

TABLE 1
*ICD-10 Multiaxial System and Corresponding ICD-10
Categories*

Axis I: Clinical Diagnoses
Mental disorders (F00-F99)
Physical disorders (A00-E90 and G00-Y98)
Axis II: Disabilities in
Personal care
Occupation
Family and household
Broader social context
Axis III: Contextual factors
Problems related to negative events in childhood (Z61-Z62)
Problems related to education and literacy (Z55)
Problems related to primary support group, including family circumstances (Z63)
Problems related to social environment (Z60)
Problems related to housing or economic circumstances (Z59)
Problems related to (un)employment (Z56)
Problems related to physical environment (Z57-Z58)
Problems related to certain psychosocial circumstances (Z64)
Problems related to legal circumstances (Z65)
Problems related to family history of diseases or disabilities (Z81-Z82)
Problems related to lifestyle and life management difficulties (Z72-Z73)

proposed: a) all medical conditions are to be recorded on the same axis (axis I), which demonstrates to psychiatrists and nonpsychiatrists that the distinction between mental and "nonmental" disorders is a thing of the past—unnecessary and potentially harmful to the development of both psychiatry and medicine in general; b) if the patient suffers from more than one disorder, the related disability (axis II) is to be assessed in the specific areas of the patient's functioning without attempting to guess how much of it is due to each of the disorders or to untoward circumstances; and c) the choice of environmental and personal life factors (axis III) that influence presentation, course, or outcome of the disorders has been determined by clinical practice and epidemiological evidence (Sartorius, 1995).

The results of the field trials of the ICD-10 multiaxial system indicated that there are a number of areas of its possible application across cultures and settings. The first of these areas is routine clinical work, in which the ICD-10 multiaxial system could represent a useful tool for the efficient simultaneous assessment of different aspects of the patient's illness and thus better understanding of the patient's plight, impairment, and surrounding circumstances. Research on mental disorders is the second area of possible application of the ICD-10 multiaxial system. The system allows more thorough, uniform, and consistent collection of data and can improve the reliability and precision of the assessment and increase the consistency and comparability of the collected information. The systematic application of the ICD-10 multiaxial system could also generate a database useful in both routine clinical care and research. The extensive multiaspect coverage of the patient's illness makes the ICD-10 multiaxial system a useful teaching tool in the training of mental health professionals. The application of the system can teach a dis-

ciplined and complete review of the different aspects of the patient's illness necessary for a thorough clinical examination. Modern information-processing technology makes the retrieval, organization, and communication of different diagnostic statements from the ICD-10 multiaxial system easy, thus ensuring its suitability for the coding and statistical reporting of morbidity. Properly used, the multiaxial classification can also provide valuable information for epidemiological studies and for the management of health services.

The ICD-10 multiaxial system is now available to clinicians worldwide and all the necessary information and documents can be obtained from WHO. Although the results of the international field trials demonstrated its cross-cultural applicability, usefulness, and "fair to good" reliability, the real test of the system will be in its routine use by clinicians in different cultures and settings.

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- Aleksandar Janca, M.D., M.R.C.Psych.
Marianne C. Kastrup, M.D.
Heinz Katschnig, M.D.
Juan J. López-Ibor, Jr., M.D.
Juan E. Mezzich, M.D., Ph.D.
Norman Sartorius, M.D., Ph.D., F.R.C.Psych.

²Division of Mental Health, World Health Organization, 1211 Geneva 27, Switzerland. Send reprint requests to Dr. A. Janca, Medical Officer.

The list of participants in the development and field trials of the ICD-10 multiaxial system will be published in the WHO document "The Multiaxial Presentation of ICD-10 for Use in Adult Psychiatry." The document will be available from WHO on request.

Naltrexone Treatment of Self-Injurious Thoughts and Behaviors

Self-injurious behavior is an alarming but poorly understood phenomenon most commonly observed in autistic and mentally retarded children and adolescents, prison populations, psychotic patients, and patients with personality disorder. Over the last decade, the opioid antagonists naloxone and naltrexone (NTX) have been shown to be effective in the treatment of self-injurious behavior in some cases of autistic and mentally retarded patients (Barrett et al., 1980; Herman et al., 1987). Several studies have also found naloxone to be effective in decreasing obsessive-compulsive symptoms associated with Tourette's syndrome (Kurlan et al., 1991; Sandyk, 1987). There are currently no published studies involving the use of NTX for the treatment of self-

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TABLE 1
 YBOCS Scores and Average Number of Self-Injurious Thoughts Per Day for Each Patient During the Study Period

Patient	Baseline (week 1)		NTX (week 2)		Post-NTX (week 3)	
	YBOCS	Average no. of self-injurious thoughts per day	YBOCS	Average no. of self-injurious thoughts per day	YBOCS	Average no. of self-injurious thoughts per day
1	24	8.0	13	4.9	22	16.0
2 ^a	19	4.3	4	0.4	18	5.0
3	17	19.6	8	8.4	22	18.3
4	22	6.4	22	8.0	15	12.5
5	19	37.9	6	3.9	28	42.4
SD	2.8	13.9	7.2	3.3	4.9	14.1
Average	20.2	15.2	10.6 ^b	5.1 ^c	21.0 ^d	18.8 ^e

^aThis patient received NTX (100 mg/day) during week 2. All other patients received NTX (50 mg/day) during week 2.

^b $t = 3.69, p \leq .05$ compared with week 1.

^c $t = 1.60, p = .09$ compared with week 1.

^d $t = 2.15, p \leq .05$ compared with week 2.

^e $t = 2.16, p \leq .05$ compared with week 2.

injurious behavior in patients with borderline personality disorder (BPD). The purpose of this pilot study was to investigate the effectiveness of NTX in decreasing the frequency of self-injurious thoughts and behaviors in patients with BPD.

Methods

Five female patients aged 26 to 36 years (mean \pm SD, 31.4 \pm 4.1) who experienced daily self-injurious ideation and met DSM-III-R criteria for BPD were recruited for study participation. Study candidates were informed that their thoughts, behaviors, and mood would be monitored during the study. On average, patients had a 13.0 \pm 7.68-year history of self-injurious behavior. All patients gave written informed consent. All patients had primary therapists outside of the study. Although all therapists knew of their patients' participation in the study, they were instructed not to discuss the study with their patients. The Millon Clinical Multiaxial Inventory was administered at study initiation to corroborate the diagnosis of BPD. Other chart diagnoses included anorexia nervosa ($N = 1$) and schizoaffective disorder ($N = 1$). The study lasted 3 weeks. The Yale-Brown Obsessive Compulsive Scale (YBOCS; Goodman et al., 1989), modified to specifically assess self-injurious obsessive thoughts and compulsive behaviors, was performed at baseline and at the end of weeks 2 and 3. Patients kept a daily record of self-injurious thoughts and behaviors with a mechanical handheld counting device. During the first and third weeks the patients received no medication, but recorded self-injurious thoughts and behaviors. During the second week, each subject received NTX 50 mg/day ($N = 4$) or 100 mg/day ($N = 1$) while continuing to record self-injurious thoughts and behaviors. One patient received 100 mg/day because she was also taking carbamazepine, which we feared may have been decreased the effectiveness of the naltrexone by increasing its metabolism. All patients were consistently taking other psychiatric medication throughout the study. Medications included fluoxetine ($N = 3$), fluphenazine ($N = 1$), trazodone ($N = 1$), perphenazine ($N = 1$), and carbamazepine ($N = 1$).

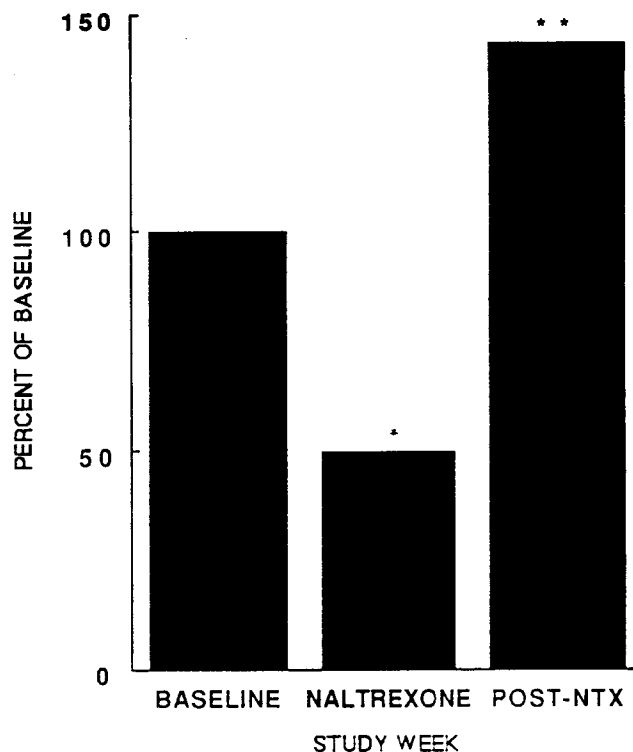


FIG. 1. Average effect of naltrexone treatment (self-injurious thoughts per day). *Baseline to NTX: $t = 2.37, p < .05$. **NTX to post-NTX: $t = 6.07, p < .005$.

Data were analyzed using a paired, one-tailed Student's t -test and chi-square analysis.

Results

All patients completed the 3-week trial and tolerated NTX well. As shown in Table 1, the average baseline number of self-injurious thoughts per day varied significantly among individual patients. In all but one case (patient 4), there was

a decrease in self-injurious thoughts during NTX treatment. There was a significant decrease in self-injurious thoughts per day when NTX treatment (week 2) was compared with posttreatment (week 3; $t = 2.16, p \leq .05$), and a trend toward significance when baseline (week 1) values were compared with NTX treatment (week 2; $t = 1.603, p = .092$). Figure 1 shows the average number of self-injurious thoughts per day during the study period, represented as a percentage of baseline self-injurious thoughts. As can be seen, there was a statistically significant difference in self-injurious thoughts per day between weeks 1 and 2 (decrease: $t = 2.37, p \leq .05$) as well as between weeks 2 and 3 (increase: $t = 6.07, p \leq .005$). The scores from the modified YBOCS decreased significantly ($t = 3.69, p \leq .05$) during NTX treatment as compared with both baseline and week 3 scores. Modified YBOCS scores and self-injurious behaviors returned to baseline or above after discontinuation of NTX (week 3).

Self-injurious actions decreased dramatically with NTX treatment. All five patients engaged in self-injurious behavior at baseline, but only one patient engaged in self-injurious actions while receiving NTX ($\chi^2 = 3.75, p = .053$). The number of days patients injured themselves decreased by 60% compared with baseline. The average percentage of days patients hurt themselves during study weeks 1, 2, and 3 was 28%, 11%, and 26%, respectively. The average number of actual self-injurious actions during study weeks 1, 2, and 3 was 2.0, .4, and 1.8, respectively ($t = 4.0, p \leq .05$). Self-injurious actions included cutting, hitting, scratching, and head banging. Head banging and hitting occurred in one patient in combination with cutting. There was a trend toward significance when self-injurious thoughts during week 1 were compared with those from week 3, which suggests that there may be a rebound effect when NTX is discontinued.

Discussion

While the etiology of self-injurious behavior is not known, the rationale behind the use of opiate antagonists is based on the idea that self-injurious behavior may involve a form of dysregulation of the endogenous analgesic system. One theory is that self-injury reflects an insensitivity to pain due to an excessive basal activity of endogenous opioid peptides (Richardson and Zaleski, 1983). A second theory proposes that self-injury constitutes a form of addiction to endogenous opioids (Lienemann and Walker, 1989).

Of interest in this regard as well is the relationship between obsessive-compulsive symptoms and the endogenous opiate system. While opiate antagonists have been found by some investigators to reduce obsessional thoughts and compulsive behaviors in individuals with Tourette's syndrome, others (Kurlan et al., 1991; Sandyk, 1987) have reported an exacerbation of obsessional doubt in individuals with obsessive-compulsive disorder after NTX administration (Insel and Pickar, 1983). The obsessional nature of the self-injurious thoughts in our subjects was manifested by the high YBOCS scores they demonstrated. Perhaps the efficacy of NTX in this study was related to some role of the endogenous opiate system in the pathogenesis of obsessional thoughts.

There is controversy in the literature regarding the use of NTX for the treatment of self-injurious behavior. In a double-

blind, placebo-controlled trial, Szymanski et al. (1987) found NTX to be no different than placebo in decreasing self-injurious behavior in two profoundly mentally retarded clients. Herman et al. (1987) conducted a double-blind, placebo-controlled trial of NTX and found it to be effective in decreasing self-injurious behavior by as much as 70% of baseline in three mentally retarded male patients. To our knowledge, there are no reports of the use of NTX in BPD patients with self-injurious behavior.

Recent research has attempted to differentiate distinct forms of self-destructive behavior (Favazza and Rosenthal, 1993; Pattison and Kahan, 1983). Herman and colleagues (1987) found that NTX significantly reduced the frequency of facial and head hits but did not significantly reduce the frequency of self-biting. One possible explanation for the discrepancy in the literature concerning the effects of NTX on self-injurious behavior is that NTX may affect only certain types of self-injurious behavior.

It is important to mention the methodological limitations of this study. This was an open-label study; thus, there is the possibility of a placebo effect. Although the modified YBOCS appeared to be a useful instrument for assessing obsessive self-injurious thoughts and actions, this modified scale has not been validated. Validation studies are needed to determine the full usefulness of the modified YBOCS.

In conclusion, NTX is a well-tolerated medication that may be useful in treating BPD with self-injurious behavior. NTX also appears to be helpful in decreasing obsessional self-injurious thoughts. These pilot data suggest the need for a larger, double-blind, placebo-controlled trial to determine the utility of NTX in treating self-injurious behavior in patients with BPD.

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Susan Sonne, Pharm.D.^{1,2}
 Robert Rubey, M.D.¹
 Kathleen Brady, Ph.D., M.D.¹
 Robert Malcolm, M.D.¹
 Tracy Morris, Ph.D.¹

Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29425-0742. Send reprint requests to Dr. Sonne.
 Department of Pharmacy Practice, Medical University of South Carolina.

Posttraumatic Stress Disorder Occurring after Painful Childbirth

The diagnosis of posttraumatic stress disorder (PTSD) essentially involves exposure to a traumatic stressor, which gives rise to characteristic symptom clusters involving a) persistent re-experiencing of the event, b) avoidance of reminders and numbing of responsiveness, and c) increased arousal (American Psychiatric Association, 1994). While DSM-III-R (American Psychiatric Association, 1987) specified the objective severity of the stressor as being "markedly distressing to anyone" and "outside the range of usual human experience," DSM-IV emphasizes instead the subjective response of "intense fear, helplessness, or horror" and perceived threat of death or serious injury.

The variety of stressors precipitating PTSD has now grown in scope to include commonly occurring trauma, such as road traffic accidents, physical assault, witnessing violence, and even learning about sudden, unexpected death. Medically related events, such as having a myocardial infarction (Kutz et al., 1988), or being diagnosed with a life-threatening illness, such as cancer (e.g., Kelly et al., 1995) can also give rise to PTSD.

Childbirth has recently been reported as causing PTSD (Ballard et al., 1995). This case report serves to highlight the possible predisposing risk factors and potential sequelae of childbirth-related PTSD, which has not been adequately emphasized in the literature so far.

Case Report

Mrs. T., a 40-year-old Chinese housewife, first presented to her general practitioner, requesting a referral to undergo tubal ligation. She complained of recurrent recollections and nightmares of childbirth that had bothered her ever since she gave birth to her son 9 years earlier.

The pregnancy had been uneventful but the labor was long and difficult. Epidural anesthesia had not been administered and Entonox was apparently ineffective. After 16 hours of what she described as "a long, horrifying torture," a forceps-assisted delivery was conducted. The baby was well at birth and had no subsequent complications. Following delivery, Mrs. T. experienced considerable perineal pain. She was depressed for about a month postpartum. She had difficulty sleeping and was very irritable.

A week after delivery, Mrs. T. started having recurrent, intrusive recollections of her labor accompanied by anxiety

or panic symptoms. Sometimes she had dreams of dying during childbirth. Subsequently she avoided reading or talking about childbirth and was especially afraid of television portrayals of childbirth. She harbored no meaning or hope for the future and eventually decided not to return to her career. Her relationship with her son developed well, although she became progressively more cold and distant toward her husband.

For the first year after delivery, Mrs. T. did not have sex at all. When she resumed having intercourse, she was extremely worried about getting pregnant. She took oral contraceptives and insisted that her husband use a condom as well. During sex, she experienced headaches and was preoccupied about accidentally conceiving. However, she still had hopes of having another child "when she got over her fears."

After 9 years, she was still experiencing disturbing memories and symptoms consistent with a diagnosis of posttraumatic stress disorder, chronic type (DSM-IV). She recognized that her sexual difficulties were related to her fears of getting pregnant and now felt compelled to undergo sterilization.

Mrs. T., however, declined formal psychiatric treatment. She eventually underwent a tubal ligation, after which her sexual difficulties and anxieties improved markedly. She finally felt that her fears related to re-experiencing childbirth were totally removed. After 3 months, she no longer had any PTSD symptoms.

Discussion

Childbirth may pose a severe stress, giving rise to emotional symptoms, such as prolonged nightmares (Beech and Robinson, 1985), or a clinical syndrome characteristic of typical PTSD (Ballard et al., 1995). Certain situations may make childbirth an especially traumatic experience. Bydlowski and Raoul-Duval (1978) reported the occurrence of *la nevrose traumatique post-obstetricale* arising especially in cases of prolonged, difficult labors, forceps delivery, or when infant mortality/injury had occurred. Other risk factors include poor pain relief, a feeling of "lack of control" over the situation, and associated depressive illness (Ballard et al., 1995). Also important are perceived feelings of powerlessness and a lack of information about operative procedures (Menage, 1993).

It has been postulated that uncontrolled pain may be the core trauma in PTSD (Schreiber and Galai, 1993). Certainly for this patient, it was the pain that she recalled most vividly and feared most. This emphasizes the need for optimal pain relief in obstetric practice. Also important would be providing adequate advice and education before childbirth. After childbirth, women should be given the opportunity to recount their traumatic birth experiences and feelings and validate them, rather than ignore or minimize them.

Posttraumatic stress disorder occurring after childbirth may lead to postponement or avoidance of subsequent childbearing, and even requests for sterilization or termination of pregnancy. Psychosexual disorders can also develop from excessive fears of becoming pregnant. Problems may sometimes manifest only during a subsequent pregnancy with the re-emergence of emotional symptoms (Bydlowski and Raoul-