

Multi-Impulsivity Among Bulimic Patients in Japan

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Abstract: Objective: *Studies in Western world patients suggest the possible existence of a subgroup of patients with bulimia nervosa (BN) who display multiple problems with impulsivity, such as suicidal attempts. We assessed impulsive behaviors among BN patients in Japan to discuss them crossculturally. Method:* Impulsive behaviors in 64 BN patients were assessed and multi-impulsivity (MI) was defined according to the definition proposed by Fichter, Quadflieg, and Rief (*Psychological Medicine*, 24, 591–604, 1994). **Results:** Nineteen patients (30%) met the definition of MI. BN patients with MI had more severe clinical features, such as concurrent depressive and anxious symptoms, global functioning, and higher prevalence of borderline personality disorder than BN patients without MI. **Discussion:** These results showed the similarities between BN patients with MI in Japan and those patients in the Western world in clinical and psychopathological characteristics and a lifetime incidence of each impulsive behavior. These findings may suggest culturally free bases for linkage between BN and MI. © 2000 by John Wiley & Sons, Inc. *Int J Eat Disord* 27: 348–352, 2000.

Key words: bulimia nervosa; impulsivity; Japan

INTRODUCTION

A substantial proportion of people with bulimia nervosa (BN), aside from the core bulimic symptoms such as binge eating, have a generalized disturbance of impulse control. Impulsive control problems include substance abuse, stealing, and self-mutilation (Sansone, Fine, & Nunn, 1994; Suzuki, Higuchi, Yamada, Komiya, & Takagi 1994). In fact, multiple patterns of impulse discontrol have been characterized as a multi-impulsive form of BN (Lacey & Evans, 1986). Although there is some controversy as to the exact

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diagnostic definition of multi-impulsivity (MI; Wiederman & Pryor, 1996), MI is considered relatively common in BN and is closely related to the more severe clinical features and less favorable course of illness (Fahy & Eisler, 1993; Lacey, 1993; Fichter, Quadflieg, & Rief, 1994; Wiederman & Pryor, 1996). MI bulimics may constitute a distinct subgroup of BN (Lacey & Evans, 1986; Lacey, 1993; Fichter et al., 1994).

The types of impulsive behaviors displayed by people may be influenced by environmental factors, such as culture and race. For example, the elevated rate of amphetamine use found in eating-disordered (ED) patients with borderline personality disorder (BPD) in the United States (Johnson, Tobin, & Enright, 1989) was not found in ED patients with BPD in Japan (Matsunaga, Kiriike, Nagata, & Yamagami, 1998). Therefore, we hypothesized that the type of impulsive behaviors and the clinical features of BN patients with MI in the Western world would be different from those in Japan. To clarify these issues, we assessed the impulsive features among BN patients in Japan.

METHODS

Subjects were 64 female patients with BN diagnosed according to the criteria outlined in the 3rd Rev ed. of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R; American Psychiatric Association [APA], 1987). Of these subjects, 31 patients concurrently met the DSM-III-R criteria for anorexia nervosa (AN; 48%; BAN) and the others met the criteria for BN alone (52%; NWB). All subjects were consecutively admitted to the Osaka City University Medical School Hospital. All gave informed consent to participate in this study.

To assess the life-time incidence of impulsive behaviors in all subjects, we used a self-report questionnaire that has the same format and mostly consists of the same items as the parts of "other behavior" and "sexual history" in the Diagnostic Survey for Eating Disorders (DSED; Johnson, 1985). With respect to alcohol and drug use in all subjects, we performed the assessment according to the DSM-III-R criteria for substance abuse or dependence. The evaluation of MI was performed according to the definition proposed by Fichter et al. (1994). They defined MI as an existence of at least three of the six following impulsive behaviors in their life-time, together with their bulimic symptoms: (a) one or more episodes of suicidal attempts, (b) one or more episodes of self-harming, (c) one or more episodes of shop-lifting (other than food), (d) severe or very severe abuse (or dependency) of alcohol, (e) severe or very severe abuse (or dependency) of drugs, or (f) sexual promiscuity (five or more sexual partners in past 2 years or 10 or more since puberty). To make the definitions of (d) and (e) more clear, we modified them as "presence of a life-time diagnosis of alcohol (drug) abuse or dependence according to the DSM-III-R criteria."

Personality disorders (PD) were assessed in all subjects using the Japanese version of the Structured Clinical Interview for DSM-III-R PD (SCID-II; Spitzer, Williams, & Gibbon, 1987). The acceptable reliabilities for each PD diagnosis obtained by the SCID-II Japanese version were previously described (Matsunaga et al., 1998). The Eating Disorder Inventory (EDI; Garner, Olmsted, & Polivy, 1983), the Manifest Anxiety Scale (MAS; Taylor, 1953), the Zung's Self-Rating Depression Scale (SDS; Zung, 1965), and the Maudsley Obsessional Compulsive Inventory (MOCI; Hodgson & Rachman, 1977) were concurrently administered to all subjects on the day of these assessments. Global functioning was assessed using the DSM-III-R Axis V Global Assessment of Functioning Scale (GAFS). The

statistical analysis was performed using a Student's *t* test and chi-square test with Yate's correction for 2 × 2 tables or Fisher's exact test where appropriate.

RESULTS

For all subjects, the life-time incidence was 36% for suicidal attempts, 30% for self-harming and shop-lifting, 13% for alcohol abuse or dependence, and 9% for drug abuse or dependence and sexual promiscuity. We found that 19 (30%) patients with BN in our center met criteria for MI. The rate of MI in people with BAN (36%) was almost similar to that for people with NWB (24%; Table 1).

There were no significant differences between patients with and without MI in terms of mean age, age at onset, duration of illness, or percent standard body weight (Table 1). BN patients with MI (BN+MI) had significantly less years of education ($t = 2.47$, $df = 62$, $p < .05$), lower GAFS scores ($t = 4.39$, $df = 62$, $p < .01$), greater current frequencies of binge eating ($t = 2.48$, $df = 62$, $p < .05$) and self-induced vomiting ($t = 2.46$, $df = 62$, $p < .05$), and higher prevalence of purgative abuse ($\chi^2 = 7.83$, $df = 1$, $p < .05$) than BN patients without MI (BN-MI). BN+MI also had significantly greater numbers of hospitalizations ($t = 7.19$, $df = 62$, $p < .01$) than BN-MI.

With regard to psychometric test results, BN+MI had significantly higher mean scores on the MAS ($t = 3.82$, $df = 62$, $p < .01$), the SDS ($t = 3.47$, $df = 62$, $p < .01$), and on the EDI subscales for Ineffectiveness ($t = 4.02$, $df = 62$, $p < .01$), Interoceptive Awareness

Table 1. Comparison of demographic and clinical features and psychometric test results between bulimic patients with (BN + MI) and without (BN – MI) multi-impulsivity

	BN + MI (N = 19)	BN – MI (N = 45)	Analysis	
			<i>t</i> (<i>df</i> = 62)	<i>p</i>
Demographic and clinical features				
Age (years)	25.4 ± 4.2	24.1 ± 3.0	1.41	.16
Age at onset (years)	19.5 ± 3.9	19.2 ± 2.8	0.32	.75
Duration of illness (years)	5.9 ± 3.2	5.0 ± 2.0	1.25	.21
Education (years)	12.3 ± 2.9	13.8 ± 3.5	2.47	.02
GAFS score	39.2 ± 9.8	52.2 ± 11.3	4.39	<.0001
Percentage of SBW	79.6 ± 20.5	83.0 ± 18.7	0.63	.53
Current frequency of binge eating (/w)	8.9 ± 4.9	6.3 ± 3.6	2.48	.02
Current frequency of vomiting (/w)	9.3 ± 4.4	6.5 ± 4.0	2.46	.02
Laxative abuse ^a	14 (73.4)	14 (31.1)	—	.02*
Number of admissions	2.8 ± 2.1	0.3 ± 0.8	7.19	<.0001
Psychometric test results				
MAS	31.4 ± 4.1	25.2 ± 6.5	3.82	.003
SDS	62.7 ± 3.5	54.2 ± 10.4	3.47	.01
MOCI	12.8 ± 5.7	10.8 ± 6.3	1.22	.23
EDI				
Ineffectiveness	22.2 ± 5.7	14.9 ± 6.7	4.02	.002
Interoceptive Awareness	19.6 ± 4.6	13.4 ± 6.5	3.62	.0006
Maturity Fears	14.6 ± 5.5	7.5 ± 3.9	5.60	<.0001

Note: Values are expressed as mean ± S.D. GAFS = Global Assessment of Functioning Scale (Axis V); SBW = standard body weight; MAS = Manifest Anxiety Scale; SDS = Zung's Self-Rating Depression Scale; MOCI = Maudsley Obsessional Compulsive Inventory; EDI = Eating Disorder Inventory.

^aNumbers (%).

*Chi-square test and Yate's correction.

($t = 3.62$, $df = 62$, $p < .01$), and Maturity Fears ($t = 5.60$, $df = 62$, $p < .01$). When comparing the prevalence of PD between these groups, BPD was more frequently diagnosed in BN+MI than in BN-MI subjects ($\chi^2 = 14.0$, $df = 1$, $p < .01$). Except for BPD, there were no significant differences between these groups in the prevalence of each PD.

DISCUSSION

We found that 30% of Japanese subjects with BN met the definition of MI according to the criteria defined by Fichter et al. (1994). The rate of MI in our BN subjects is relatively higher than that reported by their group (32/196;16%, 1994). However, comparing the rates in Japan with those in other Western studies is problematic because of the inconsistency of diagnostic criteria in the literature where the rate of MI has ranged from 18% to 80% (Fahy & Eisler, 1993; Lacey, 1993; Wiederman & Pryor, 1996). Another potential method of assessing impulsive and unstable behaviors between cultures is to compare the rates of BPD. A deficit of impulsive control is included in the DSM-III-R criteria for BPD. In Western countries, the rate of BPD in BN patients has been estimated to be approximately 25–48% (Rossiter, Agras, Telch, & Schneider, 1993). This rate of BPD in Western countries is almost similar to that in our previous study (Matsunaga et al., 1998). Johnson et al. (1989) suggested that ED patients with comorbid BPD were significantly more likely than ED patients without BPD to make suicidal attempts, to physically hurt themselves, or to have substance abuse. Moreover, ED patients with BPD had a greater incidence of stealing nonfood items, which they considered as an indication of general self-regulatory problems related to BPD pathology. Suzuki et al. (1994) found that BN patients with alcoholism had more BPD and pathological symptoms, such as stealing and suicidal attempts or wrist cutting. Sansone et al. (1994) also reported that ED patients with substance abuse were far more likely to be classified as having BPD and a significantly higher number of more lethal self-destructive behaviors. These studies supported the close linkage between BPD and MI in terms of behavioral and phenomenological characteristics. In this study, BPD was the only PD whose rate was significantly higher in BN+MI (63%) than in BN-MI subjects (13%). Fichter et al. (1994) also suggested that BN patients with MI tended to have higher rates for BPD compared with those patients without MI.

When all of our BN subjects were considered together, the rates of some impulsive behaviors such as suicidal attempts, self-mutilation, and shop-lifting were similar to those reported in the Western cultures: 30–40% for suicidal attempts, 15–31% for self-mutilation; and 35–41% for shop-lifting (Lacey, 1993; Fichter et al., 1994; Wiederman & Pryor, 1996). On the other hand, most studies on MI did not support our findings that BN+MI subjects showed more severe forms of typical BN symptoms, such as binge or purge frequency, as compared with BN-MI subjects. However, in this study, the pathology related to MI is characterized to have a stronger association with general psychopathology and generalized psychosocial and behavioral problems rather than core BN features as reported in the Western world studies (Lacey, 1993; Fichter et al., 1994).

In conclusion, there were more similarities than we had expected between BN patients with MI in Japan and those in the Western world in terms of the incidence of each impulsive behavior, clinical features, and personality pathology. Although there were some methodological limitations, such as small sample size, lack of controlled comparison, and the use of self-report measure in this study, these results may suggest culturally free bases for linkage between BN and MI.

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