence and paranoid schizophrenia (in accordance with *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* criteria) and treated with haloperidol and benzodiazepines. He had also been treated with disulfiram and had attended Alcoholics Anonymous meetings, without any apparent beneficial effect in terms of reduction of alcohol intake. From 1999 to 2005, he was admitted to the hospital approximately once a year because of severe episodes of acute alcohol intoxication. In July 2005, we proposed to the patient and his family a new pharmacological treatment to decrease his alcohol consumption. Specifically, the possibility of using baclofen was discussed. Written informed consent was obtained. Before the first baclofen administration, a blood sample was collected for evaluation of the following indicators of heavy alcohol drinking: mean corpuscular volume of red blood cells, aspartate aminotransferase, alanine aminotransferase, and γ-glutamyl transpeptidase. A schedule was drawn up providing for patient examination once a day for the first 3 days, once a week for the first 4 weeks, and subsequently once every 2 weeks. A breathalyzer test, using the Alco-Sensor IV breathalyzer apparatus (Syen Elettronica, Gardigiano di Scorzè, Venezia, Italy), was administered at each visit to evaluate the patient's breath alcohol concentration. At each visit, the following rating scales were administered to the patient: Zung Self-rating Depression Scale, Spielberger State Anxiety Inventory, Brief Psychiatric Rating Scale (BPRS), Clinical Global Impression (CGI)–Improvement and –Severity Scales, a visual analog scale (VAS) of craving severity and Obsessive and Compulsive Drinking Scale (OCDS[15]) in its validated form in Italian.[16] Alcohol intake was self-reported by the patient and confirmed by a family member. Possible side effects related to baclofen therapy were also recorded. Treatment with baclofen started with the dose of 5 mg, per os, 3 times a day for 3 days; starting from day 4, the dose was increased to 10 mg, 3 times a day. The patient attended all scheduled visits and regularly took the baclofen pills as indicated by counting the returned tablets. He did not report any side effect, with the sole exception of a mild degree of sedation at the very beginning of the treatment. He stopped drinking from the first week of treatment; breath alcohol concentrations were negative throughout the treatment. OCDS and VAS scores were virtually suppressed from the first 4 weeks of treatment (Table 1). Indexes of severity of schizophrenic symptoms tended to decrease during treatment (Table 1). Conversely, anxiety and depression severity scores were not modified by baclofen administration. In line with the reduction in alcohol intake, value of mean corpuscular

TABLE 1. Scores of Different Rating Scales for Psychiatric Disorders and Alcohol Craving in an Alcohol-Dependent Schizophrenic Patient Treated With Baclofen

	Week									
Rating Scales	**0**	**1**	**2**	**3**	**4**	**8**	**12**	**16**	**20**	**24**
BPRS	36	33	33	30	29	25	33	29	33	26
CGI-S	6	6	6	6	5	5	4	4	4	4
CGI-I	7	3	3	3	3	3	2	2	2	1
OCDS	34	7	15	6	0	5	3	6	4	9
VAS	25	30	23	23	13	6	1	0	0	0
ZUNG	41	41	40	42	38	44	40	42	40	40
STAI	42	38	47	38	41	42	32	35	42	42

Values in week 0 are baseline values (before the start of treatment with baclofen). Weeks 1 to 24 are time elapsed from the start of the treatment with baclofen.

BPRS indicates Brief Psychiatric Rating Scale; CGI-S, CGI-Severity; CGI-I, CGI-Improvement; OCDS, Obsessive and Compulsive Drinking Scale; VAS, visual analog scale; ZUNG, Zung Self-rating Depression Scale; STAI, Spielberger State Anxiety Inventory.

volume decreased from 101 to 94 fL over treatment with baclofen. The patient reported the consumption of 1 drink in week 18. Subsequently, taking into account the recently reported beneficial effects induced by relatively high doses of baclofen (up to 270 mg/d) on alcohol consumption and craving for alcohol,[7] the dose of baclofen was increased to 25 mg, 3 times a day. After 1 year of treatment, the latter remains the only episode of alcohol drinking, as the patient demonstrated near-complete suppression of alcohol drinking and craving for a 48-week period.

DISCUSSION

Suppression, or at least reduction, of alcohol drinking is 1 of the major goals in the treatment of patients affected by schizophrenia and alcohol dependence.[2] However, research to evaluate effective pharmacotherapies for patients diagnosed with AUDs and psychiatric comorbidity is still in its infancy. To our knowledge, this is the first case of a schizophrenic alcohol-dependent patient treated with baclofen in an attempt to decrease his alcohol consumption. Consistent with previous reports,[11–13] treatment with baclofen did not worsen schizophrenic symptoms in our patient, as indicated by the scores of BPRS and CGI. Vice versa, treatment with baclofen resulted in a virtually complete suppression of alcohol drinking, without occurrence of any relevant side effects. This observation is in agreement with the results of 2 recent studies which demonstrated that treatment with baclofen induced a significant reduction in alcohol intake and craving for alcohol.[4,5] Of interest, another GABAergic medication has recently been suggested to be effective in alcohol-dependent schizophrenic patients. A recent case report indeed described how the GABAergic antiepileptic drug, topiramate, suppressed alcohol intake in a patient affected by alcohol dependence and schizophrenia.[17] In conclusion, the present observation suggests that baclofen may be evaluated in future, properly designed studies as a novel pharmacotherapy for patients affected by alcohol dependence and schizophrenia.

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