Affective disorder in bulimic anorexics and their families[1]

Gregory B. Collins, M.D.
Margaret Kotz, D.O.
Matthew Messina
Thomas Ferguson

A retrospective study of 43 cases of bulimic anorexia and the patients' first-degree relatives was done to examine the hypothesis that affective disorder (depression) and bulimic anorexia are related disorders. Twenty-one (48.8%) of the bulimic anorexics were diagnosed as having affective disorder, while 9.3% of the adult female first-degree relatives and 6.8% of the adult male first-degree relatives had affective disorder. This review revealed a high rate of diagnosis of affective disorder among bulimic probands, but not among their family members, whose rates did not differ significantly from those listed for the general population. The reason for the high incidence of affective disorder in bulimic patients is unknown at present, but does suggest that the two disorders are related.

Index terms: Anorexia nervosa • Appetite disorders • Depression

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Anorexia nervosa is a severe, life-threatening disorder characterized by self-induced starvation, mental preoccupation with weight loss, and distortion of body image. Bulimia has been reported in 47% of anorexia cases,[1] and is characterized by episodic binging on food, with subsequent self-induced vomiting. Bulimia has been associated with worsened prognosis and may be present with or without starvation and weight loss.[2–4] In recent years, there has been a tendency to regard bulimia as a disorder separate from anorexia nervosa on the basis of clinical course[5] or psychological testing.[6] While both bulimia and anorexia nervosa are illnesses of unknown etiology, pathophysiolog-

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ical clues have been sought in epidemiological studies seeking linkages to other disorders such as depression. Such studies have generally focused on the co-occurrence of two possibly related disorders in the same patient group or in family members.

Anorexia nervosa and affective disorder (or depressive disease) have been linked in several previous studies. Until recently, however, little work has been done on a possible relationship between bulimia and affective disorder. If such linkages were to be found, they could have significant implications for enhanced understanding of the pathophysiology and treatment of bulimia. Therefore, this epidemiologic study was designed to examine two hypotheses: (*a*) that bulimics have a higher than normal incidence of affective disorder, and (*b*) that affective disorder occurs more frequently in the families of bulimics than in those of normals.

Method

To examine the relationship between bulimic anorexia and affective disorder, a retrospective chart review was performed for 43 patients hospitalized for anorexia nervosa with bulimia at the Cleveland Clinic Foundation. Charts were reviewed from the Cleveland Clinic computerized list of patients with bulimia during the period 1982–1984. Bulimic probands included 42 females and one male. Patients ranged in age from 15 to 31 (median age: 19; mean age: 19.1). Patients were included in this study if they showed a pattern of repetitive binging on food, frequent compulsive self-induced vomiting, and significant weight loss. Charts were reviewed for indications of affective disorder as evidenced by a current or previous diagnosis or treatment for affective disorder. Criteria for affective disorder were a severe, long-lasting, dysphoric mood (depression) and impairment of psychosocial functioning.

Rates of affective disorder in bulimic anorexics and their first-degree relatives were compared using chi-square tests with rates of affective disorder in the general population and in anorexics and bulimics reported in previous studies.

Results

Of the 43 bulimic anorexic probands, there were 39 adult patients (age 18 years and older) and 14 juvenile patients (under age 18). Twenty-one of the 48 patients (48.8%) were designated as having affective disorder. Eight of the 14 juvenile patients (57.1%) and 13 of the 29 adult patients (44.8%) had this diagnosis.

In the families of the 43 probands, there were 148 adult (age 18 years and older) first-degree relatives, including 73 males and 75 females. Affective disorder was listed for three (7.0%) of the patients' fathers, two (4.7%) of the mothers, two (6.7%) of the brothers ($N = 30$), and five (15.6%) of the sisters ($N = 32$). Rates of affective disorder in female first-degree relatives (7/75 or 9.3%) compared with male first-degree relatives (5/73 or 6.8%) were not significantly different. Combining male and female totals shows an overall prevalence of affective disorder of 8.1% (12/148) in adult first-degree relatives of bulimic anorexics.

Discussion

This retrospective chart review study revealed a high rate of diagnosis of affective disorder among hospitalized bulimic anorexic probands, but not among their family members. Robins et al[7] reported an average adult prevalence rate of 7.9% for affective disorder in the general population. The rate of affective disorder for the adult bulimic anorexic probands (44.8%) was significantly higher ($P < .001$) than the rate for the general population. Comparisons with age and sex-matched normal controls were not possible, but future studies should incorporate this comparison. The prevalence of affective disorder for adult first-degree relatives (8.1%) is not significantly different from the rate for the general population.

Our data are in substantial agreement with several recent studies. In 1982, Hudson et al reported a prevalence rate of 60% for various depressive disorders among 10 bulimic probands.[8] In 1984, Herzog[9] reported the prevalence of affective disorder among bulimic probands ($N = 55$) to be 49.2%, which is nearly identical to our result (48.8%). Hatsukami et al recently reported that 43.5% of a group of 108 bulimic probands had a history of affective disorder.[10] Thus, there appears to be considerable agreement among recent investigators concerning the co-incidence of affective disorder with bulimia.

On the other hand, our study found no significant difference between the rate of affective disorder in the adult relatives of bulimic probands (8.1%) and the prevalence of affective disorder in the general adult population (7.9%). The existing literature is divided about this issue.

Stern et al found no difference in the prevalence of affective disorder between the relatives of bulimic probands and the relatives of control probands.[11] Hudson et al, on the other hand, found the incidence of major depression to be 15% in first-degree relatives of bulimic patients.[8] There were several methodological considerations that might explain this disparity. Our data were obtained by retrospective chart review and were therefore subject to the limitations inherent in record searches. Diagnoses were necessarily based on nonspecific criteria, rather than on more objective data such as psychological test results or biological parameters such as the dexamethasone suppression test results. Several clinicians made the diagnoses, and considerable variation may exist among clinicians as to the specificity or frequency of "secondary" diagnoses. Since retrospective chart reviews have been found to underestimate significantly the extent of family pathology,[12] the actual rate of familial affective disorder might be higher than we have reported. A prospective study design should be done in the future to provide more objective diagnostic criteria for bulimia and affective disease, and to provide improved documentation of family psychiatric disorder.

Nonetheless, this study does support the findings of a high prevalence of affective disorder in bulimic patients. The etiology of this co-occurrence of severe psychiatric disorders is unknown at present, but several mechanisms are possible. One hypothesis is that one disorder precedes the other, with the second as a "reaction" to the first; depression might follow severe chronic bulimia, or vice-versa. Or, it is possible that the disorders are biologically or biochemically related. In 1973, Flemenbaum theorized that anorexia, bulimia, and unstable weight were syndromes relating to a common underlying depressive disorder.[13] More recently, Collins et al reported a relatively high incidence of alcoholism among the first-degree relatives of bulimic anorexics.[14] Alcoholism has been shown to be influenced by genetic factors, and to be related to affective disorder.[15,16] It would appear that bulimia, affective disorder, and alcoholism may be syndromes relating to a common, underlying biological mechanism or predisposition. This hypothesis is supported by Pope et al[17] and Walsh et al,[18] who report some success in the treatment of bulimics with antidepressants. Thus, this study adds support to the hypothesis that bulimia and affective disorder are related conditions. Further work is suggested in delineating the pathophysiology of these conditions with specific regard to their possible biochemical and therapeutic similarities.

Drug and Alcohol Rehabilitation Program
Department of Psychiatry
The Cleveland Clinic Foundation
9500 Euclid Avenue
Cleveland, OH 44106

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