



Prevalence and Features of Intermittent Explosive Disorder in a Clinical Setting

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Objective: To determine the lifetime and current prevalence, along with other characteristics such as age at onset, patterns of comorbidity, and interest in treatment, of DSM-IV intermittent explosive disorder (IED) in an outpatient psychiatric sample.

Method: 1300 individuals presenting for outpatient psychiatric treatment at Rhode Island Hospital, Providence, R.I., underwent structured diagnostic assessment for Axis I and II disorders. The diagnosis of IED was made according to DSM-IV criteria.

Results: 6.3% (SE, $\pm 0.7\%$) of patients met criteria for lifetime DSM-IV IED, and $3.1\% \pm 0.5\%$ of patients met criteria for current DSM-IV IED. While DSM-IV IED was the current principal diagnosis in only $0.6\% \pm 0.2\%$ of patients, most patients with current DSM-IV IED (80%) were interested in treatment for their intermittent aggressive behavior. Only lifetime alcohol/drug disorder was more frequent in DSM-IV IED compared with non-IED patients. Age at onset for DSM-IV IED peaked in the teen years, was earlier for men than women, and occurred earlier than all comorbid disorders, with the exception of phobic anxiety disorders, suggesting that IED cannot be attributed to most comorbid conditions.

Conclusions: DSM-IV IED in psychiatric samples is far more common than previously thought. DSM-IV IED develops early in life, especially in male patients, and its development may be independent of most other disorders.

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Intermittent explosive disorder (IED), according to the DSM-IV, is characterized by recurrent episodes of serious physical assault to other persons and/or recurrent episodes involving the destruction of property of non-trivial value. The aggressive behavior is out of proportion to psychosocial stressors, and/or provocation, and is not better accounted for by another mental disorder, selected personality disorders, comorbid medical conditions, or the physiologic effects of a pharmacologic agent or other substance with psychotropic properties. While IED (including its predecessor diagnostic labels: “passive-aggressive personality, aggressive type” in DSM-I and “explosive personality disorder” in DSM-II) has been included in the DSM from the beginning, little systematic research has been performed in this area, and relatively little is known about the phenomenology, incidence, or prevalence of IED either in clinical samples or in the general population. The only 2 relevant reports published in the DSM-III era^{1,2} suggested a less than 2% prevalence of DSM-III IED in psychiatric patients or in self-referred aggressive subjects. The first, a chart review of 830 hospitalized patients,¹ found that only 1.1% of the patients actually met the DSM-III criteria for IED. The second, a report of incidence of IED in 433 putatively aggressive subjects being screened for a treatment study of IED,² found that only 1.8% of subjects met the DSM-III criteria for IED.

The dearth of information in this area is due in part to changes in the DSM criteria sets over time, which made it increasingly difficult to assign an IED diagnosis to patients who had significant histories of intermittent explosive and aggressive behavior. Beginning with DSM-III, patients with intermittent explosive behavior could not be diagnosed with IED if they had impulsive and/or less severe aggressive behavior between episodes of severe assaultive or destructive behavior. This criterion clearly limited the number of subjects diagnosed with IED in the Felthous et al.² study, in which approximately 80% of subjects were excluded from the IED diagnosis because of significant impulsivity. DSM-III also excluded explosively aggressive patients with antisocial personality disorder from an IED diagnosis—an exclusion extended to further rule out patients with borderline personality disorder in the DSM-III-R. While the current DSM-IV criteria for IED eliminate the exclusion for generalized aggression

and impulsivity, a relative exclusion for comorbid borderline or antisocial personality disorder remains, and this factor rules out up to approximately 40% of individuals who would otherwise meet DSM-IV criteria for IED.³ The results of these changes in the DSM-IV criteria have already affected the potential rates of IED. For example, in a recent small community sample from the Baltimore Epidemiologic Catchment Area follow-up study,⁴ lifetime and 1-month prevalence of DSM-IV IED was estimated at 3.95% and 1.58%, respectively. The addition of subjects who met inclusion criteria for IED except for the presence of comorbid borderline or antisocial personality disorder increased the lifetime and 1-month prevalence rates by 30% (to 5.14%) and 25% (to 1.98%), respectively.

As part of an effort to better characterize the clinical epidemiology of IED diagnosed by DSM-IV criteria, we analyzed data from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project (<http://www.lifespan.org/services/mentalhealth/rih/MIDAS/>) to determine the current and lifetime prevalence of IED, its age at onset, patterns of comorbidity, and treatment interest for those with this diagnosis in a large, private, psychiatric outpatient practice set in a general hospital.

METHOD

Subjects

This article reports on data from 1300 outpatients presenting for psychiatric treatment at the Rhode Island Hospital Department of Psychiatry outpatient practice, a general hospital private psychiatric practice in Providence, Rhode Island. These patients are referred to the practice primarily by primary care physicians and psychotherapists, are covered primarily by medical insurance (including Medicare but not Medicaid), and are treated on a fee-for-service basis. As such, these patients are distinct from those in hospital-based clinics that serve lower-income, uninsured, and medical assistance patients. Exclusion criteria for this study included age of less than 18 years, history of a developmental disorder, or difficulty with the English language. The sample analyzed in this report is the same as in a previous report focusing on the degree of anger and aggression, as specific symptoms, experienced by psychiatric outpatients in general.⁵ While the raw number of patients with current (but not lifetime) DSM-IV IED was presented in one of the tables in the previous report, no other data regarding DSM-IV IED or modified DSM-IV IED presented in this article were presented in that report.

Assessments and Diagnosis of IED

Trained diagnostic raters administered the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I/P)⁶ to all subjects who acted as their own informants. All

Table 1. DSM-IV Diagnostic Criteria for Intermittent Explosive Disorder^a

- A. Several discrete episodes of failure to resist aggressive impulses that result in serious assaultive acts or destruction of property
- B. The degree of aggressiveness expressed during the episodes is grossly out of proportion to any precipitating psychosocial stressors
- C. The aggressive episodes are not better accounted for by another mental disorder (eg, antisocial or borderline personality disorder, a psychotic disorder, a manic episode, conduct disorder, or attention-deficit/hyperactivity disorder) and are not due to the direct physiological effects of a substance (eg, a drug of abuse, a medication) or a general medical condition (eg, head trauma, Alzheimer's disease)

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raters achieved adequate interrater reliability before independently administering the interviews; further details regarding these evaluations are presented elsewhere.⁷ While full Structured Interview for DSM-IV Personality (SIDP-IV)⁸ assessments were only included in the assessment protocol after the first 600 subjects studied (because of a change in the assessment protocol at that time), raters did complete SIDP-IV modules for borderline and antisocial personality disorders for all subjects. Axis I diagnoses (including the diagnosis of IED), using the SCID-I/P as described earlier in this paragraph, and Axis II personality disorder diagnoses were made according to DSM-IV criteria.⁹

For the purposes of this study, DSM-IV IED criteria (Table 1) were conservatively interpreted so that the diagnosis of borderline and/or antisocial personality disorder excluded the diagnosis of IED (criterion C; a separate analysis is presented to note how many subjects would have met DSM-IV IED criteria if these personality disorder diagnoses were not exclusionary). In addition, patients with other comorbid Axis I disorders (e.g., mania, substance abuse) were excluded from a DSM-IV IED diagnosis if aggression was limited to periods of those other Axis I conditions.

Data regarding history of conduct disorder were obtained in the context of assessing the presence of antisocial personality disorder in all subjects, and a positive history was exclusionary for a diagnosis of IED. Data regarding a childhood history of attention-deficit/hyperactivity disorder (ADHD) were obtained in subjects reporting adult ADHD. This diagnosis was present in only a small number of cases, and in no case was ADHD judged by raters to better account for the symptoms of IED.

In addition to diagnostic data, this evaluation also assigned an age at onset for IED and for all other current/lifetime comorbid disorders and assessed treatment interest for each disorder diagnosed. Written informed consent, using an internal review board–approved consent document, was obtained from all subjects after all procedures were fully explained.

Table 2. Prevalence of DSM-IV Intermittent Explosive Disorder by Demographic Group

Variable	Current		Lifetime	
	% ± SE (N/N)	p ^a	% ± SE (N/N)	p ^a
Sex				
Male	3.4 ± 0.8 (17/493)	.620	7.7 ± 1.2 (38/493)	.126
Female	2.9 ± 0.6 (23/807)		5.5 ± 0.8 (44/807)	
Ethnicity				
White	2.6 ± 0.5 (30/1155)	.010	5.7 ± 0.7 (66/1155)	.018
Nonwhite ^b	6.9 ± 2.1 (10/145)		11.0 ± 2.5 (16/145)	
African American	8.5 ± 4.1 (4/47)		8.5 ± 4.1 (4/47)	
Hispanic	12.5 ± 6.8 (3/24)		20.8 ± 8.3 (5/24)	
Other	4.1 ± 2.3 (3/74)		9.5 ± 3.4 (7/74)	
Age, y				
≤ 24	6.2 ± 1.7 (12/195)	.049 ^c	9.2 ± 2.1 (18/195)	.406 ^c
25–34	2.7 ± 0.8 (10/367)		6.5 ± 1.3 (24/367)	
35–44	3.1 ± 0.9 (11/352)		5.4 ± 1.2 (19/352)	
45–54	1.2 ± 0.7 (3/259)		5.8 ± 1.6 (15/259)	
≥ 55	3.1 ± 1.5 (4/127)		4.7 ± 1.9 (6/127)	
Education				
Less than high school graduate ^c	8.8 ± 2.4 (12/137)	< .001 ^d	12.4 ± 2.8 (17/137)	< .001 ^d
High school graduate/some college	3.0 ± 0.6 (25/825)		6.7 ± 0.9 (55/825)	
College graduate and beyond	0.9 ± 0.5 (3/338)		3.0 ± 0.9 (10/338)	
Work history (past 5 y)				
Continuously working	2.6 ± 0.5 (24/922)	.156	6.0 ± 0.8 (55/922)	.451
Not continuously working	4.2 ± 1.0 (16/378)		7.1 ± 1.3 (27/378)	
Marital status				
Married	2.6 ± 0.6 (16/627)	.517	6.7 ± 1.0 (42/627)	.744
Divorced or separated	3.2 ± 1.1 (9/280)		5.4 ± 1.3 (15/280)	
Never married	3.8 ± 1.0 (15/393)		6.4 ± 1.2 (25/393)	

^a χ^2 or Fisher exact test p.^bNo significant differences among nonwhite groups for current or lifetime.^cLinear by linear association for current (p = .038) and lifetime (p = .094).^dLinear by linear association for both current and lifetime (p < .001).

Statistical Analysis

Current and lifetime prevalence of DSM-IV IED was estimated by dividing the number of patients meeting full DSM-IV criteria for IED at time of presentation (current IED) or at any time in their life (lifetime IED) by the total number of subjects evaluated. Comorbidity across 9 diagnostic categories was examined and compared using χ^2 or Fisher exact (for 2 × 2 tables) tests with a Bonferroni corrected alpha of < .006 for these multiple comparisons. The diagnostic categories included any mood disorder, anxiety disorder, substance (alcohol or drug) use disorder, psychotic disorder, non-IED impulse control disorder, eating disorder, somatoform disorder, adjustment disorder, and personality disorder. Age at onset data, comparing the age at onset of IED with the age at onset of other comorbid disorders in IED subjects, were examined using the paired t test. Means with standard deviations are reported, except, for prevalence estimates, standard errors are presented. All probabilities are set at a 2-tailed alpha of .05.

RESULTS

Current and Lifetime

Prevalence of DSM-IV IED Overall

Eighty-two patients (6.3% ± 0.7%) received a lifetime diagnosis of DSM-IV IED; 40 of these (3.1% ± 0.5%) met

criteria for current DSM-IV IED. An additional 109 patients (8.4% ± 0.8%) met inclusion (criteria A and B), but not exclusion (criterion C), criteria for DSM-IV IED (see Table 1). Nearly half of this group (53 of 109: 48.6%; 4.1% ± 0.5%) were excluded because of the presence of borderline personality disorder or antisocial personality disorder. The remaining 56 patients were excluded because intermittent aggressive behavior was better accounted for by another Axis I disorder; 85.7% of these patients had principal diagnoses of mood (38 of 56: 67.9%), anxiety (7 of 56: 12.5%), or alcohol/drug (3 of 56: 5.4%) disorders.

Current and Lifetime Prevalence of DSM-IV IED as a Function of Demographic Group

While current and lifetime prevalence of DSM-IV IED did not differ as a function of sex, past 5-year employment history, or marital status, the prevalence of DSM-IV IED did differ as a function of age group, education, and ethnicity (Table 2). First, the prevalence of current DSM-IV IED diminished significantly, in a linear fashion, from younger to older age groups; the same pattern was noted for lifetime DSM-IV IED but only at a trend level of statistical significance. Second, the prevalence of DSM-IV IED differed as a function of education in a linear fashion. DSM-IV IED was approximately twice as prevalent in high school dropouts compared with those with a high

Table 3. Comorbidity Among Patients With and Without DSM-IV Intermittent Explosive Disorder (IED)

Lifetime Diagnosis	IED Group, N (%) (N = 82)	Non-IED Group, N (%) (N = 1218)	Nonaggressive Group, N (%) ^a (N = 1109)	p ^{b,c}	p ^{c,d}
Any mood disorder	62 (75.6)	1005 (82.5)	903 (81.4)	.115	.191
Any anxiety disorder	64 (78.0)	853 (70.0)	763 (68.8)	.123	.083
Any alcohol/drug disorder	49 (59.8)	531 (43.6)	448 (40.4)	.004	.001
Any psychotic disorder	3 (3.7)	43 (3.5)	40 (3.6)	.764	.981
Any impulse control disorder	6 (7.3)	47 (3.9)	35 (3.2)	.141	.057
Any eating disorder	9 (11.0)	165 (13.5)	142 (12.8)	.616	.862
Any somatoform disorder	7 (8.5)	94 (7.7)	77 (6.9)	.830	.508
Any adjustment disorder	3 (3.7)	73 (6.0)	69 (6.2)	.623	.473
Any personality disorder ^e	16/49 (32.7)	167/651 (25.7)	136/597 (22.8)	.312	.118

^aExcludes subjects who met inclusionary criteria for DSM-IV IED but were ruled out by exclusionary criteria for IED.

^bIED group vs. non-IED group.

^cp < .006 required for statistical significance for comparisons of the nine groups of comorbid lifetime diagnoses.

Analyzed by 2 × 2 χ^2 or Fisher exact test.

^dIED group vs. nonaggressive group.

^eAny DSM-IV personality disorder: only includes subjects with complete Structured Interview for DSM-IV Personality assessment (N = 700).

school degree/some college; in turn, DSM-IV IED was more than twice as prevalent among those with a high school degree/some college compared with those with a college degree or beyond. Third, DSM-IV IED was more prevalent among nonwhite compared with white patients. The prevalence of DSM-IV IED did not differ significantly among nonwhite patients, although its prevalence among Hispanic patients was about twice that among patients who were African American or who belonged to other racial categories for both current and lifetime DSM-IV IED. The relationship between DSM-IV IED and education appeared to account for the relationships between both DSM-IV IED and age and DSM-IV IED and ethnicity. Subsequent logistic regression analysis, including lifetime DSM-IV IED as a dependent variable and education, age, and ethnicity as categorical covariates, revealed a significant relationship between DSM-IV IED and education (Wald = 10.83, df = 2, p = .004) only; relationships between DSM-IV IED and age (Wald = 2.00, df = 4, p = .736) or between DSM-IV IED and ethnicity (Wald = 5.65, df = 3, p = .130) were not significant.

Comorbidity Patterns Among DSM-IV IED and Non-IED Patients

There was a substantial amount of lifetime comorbidity among DSM-IV IED patients for Axis I mood disorder (75.6%), anxiety disorder (78.0%), and alcohol/drug disorder (59.8%) as well as for Axis II personality disorder (32.7%) (Table 3). However, when DSM-IV IED patients were compared with non-IED patients, differences in the lifetime comorbidity for these disorders were generally small and nonsignificant with the exception of alcohol/drug disorders, which were nearly 40% more frequent in DSM-IV IED (59.8%) compared with non-IED (43.6%) patients ($\chi^2 = 8.12$, df = 1, p = .004). While the lifetime comorbidity of any (non-IED) impulse control disorder was nearly twice as great in DSM-IV IED (7.3%) com-

pared with non-IED (3.9%) patients, this difference did not reach statistical significance. Removing the 109 patients who met inclusionary (but not exclusionary) criteria for DSM-IV IED did not change this pattern of comorbidity (see Nonaggressive Group, Table 3).

Treatment Interest in DSM-IV IED

DSM-IV IED was the principal reason for treatment in only 8 (20%; 0.6% \pm 0.2% of all patients) of those with current DSM-IV IED. Treatment for a current mood or anxiety disorder was the principal reason for treatment for most (25 of 32: 78%) of the remaining patients in this group—a similar rate to that of the non-IED patients (1011 of 1218: 83.0%, respectively). An additional 24 (60%; 1.8% \pm 0.4% of all patients) of the current DSM-IV IED patients would have been interested in treatment for IED if offered. The remaining 8 patients (20%) were either unsure about or uninterested in treatment for IED; current mood or anxiety disorder was the most common principal reason for treatment in these cases as well.

Age at Onset Data in DSM-IV IED Patients

The mean age at onset of DSM-IV IED in this sample was mid-adolescence (16.2 \pm 8.5 years) and was earlier for men (12.9 \pm 5.3 years) than for women (19.0 \pm 9.7 years) by about 6 years (t = 3.57, df = 68.33, p < .001). The age at onset of symptoms referable to IED, in the total group, ranged from 2 to 40 years. Prevalence of DSM-IV IED by decade was as follows for total group (and for men/women): first decade = 24.4% (36.9%/13.6%); second decade = 52.4% (57.9%/47.7%), third decade = 15.9% (5.3%/25.0%), fourth decade = 7.3% (0%/13.6%). The age at onset of DSM-IV IED was generally earlier than the age at onset for most comorbid disorders.

Age at onset differences for the total group were statistically significant for the comparison between DSM-IV IED and any mood disorder (16.8 \pm 8.5 years vs. 22.2 \pm 11.1 years; t = 3.18, df = 57, p = .002), any alcohol/drug

disorder (15.2 ± 7.5 years vs. 19.8 ± 6.0 years; $t = 3.79$, $df = 48$, $p < .001$), and any other impulse control disorder (14.2 ± 5.2 years vs. 26.2 ± 7.9 years; $t = 2.99$, $df = 4$, $p < .05$). The reverse was true in the case of any anxiety disorder, for which age at onset was nonsignificantly later for DSM-IV IED (16.3 ± 8.1 years vs. 14.7 ± 10.5 years; $t = 1.09$, $df = 60$, $p = .28$).

Further analysis revealed a significantly earlier age at onset for phobic anxiety disorders (e.g., social and simple phobias: 15.7 ± 7.3 years vs. 10.7 ± 6.7 years; $t = 3.20$, $df = 39$, $p = .003$) but not for nonphobic anxiety disorders (e.g., generalized anxiety, panic, posttraumatic stress, obsessive-compulsive disorder: 16.8 ± 8.3 years vs. 18.4 ± 10.9 years; $t = .96$, $df = 49$, $p = .34$). Differences in the respective ages at onset of IED and the comorbid disorders were generally greater for males than females because of the earlier age at onset of IED among males.

DISCUSSION

This study reveals that current and lifetime history of intermittent aggressive behavior that is out of proportion to psychosocial stressors and/or provocation is fairly common in general outpatient psychiatric practice. Nearly 15% of the patients in this sample met the inclusion criteria for lifetime DSM-IV IED. While another Axis I disorder could better explain the symptoms of IED in about 4% of all patients, more than 6% of all patients met full (inclusion and exclusion) DSM-IV criteria for lifetime IED and about 3% met criteria for current DSM-IV IED at time of presentation. If the findings from this study are correct, the prevalence rates for DSM-IV in outpatient psychiatric practice may be as much as 50% higher than those recently estimated for the community.⁴ The remaining patients meeting inclusion criteria for DSM-IV IED (4.1% of all patients) were excluded from the DSM-IV IED diagnosis because of the presence of a borderline or antisocial personality disorder.

Demographic Correlates of DSM-IV IED: Age, Ethnicity, Education, and Sex

Differences in the prevalence of DSM-IV IED were found for some, but not all, demographic groups. The association between low educational level and DSM-IV IED is consistent with some studies showing an association between low educational level and violent behavior¹⁰ and other studies showing an association between low IQ and aggression.¹¹

Differences in the prevalence of DSM-IV IED among age groups or ethnic groups have not been reported previously. However, in this sample, differences by age and ethnic group appear to be accounted for by differences in education, although it is possible that age differences may be the result of a cohort effect or a recall bias in reporting.

Finally, in contrast to what has been suggested by some previous studies,^{3,12,13} the prevalence of DSM-IV IED did not differ as a function of sex. While this difference in the results among studies may be due to sampling differences (i.e., previous studies purposefully recruited physically aggressive individuals who are more likely to be male), this finding is consistent with that of a recent community study⁴ that also reported a near equal prevalence of DSM-IV IED between the sexes. Given the variability in measures of aggression as a function of sex (where studies suggest either a greater degree of aggression in males compared with females¹⁴ or no difference in aggression as a function of sex¹⁵), it is possible that putative sex differences in IED may be smaller than previously thought.

Age at Onset and Comorbidity in DSM-IV IED

In much smaller samples, DSM-IV IED has been reported to have an early age at onset^{4,13} and to be highly comorbid with many other disorders.^{3,13} An early age at onset was confirmed in this study with a mean age of about 16 years. In this sample, the incidence of DSM-IV IED appears to begin as early as childhood, peaks in the teen years, and declines dramatically after age 30 years, with only about 7% of new cases occurring after the age of 30 years. A sex difference in the age at onset, however, was found, whereby criteria for DSM-IV IED is met earlier in males than in females by about 6 years. This is consistent with other data regarding higher rates of aggression in boys than in girls, especially at earlier ages.¹⁶

Despite the early age at onset of IED, a high rate of comorbidity with a variety of disorders has been a reason many have doubted its existence as a behavioral disorder. In this sample, patients with DSM-IV IED displayed substantial lifetime (and current, though not shown) comorbidities with mood, anxiety, alcohol/drug, and personality disorders. However, only alcohol/drug disorder was more prevalent among DSM-IV IED patients compared with non-IED patients. Since the age at onset of DSM-IV IED preceded that for alcohol/drug disorder, it is unlikely that alcohol/drug disorder led to the development of DSM-IV IED in these patients. Overall, the age at onset of DSM-IV IED preceded that for nearly all of the comorbid disorders, with the exception of phobic anxiety disorders, which had an age at onset of 5 years earlier than DSM-IV IED. This suggests that some types of anxiety disorders may predispose one to develop impulsive aggressive behavior at a later time. While a relationship between anxiety disorder and IED has not previously been reported, emerging data suggest variable relationships between anxiety disorder and conduct disorder. For example, while posttraumatic stress disorder may be quite common among juvenile delinquents,¹⁷ the presence of social anxiety in early childhood may protect against the later development of conduct disorder.¹⁸ In adults, strong positive correlations between dimensional measures of anxiety

and aggression have been reported,¹⁹ suggesting the presence of a facilitative, rather than suppressive, effect of anxiety on aggression. More work in this area will be needed to fully understand the nature of potential links between IED and anxiety disorders.

Interest in Treatment for DSM-IV IED

DSM-IV IED was the principal focus of treatment in only 20% of current DSM-IV IED patients (0.6% of all patients). Since DSM-IV IED is often thought of as an “ego-syntonic” disorder, it is assumed by many that patients with DSM-IV IED, especially those currently meeting criteria, do not perceive a problem and/or are otherwise uninterested in treatment. However, an additional 60% of current DSM-IV IED patients expressed interest in treatment (only 20% were uninterested in treatment), suggesting that DSM-IV IED may be less ego-syntonic than thought. These data further suggest that there may be a large gap (e.g., 3 to 1) between the number of DSM-IV IED patients interested in being treated for problematic aggressive behavior and the number being offered treatment for this condition. The fact that DSM-IV IED is not widely recognized as a behavioral disorder, and the fact that few treatment options appear to be available, may explain the presence of this treatment-interest/treatment-offer gap.

Issues of Nosology

While a diagnosis of IED clearly should not be made when intermittent aggressive behavior is better accounted for by another Axis I disorder (such as in the case of psychosis or substance intoxication/withdrawal), it is unclear if the presence of borderline personality disorder and/or antisocial personality disorder should continue to be exclusionary for a DSM-IV diagnosis of IED. A recent review of this issue²⁰ notes few empirical data supporting the notion that the construct of intermittent aggressive behavior should be subsumed by constructs involving these personality disorders. This issue is not merely academic. If patients with borderline/antisocial personality disorder who also met the DSM-IV inclusion criteria for IED were included as individuals classified as DSM-IV IED patients, an additional 4.1% of all patients in this sample would be formally diagnosed with DSM-IV IED—an increase of 65%.

On the other hand, if the cardinal feature of a disorder (e.g., intermittent aggressive behavior) occurs in nearly every patient with another disorder (e.g., borderline/antisocial personality disorder), one of the diagnoses would clearly be unnecessary. While this is the case when one considers generalized social phobia and avoidant personality disorder,²¹ current data suggest that IED and borderline/antisocial personality disorder do not invariably occur together.²⁰ In this study, 49% of patients with borderline/antisocial personality disorder did not meet in-

clusion criteria for DSM-IV IED. In another study involving a small community sample of nonpatients,⁴ only 23% of subjects with borderline/antisocial personality disorder also met inclusion criteria for DSM-IV IED. Differences in comorbidity between these studies are likely due to the general psychopathologic nature of the study population (e.g., treatment seeking vs. community based). Overall, these data suggest that while borderline/antisocial personality disorder and IED commonly occur together, the degree of comorbidity is not sufficiently large that one disorder is only rarely diagnosed in the absence of the other. If so, the exclusion of these personality disorders from the DSM-IV IED diagnosis may not be warranted at this time.

CONCLUSION

Intermittent aggressive behavior in psychiatric outpatient samples appears to be far more common than previously thought, and lifetime DSM-IV IED may be present in as many as 6% (perhaps 10% if patients with borderline/antisocial personality disorder are included) of outpatients. DSM-IV IED develops early in life, and its development may well be independent of most other disorders. Finally, while DSM-IV IED may be the focus of treatment in only a few patients, far more patients may be interested in treatment if offered. Limitations of this study include the fact that the sample was drawn from a hospital-based outpatient private practice that did not include many patients with public sector funding. Related to this is the fact that the overall sample was highly represented by patients with mood and anxiety disorders and less represented by those with psychotic and alcohol/drug disorders. Thus, these results may not generalize to a more diverse group of patients seen in other settings.

Disclosure of off-label usage: The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration–approved labeling has been presented in this article.

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