CLINICAL PRACTICE

Borderline Personality Disorder

John G. Gunderson, M.D.

This Journal *feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the author's clinical recommendations.*

A 26-year-old woman is brought to the emergency room by an anxious-looking man who explains that she became angry and suicidal, stating that her "life had no value" and that she would "like to end it all" after he criticized her. Her history includes five previous emergency room visits (twice involving self-inflicted cuts that required sutures) and two psychiatric hospitalizations after overdoses. Adolescent adjustment reaction and major depressive disorder have been diagnosed in the past, and she has been treated with sertraline, alprazolam, and aripiprazole. How should she be evaluated and treated?

THE CLINICAL PROBLEM

Borderline personality disorder (BPD) is present in about 6% of primary care patients[1] and persons in community-based samples and in 15 to 20% of patients in psychiatric hospitals and outpatient clinics.[2] In clinical settings, about 75% of persons with the disorder are female, although this percentage is lower in community-based samples.[3,4] Patients with BPD usually enter treatment facilities after suicide attempts or after episodes of deliberate self-injury.[5] Such episodes result in an average hospital stay of 6.3 days per year and nearly one emergency room visit every 2 years, rates that are 6 to 12 times those among patients with a major depressive disorder.[6,7]

Table 1 summarizes the criteria for the diagnosis of BPD, according to the *Diagnostic and Statistical Manual of Mental Disorders,* fourth edition. Recurrent suicidal threats or acts, when combined with fears of abandonment, are by themselves strongly indicative of the diagnosis.[8] Though these signature criteria make BPD easy to recognize, the diagnosis is often underused.[9,10] A major reason for this is the perception that the recurrent crises, emotional volatility, and self-injurious behavior that characterize patients with BPD are willful and manipulative episodes rather than signs of an illness.[11,12]

BPD is significantly heritable, with 42 to 68% of the variance associated with genetic factors[13,14] — rates in the same range as those reported for hypertension.[15] All the major components of the disorder (e.g., interpersonal hypersensitivity, affective dysregulation, and impulsivity) have likewise been shown to track in families.[14] Studies involving the use of magnetic resonance imaging or positron-emission tomography in patients with BPD have shown a hyperresponsive amygdala and impaired inhibition from the prefrontal cortex during tasks involving exposure to facial expressions, reactions to emotionally charged words, and interpersonal cooperation.[16-18] There is evidence that neurohormones, such as oxytocin and opioids, mediate the exaggerated fears of rejection and abandonment that are characteristic of BPD.[19] Environmental influences also appear to be important in the pathogenesis of the disorder; insecure attachment, childhood neglect or trauma, and family marital or psychiatric problems are recognized risk markers.[2]

From the Psychosocial and Personality Research Program, McLean Hospital, Belmont, MA. Address reprint requests to Dr. Gunderson at the Psychosocial and Personality Research Program, McLean Hospital, 115 Mill St., Belmont, MA 02478, or at jgunderson@mclean.harvard.edu.

N Engl J Med 2011;364:2037-42.

An audio version of this article is available at NEJM.org

Table 1. Criteria for the Diagnosis of Borderline Personality Disorder.

Five or more of the following criteria must be met:
Interpersonal hypersensitivity
Frantic efforts to avoid real or imagined abandonment
A pattern of unstable and intense interpersonal relationships, characterized by alternating between extremes of idealization and devaluation
Affective dysregulation
Affective instability because of a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety, usually lasting a few hours and only rarely more than a few days)
Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights)
Chronic feelings of emptiness
Impulsivity
Impulsive behavior in at least two areas that are potentially self-damaging (e.g., spending money, sex, substance abuse, reckless driving, binge eating)
Recurrent suicidal behavior, gestures, or threats or self-mutilating behavior
Other factors
Identity disturbance with markedly and persistently unstable self-image or sense of self
Transient, stress-related paranoid ideation or severe dissociative symptoms

Whereas BPD has long been considered a chronic and largely untreatable disorder, more recent data indicate a high remission rate (about 45% by 2 years and 85% by 10 years), with remission defined as no more than two diagnostic criteria being met for at least 12 months, and a low relapse rate (about 15%).[20] In other respects, however, the prognosis remains discouraging. The suicide rate is about 8 to 10%, which is particularly high for young women, in whom the suicide rate is typically low. Moreover, even after remission, most patients with BPD have severe functional impairment, with only about 25% of patients employed full time and about 40% receiving disability payments after 10 years.[20] In addition, BPD negatively affects the course and treatment of coexisting medical conditions[21,22] and other psychiatric disorders.[23,24]

Costs of the disorder include those related to heavy utilization of expensive health care resources and the persistent lack of productivity of patients.[25] There are also considerable emotional and other costs, including those related to a variety of behaviors that are more common among patients with BPD than among those without the disorder, including reckless driving,[26] domestic violence,[27] imprisonment,[28] and pathological gambling.[29]

STRATEGIES AND EVIDENCE

DIAGNOSIS

The most distinctive characteristics of patients with BPD are their hypersensitivity to rejection and their fearful preoccupation with expected abandonment (Table 1).[30] Patients with the disorder feel that their lives are not worth living unless they feel connected to someone they believe really "cares," yet their perception of "caring" generally involves unrealistic levels of availability and validation. Within such relationships, an initial idealization can dramatically shift to devaluation when rejection is perceived. In addition to this external "splitting," patients with BPD typically have internal splitting (i.e., vacillation between considering oneself a good person who has been mistreated, in which case anger predominates, and a bad person whose life has no value, in which case self-destructive or even suicidal behavior may occur). This splitting is also evident in black-and-white or all-or-nothing dichotomous thinking.

BPD is usually diagnosed in young adulthood, but signs of it often become evident in adolescence.[31] Early markers include body-image problems, severe shame, the search for exclusive relationships, extreme sensitivity to rejection, and behavioral problems, including deliberate self-harm.[32] Although these phenomena may occur in adolescents without BPD, their presence is predictive of long-term social disability and an increase in the risk of adult BPD by a factor of nine.[31]

The diagnosis of BPD is most easily established by asking patients whether they believe that the criteria for the disorder characterize them. Clinical experience suggests that by participating in the diagnosis, patients with BPD may be more likely to accept it. Although clinicians who think of a BPD diagnosis as pejorative (chronic and untreatable) may be reluctant to disclose it,[8,12] patients and their families often find it helpful to be informed of the diagnosis. Such disclosure frames treatment plans, establishes reasonable expectations, and may improve compliance.[33] Clinical experience suggests that patients and their families are often relieved to learn that there are other people with similar symptoms and that there are effective treatments.

Many cases of BPD are initially misdiagnosed as depression or bipolar disorder and are treated with antidepressants or mood stabilizers.[9,10] This

Table 2. Four Evidence-Based Treatments for Borderline Personality Disorder.*

Type of Therapy	Description
Dialectical behavior therapy	A behavioral therapy that includes both individual and group therapy, involving didactics and homework on mood monitoring and stress management; the best validated and easiest to learn of the psychotherapies, one that teaches the patient how to regulate feelings and behaviors, with the therapist acting as a coach with extensive availability
Mentalization-based therapy	A cognitive or psychodynamic therapy that includes both individual and group therapy, in which the therapist adopts a "not-knowing" stance while insisting that the patient examine and label his or her own experiences and those of others (i.e., mentalizing); emphasis on thinking before reacting (a process that may be central to all effective therapies)
Transference-focused psychotherapy	A twice-weekly individual psychotherapy developed from psychoanalysis that includes interpretation of motives or feelings unknown to the patient and retains a focus on the patient's misunderstanding of others, especially of the therapist (i.e., transference); the least supportive and hardest to learn of the therapies
General psychiatric management	A once-weekly psychodynamic therapy developed from the APA guidelines[34] and the basic BPD treatment textbook,[2] focusing on the patient's interpersonal relationships but also possibly including family interventions and pharmacologic therapy; the least theory-bound and easiest to learn of the therapies but least well evaluated

* APA denotes American Psychiatric Association, and BPD borderline personality disorder.

occurs despite the fact that distinguishing BPD from such mood disorders is usually not difficult. Unlike major depressive disorder, depressive episodes in patients with BPD are marked by emptiness, shame, and a long-standing negative self-image. Unlike patients with bipolar disorders, patients with BPD are extremely sensitive to rejection and do not have periods of mania or elation.

TREATMENT

Psychotherapy

The primary treatment for BPD is psychotherapy.[2,34] Randomized trials involving patients with BPD support the efficacy of several forms of psychotherapy, characteristically involving 2 to 3 hours per week of outpatient care for 1 or more years by psychiatrists or psychologists who have received specific training plus ongoing supervision during the trials.[2,35,36] Table 2 describes four types of psychotherapy that have been shown to be effective for this condition, all of which have been outlined in manuals so that therapists' adherence to the particular approach can be reliably assessed. The best studied of these methods is dialectical behavior therapy,[37] but all the methods have proved to be superior to usual care (a mixed array of therapies), with significant reductions of 80 to 90% in the need for other treatments (hospitalizations, emergency room visits, and use of medication) and about 50% in episodes of self-harm or suicidality. Follow-up studies have shown that the clinical and cost benefits are maintained during a period of 2 to 5 years.[38,39] However, extensive training is required to deliver these therapies, and they are not widely available.

Nonetheless, there are several principles common to these effective types of psychotherapy that can be applied in practice (Table 3). These principles are central to a simpler-to-learn and less-intensive therapy called general psychiatric management, which in a large, multicenter trial resulted in reductions in the need for other treatments and in episodes of self-harm or suicidality that were similar to those with dialectical behavior therapy.[40]

The principles that are derived from effective therapies are relevant for all clinicians caring for patients with BPD. Initial visits should include a discussion of the diagnosis, expression of concern that acknowledges the patient's distress, and establishment of goals for change that are short-term and feasible. Examples of such goals are taking steps to feel better (i.e., leaving a high-stress situation or taking a medication), calling for help before losing control, improving sleep or exercise schedules, attending a self-help group (e.g., Alcoholics Anonymous), and reopening communications with an alienated friend or family member. Clinical experience indicates that such basic initial interventions can be surprisingly helpful.[41]

Table 3. Basic Principles of Effective Treatment for Patients with Borderline Personality Disorder.

Principle	Description
Need for a primary clinician	Designation of one clinician to discuss the diagnosis with the patient, assess progress, monitor safety, and oversee communications with other practitioners and family members
Need for a therapeutic structure	Establishment and maintenance of goals and roles for the clinician, particularly in the identification of the limits of his or her availability and a management plan for the patient's future suicidal impulses or other emergencies
Need for the clinician's support of the patient	Validation of the patient's extreme distress and desperation, accompanied by hopeful statements about potential to change
Need for the patient's involvement in the therapeutic process	Acknowledgment that progress depends on the patient's active efforts to take control over his or her feelings and behavior
Need for the clinician's intervention	Acknowledgment that the clinician should be active (interrupt silences and digressions), focus on here-and-now situations (including angry or dismissive responses), and help the patient connect his or her feelings to rejections, lost supports, and other past events
Need for the clinician to deal with the patient's suicidal threats or self-harming acts	Acknowledgment that the clinician should express concern about and listen patiently to such threats but behave judiciously (i.e., not always recommend hospitalization)
Need for the clinician to be self-aware and be ready to consult with colleagues	Recognition that idealization or devaluation is the patient's interpersonal style and that the inclination to rescue or punish the patient is a predictable reaction (countertransference) that can disrupt treatment and may require outside consultation

Perhaps the most difficult problems for providers to manage are deliberate self-harm, impulsive behaviors with potentially self-destructive consequences (e.g., driving under the influence of drugs or alcohol or engaging in unprotected sex), and recurrent suicidal threats. These behaviors often raise concern about suicidal intentions or plans, but they usually signify self-punishment or a way to manage feelings, and they frequently occur in association with intoxication.[42] The distinction can usually be made by inquiring about the patient's intention. If suicidal intent is confirmed, the patient's safety is a priority. This may require hospitalization and usually requires contact with the patient's family members, often despite the patient's protests. In cases in which suicidal intent is denied, self-harming behaviors or threats may be effectively managed by concerned attention (including attention from others involved with the patient as much as from the clinician) and by establishing a plan for management of crises. In clinical trials of various types of psychotherapy, emergency department visits have been used as needed in such situations, but alternatives in practice include telephone or e-mail contact, use of an Alcoholics Anonymous sponsor, and referral for substance-abuse treatment as indicated. When a patient engages in repeated or escalating self-destructive behavior, a psychiatrist who has experience with BPD should be involved in the patient's care.

Another challenge for clinicians is determining how to respond to patients' frequent anger toward and alienation from their families.[43] Family members often have the same feelings of anger and helplessness that clinicians experience in caring for patients with BPD.[44] Failure on the part of clinicians to recognize this can aggravate the alienation of family members, yet their emotional and financial support is often needed. Clinical experience suggests that involving family members can increase their understanding of and support for patients and facilitates communication between patients and their families, as well as decreasing the emotional and financial burdens.[2]

Pharmacotherapy

Selective serotonin-reuptake inhibitors and other antidepressants are frequently prescribed to patients with BPD, but in randomized trials such drugs have had little if any benefit over placebo.[45] Data from randomized trials support the benefits of atypical antipsychotic agents (e.g., olanzapine) and mood stabilizers (e.g., lamotrigine), particularly for reducing impulsivity and aggression, in patients with BPD. However, these effects are typ-

ically modest, and side effects are common (e.g., obesity and associated hypertension and diabetes with atypical antipsychotic agents or sedation and possibly toxic effects to kidneys and during pregnancy with mood stabilizers).[46,47] Thus, treatment with medications should be initiated with the understanding that they are adjuncts to psychotherapy.[33] In practice, prescribing medications may help to facilitate a positive alliance by concretely showing the physician's wish to help the patient feel better, but unrealistic expectations regarding the benefits of medications can undermine the patient's work on self-improvement.

Common concerns in prescribing medications to patients with BPD include risks of overdosing and noncompliance, but experience suggests that medications can be used without undue risk as long as patients are regularly seeing and communicating with their clinicians.[2,36,48] Another common concern in practice is polypharmacy, which may occur when patients want to continue or add medications despite a lack of demonstrable benefit. In one study, 80% of patients with BPD were taking three or more medications.[49] Medications with an unclear benefit should be discontinued before a new medication is initiated.

AREAS OF UNCERTAINTY

Genes that confer susceptibility to BPD have not yet been identified. Studies are needed to identify childhood and adolescent risk factors for adult BPD. Data on how these factors interact with genetic factors will allow for the identification of children at risk and the development of early-intervention strategies. More research is also needed to identify predictors of poor outcomes, such as suicide or chronicity. Our understanding of the neurobiology of BPD is incomplete; greater knowledge in this area would facilitate the development of effective pharmacotherapies. Effective treatments are also needed for associated social dysfunction. Improved dissemination of information about the types of psychotherapy that have been shown to be effective for BPD is warranted, since their availability remains limited.

GUIDELINES

The American Psychiatric Association's guidelines for the treatment of BPD note the need to actively engage patients in the process of changing themselves, the primary role of psychotherapy, and the need for a primary clinician to coordinate care.[34] These recommendations antedate current knowledge about genetic and neurobiologic factors in BPD, the limitations of antidepressants, and the effectiveness of evidence-based psychotherapies.

CONCLUSIONS AND RECOMMENDATIONS

The woman in the vignette has a history of impulsive and self-destructive behavior that is suggestive of BPD. She should be questioned about other features of the disorder, including anger and fear of rejection or abandonment, in order to make a definite diagnosis. Once the diagnosis is made, clinicians should educate the patient about genetic and environmental contributors and the likelihood of a favorable response to psychotherapy. If the patient has relied on medications for treatment, she should have them reevaluated, and a referral should be made for psychotherapy with a clinician who is experienced in BPD. A thoughtful evaluation of the patient's self-harming behaviors can avert unnecessary hospitalization. By recognizing the patient's likely sensitivity to rejection, doctors can also help her develop plans to have support available, should her problems recur.

No potential conflict of interest relevant to this article was reported.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

REFERENCES

1. Gross R, Olfson M, Gameroff M, et al. Borderline personality disorder in primary care. Arch Intern Med 2002;162:53-60.
2. Gunderson JG, Links PS. Borderline personality disorder: a clinical guide. 2nd ed. Washington, DC: American Psychiatric Press, Inc., 2008.
3. Lenzenweger MF, Lane MC, Loranger AW, Kessler RC. DSM-IV personality disorders in the national comorbidity survey replication. Biol Psychiatry 2007;62:553-64.
4. Grant BF, Chou SP, Goldstein RB, et al. Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: results from the Wave 2 National Epidemiologic Survey on alcohol and related conditions. J Clin Psychiatry 2008;69:533-45.
5. Pascual JC, Córcoles D, Castaño J, et al. Hospitalization and pharmacotherapy for borderline personality disorder in a psychiatric emergency service. Psychiatr Serv 2007;58:1199-204.
6. Bender DS, Dolan RT, Skodol AE, et al. Treatment utilization by patients with personality disorders. Am J Psychiatry 2001;158:295-302.

7. Zanarini MC, Frankenburg FR, Hennen J, Silk KR. Mental health service utilization by borderline personality disorder patients and Axis II comparison subjects followed prospectively for 6 years. J Clin Psychiatry 2004;65:28-36.
8. Grilo CM, Sanislow CA, Skodol AE, et al. Longitudinal diagnostic efficiency of DSM-IV criteria for borderline personality disorder: a 2-year prospective study. Can J Psychiatry 2007;52:357-62.
9. Zimmerman M, Mattia JI. Differences between clinical and research practices in diagnosing borderline personality disorder. Am J Psychiatry 1999;156:1570-4.
10. Zimmerman M, Ruggero CJ, Chelminski I, Young D. Psychiatric diagnoses in patients previously overdiagnosed with bipolar disorder. J Clin Psychiatry 2010;71:26-31.
11. Groves JE. Borderline personality disorder. N Engl J Med 1981;305:259-62.
12. Vaillant GE. The beginning of wisdom is never calling a patient a borderline. J Psychother Pract Res 1992;1:117-34.
13. Distel MA, Willemsen G, Ligthart L, et al. Genetic covariance structure of the four main features of borderline personality disorder. J Pers Disord 2010;24:427-44.
14. Gunderson JG, Zanarini MC, Choi-Kain LW, Mitchell KS, Jang KK, Hudson JI. Family study of borderline personality disorder and its sectors of psychopathology. Arch Gen Psychiatry (in press).
15. Kupper N, Willemsen G, Riese H, Posthuma D, Boomsma DI, de Geus EJ. Heritability of daytime ambulatory blood pressure in an extended twin design. Hypertension 2005;45:80-5.
16. Donegan NH, Sanislow CA, Blumberg HP, et al. Amygdala hyperreactivity in borderline personality disorder: implications for emotional dysregulation. Biol Psychiatry 2003;54:1284-93.
17. Silbersweig D, Clarkin JF, Goldstein M, et al. Failure of frontolimbic inhibitory function in the context of negative emotion in borderline personality disorder. Am J Psychiatry 2007;164:1832-41.
18. King-Casas B, Sharp C, Lomax-Bream L, Lohrenz T, Fonagy P, Montague PR. The rupture and repair of cooperation in borderline personality disorder. Science 2008;321:806-10.
19. Stanley B, Siever LJ. The interpersonal dimension of borderline personality disorder: toward a neuropeptide model. Am J Psychiatry 2010;167:24-39.
20. Gunderson JG, Stout RL, McGlashan TH, et al. Ten year course of borderline personality disorder: psychopathology and function: from the Collaborative Longitudinal Personality Disorders Study. Arch Gen Psychiatry 2011 April 4 (Epub ahead of print).
21. Rothrock J, Lopez I, Zweilfer R, Andress-Rothrock D, Drinkard R, Walters N. Borderline personality disorder and migraine. Headache 2007;47:22-6.
22. Palmer NB, Salcedo J, Miller AL, Winiarski M, Arno P. Psychiatric and social barriers to HIV medication adherence in a triply diagnosed methadone population. AIDS Patient Care STDS 2003;17:635-44.
23. Massion AO, Dyck IR, Shea MT, Phillips KA, Warshaw MG, Keller MB. Personality disorders and time to remission in generalized anxiety disorder, social phobia, and panic disorder. Arch Gen Psychiatry 2002;59:434-40.
24. Walter M, Gunderson JG, Zanarini MC, et al. New onsets of substance use disorders in borderline personality disorder over 7 years of follow-ups: findings from the Collaborative Longitudinal Personality Disorder Study. Addiction 2009;104:97-103.
25. Soeteman DI, Hakkaart-van Roijen L, Verheul R, Busschbach JJ. The economic burden of personality disorders in mental health care. J Clin Psychiatry 2008;69:259-65.
26. Sansone RA, Lam C, Wiederman MW. Road rage: relationships with borderline personality and driving citations. Int J Psychiatry Med 2010;40:21-9.
27. Tweed RG, Dutton DG. A comparison of impulsive and instrumental subgroups of batterers. Violence Vict 1998;13:217-30.
28. Trestman RL, Ford J, Zhang W, Wiesbrock V. Current and lifetime psychiatric illness among inmates not identified as acutely mentally ill at intake in Connecticut's jails. J Am Acad Psychiatry Law 2007;35:490-500.
29. Fernández Montalvo J, Echeburúa E. Pathological gambling and personality disorders: a pilot study with the MCMI-II. Psicothema 2006;18:453-8. (In Spanish.)
30. Gunderson JG, Lyons-Ruth K. BPD's interpersonal hypersensitivity phenotype: a gene-environment-developmental model. J Pers Disord 2008;22:22-41.
31. Winograd G, Cohen P, Chen H. Adolescent borderline symptoms in the community: prognosis for functioning over 20 years. J Child Psychol Psychiatry 2008;49:933-41.
32. Goodman M, Patil U, Triebwasser J, et al. Parental viewpoints of trajectories to borderline personality disorder in female offspring. J Pers Disord 2010;24:204-16.
33. Zanarini MC, Frankenburg FR. A preliminary, randomized trial of psychoeducation for women with borderline personality disorder. J Pers Disord 2008;22:284-90.
34. Oldham JM, Gabbard GO, Goin MK, et al. Practice guideline for the treatment of patients with borderline personality disorder. Am J Psychiatry 2001;158:Suppl:1-52.
35. Weinberg I, Ronningstam E, Goldblatt MJ, Schechter M, Maltsberger JT. Common factors in empirically supported treatments of borderline personality disorder. Curr Psychiatry Rep 2011;13:60-8.
36. Binks CA, Fenton M, McCarthy L, Lee T, Adams CE, Duggan C. Psychological therapies for people with borderline personality disorder: the Cochran Collaboration. New York: Wiley, 2007.
37. Linehan MM, Comtois KA, Murray AM, et al. Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. Arch Gen Psychiatry 2006;63:757-66. [Erratum, Arch Gen Psychiatry 2007;64:1401.]
38. Linehan MM, Heard HL. Borderline personality disorder: costs, course and treatment outcomes. In: Miller N, Magruder N, eds. The cost-effectiveness of psychotherapy: a guide for practitioners, researchers and policy makers. New York: Oxford University Press, 1999:291-305.
39. Bateman A, Fonagy P. Health service utilization costs for borderline personality disorder patients treated with psychoanalytically oriented partial hospitalization versus general psychiatric care. Am J Psychiatry 2003;160:169-71.
40. McMain SF, Links PS, Gnam WH, et al. A randomized trial of dialectical behavior therapy versus general psychiatric management for borderline personality disorder. Am J Psychiatry 2009;166:1365-74. [Erratum, Am J Psychiatry 2010;167:1283.]
41. Gunderson JG, Bender D, Sanislow C, et al. Plausibility and possible determinants of sudden "remissions" in borderline patients. Psychiatry 2003;66:111-9.
42. Weinberg I, Ronningstam E, Goldblatt MJ, Schechter M, Wheelis J, Maltsberger JT. Strategies in treatment of suicidality: identification of common and treatment-specific interventions in empirically supported treatment manuals. J Clin Psychiatry 2010;71:699-706.
43. Hoffman PD, Fruzzetti AE, Buteau E, et al. Family connections: a program for relatives of persons with borderline personality disorder. Fam Process 2005;44:217-25.
44. Gunderson JG, Lyoo IK. Family problems and relationships for adults with borderline personality disorder. Harv Rev Psychiatry 1997;4:272-8.
45. Gunderson JG, Morey LC, Stout RL, et al. Major depressive disorder and borderline personality disorder revisited: longitudinal interactions. J Clin Psychiatry 2004;65:1049-56.
46. Ingenhoven T, Lafay P, Rinne T, Passchier J, Duivenvoorden H. Effectiveness of pharmacotherapy for severe personality disorders: meta-analyses of randomized controlled trials. J Clin Psychiatry 2010;71:14-25.
47. Lieb K, Völlm B, Rücker G, Timmer A, Stoffers JM. Pharmacotherapy for borderline personality disorder: Cochrane systematic review of randomised trials. Br J Psychiatry 2010;196:4-12.
48. Waldinger RJ, Frank AF. Transference and the vicissitudes of medication use by borderline patients. Psychiatry 1989;52:416-27.
49. Frankenburg FR, Zanarini MC. Obesity and obesity-related illnesses in borderline patients. J Pers Disord 2006;20:71-80.