BRIEF REPORT

Clinical expression of obsessive-compulsive disorder in women with bipolar disorder

Expressão clínica do transtorno obsessivo-compulsivo em uma amostra de mulheres com transtorno de humor bipolar

Cilly Klüger Issler,[1] José Antonio de Mello Siqueira Amaral,[1] Renata Sayuri Tamada,[1] Angela Maria Schwartzmann,[1] Roseli Gedanke Shavitt,[1] Eurípedes Constantino Miguel,[1] Beny Lafer[1]

Original version accepted in Portuguese

Abstract

Objective: *To study clinical and psychopathological features of obsessive-compulsive disorder (OCD) in women with bipolar disorder (BD).* **Methods:** *Fifteen outpatients with concurrent bipolar disorder I (80.0%) or II (20.0%) and obsessive-compulsive disorder were studied. Most of them (80.0%) sought treatment for bipolar disorder. They were ascertained by means of the Structured Clinical Interview for DSM-IV (SCID/P), semi-structured interviews to investigate obsessions, compulsions and sensory phenomena that may precede compulsions and an additional module for the diagnosis of chronic motor and vocal tics. Severity of symptoms was assessed by the Yale-Brown Obsessive-Compulsive Rating Scale, Hamilton Depression Rating Scale and Young Mania Rating Scale.* **Results:** *Obsessive-compulsive disorder presented early onset (before the age of 10) in 9 (60%) cases, preceded bipolar disorder in 10 (66.7%) and displayed chronic waxing and waning course in 13 (86.7%) of them. There was wide overlap between types of obsessive-compulsive symptoms and all patients experienced sensory phenomena preceding the compulsions. There was no clear-cut impact of depressive and manic episodes on the intensity of obsessive-compulsive symptoms, which increased in depression and decreased in mania in 40.0% of the cases, had the opposite pattern in 26.7% of the patients and fluctuated inconsistently in the rest of them. Tics disorders were diagnosed in 5 (33.3%) patients.* **Conclusions:** *Our results suggest that in women with comorbid bipolar disorder and obsessive-compulsive disorder the latter presents features that may be typical of the association of the two disorders, such as early onset and sensory phenomena preceding compulsions. A prospective controlled study is necessary to confirm these observations, due to some limitations of our study: small exclusively female sample, heterogeneity concerning the type of bipolar disorder and the disorder that determined sought of treatment and retrospective non-controlled design.*

Keywords: *Bipolar disorder/diagnosis; Bipolar disorder/epidemiology; Obsessive-compulsive disorder/diagnosis; Obsessive-compulsive disorder/epidemiology; Psychiatric status rating scales; Comorbidity; Mood disorders*

Resumo

Objetivo: *Estudar características clínicas e psicopatológicas do transtorno obsessivo-compulsivo (TOC) em mulheres com transtorno de humor bipolar (THB).* **Métodos:** *Foram estudadas, retrospectivamente, 15 pacientes ambulatoriais com diagnósticos simultâneos de transtorno de humor bipolar I (80,0%) ou II (20,0%) e transtorno obsessivo-compulsivo. A maioria havia buscado tratamento para transtorno de humor bipolar (80,0%). A avaliação constou da Entrevista Clínica Estruturada para o DSM-IV (SCID/P), de entrevistas semi-estruturadas para pesquisa de obsessões, compulsões e fenômenos sensoriais que podem preceder as compulsões e de módulo adicional para diagnóstico de tiques motores e vocais crônicos. A gravidade dos sintomas foi investigada através das seguintes escalas: Escala Yale-Brown para Sintomas Obsessivo-Compulsivos, Escala de Avaliação para Depressão de Hamilton e Escala de Avaliação de Mania de Young.* **Resultados**: *O transtorno obsessivo-compulsivo teve início precoce em nove (60%) casos, instalou-se antes do transtorno de humor bipolar em 10 (66,7%) e teve curso crônico flutuante em 13 (86,7%). Houve ampla superposição de tipos de sintomas obsessivo-compulsivos e todas as pacientes apresentaram fenômenos sensoriais precedendo as compulsões. Não houve padrão definido no impacto dos episódios depressivos e maníacos na intensidade dos sintomas obsessivo-compulsivos. Estes aumentaram na depressão e diminuíram na mania em 40,0% dos casos; tiveram o comportamento inverso em 26,7% das pacientes e oscilaram de forma inconsistente nas demais. Diagnosticou-se comorbidade com transtorno de tiques em cinco (33,3%) casos.* **Conclusões:** *Nossos resultados sugerem que, em mulheres com comorbidade de transtorno de humor bipolar e transtorno obsessivo-compulsivo, este último apresente características que talvez sejam específicas da associação dos dois transtornos, tais como instalação precoce e presença de fenômenos sensoriais antecedendo as compulsões. A confirmação destas observações em pesquisa prospectiva controlada é necessária, em função de algumas limitações do estudo: casuística reduzida e restrita ao sexo feminino, alguma heterogeneidade da amostra quanto ao tipo de transtorno de humor bipolar e com relação ao transtorno que determinou procura de tratamento, ausência de grupo controle e coleta de dados retrospectiva.*

Descritores: *Transtorno bipolar/diagnóstico; Transtorno bipolar/epidemiologia; Transtorno obsessivo-compulsivo/diagnóstico; Transtorno obsessivo-compulsivo/epidemiologia; Escalas de graduação psiquiátrica; Comorbilidade; Transtornos do humor*

Article based on Issler C.K. Comorbidity of bipolar disorder with obsessive-compulsive disorder in women: demographic, clinical, psychopathological and other comorbidities [thesis]. São Paulo (SP): Universidade de São Paulo; 2004.

[1] Psychiatric Institute of the Clinical Hospital of the Medical School of the Universidade de São Paulo, São Paulo, Brazil

Financing: non existent
Conflict on interests: non existent
Submitted: 18 August 2004
Accepted: 2 February 2005

Correspondence
Cilly Klüger Issler
Rua Gandavo, 462
04023-001 São Paulo, SP, Brasil
E-mail: cillykissler@yahoo.com.br

Introduction

Up to the mid-90's, it was believed that comorbidity with obsessive-compulsive disorder (OCD) in bipolar disorder (BD) patients was rare. More recently, epidemiological researches found a lifetime prevalence of this association in 14.6% to 21% of the general population[1-2] and clinical studies found it in 10% to 35% of patients.[3-5] BD prevalence among obsessive-compulsive subjects ranges between 7.3% and 15%,[6-8] reaching 55.8%,[9] with predominance of type-II BD.[6-7,9]

Despite the high prevalence of this comorbidity, few publications[7,9-11] have investigated the characteristics of OCD in these cases, mostly in patients with primary diagnosis of OCD.

This study aimed to describe the clinical and psychopathological characteristics of OCD in association with BD in a group of patients who, in their majority, sought treatment for BD. We aimed to describe the content of obsessive-compulsive symptoms in detail, as well as the subjective experiences that accompany theses symptoms. These experiences may be classified in: 1) cognitive (obsessions), 2) autonomic anxiety and 3) sensory phenomena. The latter include uncomfortable physical and mental sensations which precede or accompany the accomplishment of compulsions, of which the patient is only relieved by practicing a repetitive behavior.[12-13] Physical sensations include focal or generalized bodily sensations (tactile, muscle-skeleton/visceral or both). Mental sensations include an inexplicable "urge to do",[14] an increasing need to discharge energy or tension, sensation of incompleteness or perception of not being "just-right". The latter may be general or associated with sensory modalities, mainly auditive and visual (e.g., fixing a frame on the wall until it seems to be visually "just right").

Besides, we aimed to describe the interrelation between OCD and BD courses.

This study is part of a post-graduate project of the first author, which consisted of the comparison between both groups of female bipolar subjects, 15 with comorbidity with OCD and 15 without this association, regarding the demographic, clinical, psychological aspects and other comorbidities. The interest in the subject arose from the difficult clinical management of these patients, as the serotonin reuptake inhibitors employed in the treatment of OCD may induce hippomanic or manic pictures and rapid cycling.[15]

Methods

The study was performed at the outpatient unit of the Assistance and Research Project in Bipolar Affective Disorder (PROMAN) of the Group on Affective Diseases (GRUDA) of the Psychiatric Institute of the Clinical Hospital of the Medical School of the Universidade de São Paulo (IPq-HC-FMUSP).

Data was collected between January 2001 and January 2003. Despite the high prevalence of the comorbidity of BD and OCD described in the literature, in our prior clinical experience we had seen few cases with the association of these disorders. Therefore, we set to 15 the number of patients on each group of the larger project mentioned above. At first, only cases for the group with comorbidity were admitted. Three patients with comorbidity BD-OCD were already patients of one of the authors (CKI). Attending physicians from other outpatient clinics referred the remaining patients, who entered the project in their arrival order. All of them were assessed by the first author of this article. Of the first 15 patients, only three were male. Aiming to increase the sample's homogeneity, men were excluded and three more women were admitted. Consequently, the control group which had OCD without BD was also composed only by female patients. Of OCD patients, 12 had sought treatment for BD and three for OCD. The comparison between groups, as to BD, will be the subject of other article.

Inclusion criteria were: age between 18 and 60 years and diagnosis of BD with OCD according to the DSM-IV criteria. Exclusion criteria were: organic brain disease, schizophrenia, schizophreniform or schizoaffective disorder. All of them signed the post-informed consent, approved by the Ethics Committee of the hospital.

Age of onset of BD was deemed that in which they had first met DSM-IV criteria for major depressive episode, and for OCD, that in which the first obsessive and compulsive symptoms appeared. OCD onset before the age of ten years was classified as early, according to criteria adopted by Rosário-Campos et al.[16]

Assessment instruments

Besides the psychiatric anamnesis, the following instruments were applied:

1) Structured Clinical Interview for the DSM-IV (SCID-I/P);

2) TS-OC Questionnaire,[17] a semi-structured interview which assesses obsessive-compulsive symptoms based on the list of symptoms of the Yale-Brown Obsessive-Compulsive Rating Scale (YBOCS) and the several types of vocal and motor tics through the Yale Global Tic Severity Scale (YGTSS);

3) USP-Harvard interview for Repetitive Behaviors,[18] which assesses subjective experiences that may precede the compulsions;

4) YBOCS scale, Hamilton Depression Rating Scale and (HAM-D) with 31 items and Young Mania Rating Scale (YMRS) to measure, respectively, the severity of obsessive-compulsive, depressive and manic symptoms.

Data analysis

Types of obsessions and compulsions were compared by means of the model of generalized estimation equations. OCD symptoms behavior according to the BD phase were analyzed with chi-square test of ratios of equality. Correlations between YBOCS and HAM-D, and YBOCS and YMRS scales were performed using Spearman correlation coefficient.

Results

Current mean age of patients was 38.9 (±10.7) years. Forty per cent of them were married or cohabiting, 40% were single and 20% were divorced or separated. Thirteen (86.7%) were unemployed. Social classes B and C were prevalent (according to the criteria of the Brazilian Association of Advertisers and of the Brazilian Association of the Market Research Institute – ABA/ABIPEME), totaling 86.7% of the cases. The mean number of years of education was 12.2 (±4.0). Twelve (80%) cases had type-I BD and three (20%) type-II BD.

The first major mood episode occurred, in average, at age 19.0 (±7.2). Obsessive-compulsive (OCS) onset was, in average, at age 11.6 (±7.3), starting before 10 years of age in nine (60.0%) patients. Thirteen (86.7%) patients showed chronic waxing and waning OCD course and two (13.3%), episodic.

There was wide overlap between the several types of obsessive-compulsive symptoms (Table 1). Aggression, symmetry, contamination, hoarding and miscellaneous obsessions prevailed over somatic, religious and sexual ones ($p = 0.0006$). Cleaning, checking, ordering and several other compulsions prevailed over counting, repeating rituals and hoarding compulsions ($p = 0.0007$). Mean score was 26.1

Table 1 – Phenotypic characteristics of OCB comorbid with BD

Types of symptoms	n (%)
Obsessions*	
Aggression	13 (86.7)
Symmetry	12 (80.0)
Contamination	11 (73.3)
Hoarding	10 (66.7)
Sexual	8 (53.3)
Religious	8 (53.3)
Somatic	8 (53.3)
Miscellaneous	15 (100.0)
Compulsions*	
Washing and cleaning	15 (100.0)
Verification	15 (100.0)
Ordering	13 (86.7)
Repeating rituals	12 (80.0)
Counting	10 (66.7)
Hoarding	10 (66.7)
Miscellaneous	15 (100.0)
Subjective experiences preceding compulsions	**n (%)**
Cognitions	15 (100.0)
Autonomic anxiety	11 (73.3)
Any sensory phenomenon	15 (100.0)
Physical sensation	1 (6.7)
Mental sensation associated with sensorial organs	15 (100.0)
Perceptions of the type not being "just right" †	10 (66.7)
Incompleteness	5 (33.3)
Rising energy which has to be discharged	5 (33.3)
"To do" without apparent motivation	5 (33.3)

†Not associated with sensorial organs
**Also predominated aggression, symmetry, contamination, hoarding and miscellaneous obsessions over somatic, religious and sexual ones (p = 0.0006). Also predominated cleaning, verification, ordering, and miscellaneous compulsions over counting, repeating rituals and hoarding compulsions (p = 0.0007).*

(±6.9) points in the YBOCS, 9.47 (±8.2) in the HAM-D and 2.20 (±3.6) in the YMRS. There was a positive correlation between the score in the YBOCS and the intensity of hipomanic/ manic symptoms measured through the YMRS (p = 0.014). There was no correlation between the score in the YBOCS and the intensity of depression as measured by the HAM-D.

There was some kind of cognition and/or sensory phenomenon preceding compulsions in all cases. Ten (66.7%) patients described at least one compulsion preceded only by sensory phenomena.

Five patients (33.3%) had tic disorders, two of them Tourette syndrome. OCS have started before 10 years of age in four (80%) out of five tic bearers.

We have not found a uniform pattern in the variation of OCD symptom intensity regarding BD phases (p = 0.8187). In six (40.0%) patients OCD symptoms worsened in depression and improved in mania, in four (26.7%) the opposite was true and in the other five (33.3%) the relation between the courses of the two disorders was inconsistent. In eight subjects, outpatient follow-up showed that the obsessive-compulsive symptoms persisted in euthymic periods.

Discussion

The mean age of onset of OCD in our study was 11.6 (±7.3) years, and in nine cases (60%) there was early installation of the disorder. In this aspect, there are studies which agree with our data,[11,19] whereas others disagreed.[2-3,9-10] These disparities may stem, at least partially, from the different criteria adopted for defining age of onset of OCD, such as that in which the first obsessive-compulsive symptoms manifested or that in which the diagnostic criteria for the disorder were met.

The finding of a high rate of early-onset OCD among our patients, although this disorder occurs mainly among men,[20] suggests that this might be one characteristic related to comorbidity with BD. However, in order to confirm this hypothesis our sample should be enlarged to comprise also the male gender.

We found chronic waxing and waning course of OCD among 13 (86.7%) patients, what disagrees from the most frequent findings of episodic course of OCD in obsessive-compulsive patients with BD.[7,9-10] Strakowski et al even propose that this type of course constitutes an atypical expression of BD.[21]

There was no predominance of any specific type of obsession or compulsion. Our data disagree with Perugi et al's, who described predominance of religious and sexual obsessions with less checking rituals among OCD and BD patients.[7] Moreover we did not replicate Masi et al's findings who reported more philosophical, existential, bizarre and superstitious obsessions with less ordering compulsions among children and adolescents with this comorbidity.[11]

Limitations of the current study may be able to explain the discrepancies between our results and the previous literature. The predominance of chronic waxing and waning course and the absence of predominance of one type of obsession or compulsion is possibly derived from differences in the profile of assessed patients: the sample studied was restricted to women, with 80% of BD primary diagnosis, which belonged to type-I among 80% of patients; in the mentioned studies,[7,9-10] primary diagnosis was OCD and there was preponderance of type-II BD in 50% to 87% of cases. These factors may be relevant in the expression of OCD when comorbid with BD.

Sensory phenomena preceded compulsions among 100% of our patients. There are no publications about these phenomena among patients with BD and OCD, but this is an already-reported characteristic among patients with tics and early onset of OCS. Rosario-Campos et al noted sensory subjective experiences among 100% of patients with early onset OCD, compared to 67% of those with late onset.[16] Miguel et al reported these experiences among 75% to 81% of cases comorbid with tics disorders.[12] In our study, the presence of sensory phenomena was universal, although OCD had not started before the age of 10 in 40% of cases and that there were only two (13.3%) patients with Tourette syndrome. The comorbidity BD-OCD possibly characterizes a subtype of this disorder with high prevalence of sensorial manifestations.

The prevalence of comorbidity with tics disorder found is similar to the rate between 13%[20] and 37.5%[22] observed in samples of OCD patients from both genders. It is known, however, that tics disorders are more frequent among men.[19,22] The high number of cases with early-onset OCD found, in which the comorbidity with tics disorders is more common,[16] maybe explains our increased prevalence of tics among women. In the same sense, of note, when comparing OCD patients with and without Tourette syndrome, there is a higher frequency of bipolar disorder among the latter.

We have not found a definite pattern of the impact of depressive or manic episodes in the course of OCD, despite the positive correlation between YBOCS and YMRS scales at the time of the interview. As the punctuation in the YMRS was equal to zero in nine out of 15 cases, it would be interesting to confirm if this correlation would be maintained in a sample with more patients symptomatic for hipomania/mania.

Case reports from the 80's[24-26] describe OCD patients who had their obsessions and compulsions remitted in hipomanic/manic periods and worsened in depressive phases. More recent studies, however, countered these initial findings. Perugi et al reported persistence of obsessive-compulsive symptoms in hipomanic episodes in 47.8% of a sample with primary diagnosis of OCD.[10] Among bipolar subjects, McElroy et al and Strakowski et al found concomitance of OCD in hospitalized manic patients, mainly in those with mixed state. Apparently, therefore, the relation between the courses of both disorders is variable.[21,27]

As far as we know, only one study,[21] which followed patients in psychotic mania who had OCD (nine out of 77 cases), showed that obsessive-compulsive symptoms, in general, remitted in the absence of mood symptoms. In our study, at least eight patients maintained their OCD symptoms even in euthymia, a finding which was confirmed afterwards in outpatient follow-up of these cases. Any conclusion about the issue should need a higher number of cases. This study has some methodological limitations. The number of cases is small and reduced to women. There was no control group with OCD without BD. In three patients, OCD was the disorder which motivated the search for treatment, what turns the sample into a somewhat heterogeneous one. The retrospective data collection was liable to memory failures, especially regarding the evocation of memories of manic periods. However, we do not know other publications which characterize OCD in patients with primary diagnosis predominantly of BD.

Conclusions

Despite the methodological limitations, this study produced challenging data about the clinical aspects of OCD in a sample of bipolar women. The results suggest that OCD among women who have BD has some characteristics which perhaps are specific and similar to those found among OCD patients with early onset and tics, such as early installation, chronic course, high prevalence of sensory phenomena preceding compulsions and absence of a specific impact of affective episodes on the obsessive-compulsive symptoms. Further prospective and controlled studies are needed to confirm or refute these findings.

References

1. Fogarty F, Russell JM, Newman RC, Bland RC. Epidemiology of psychiatric disorders in Edmonton. Mania. Acta Psychiatr Scand Suppl. 1994;376:16-23.
2. Chen YW, Dilsaver SC. Comorbidity for obsessive-compulsive disorder in bipolar and unipolar disorders. Psychiatry Res. 1995;59(1-2):57-64.
3. Kruger S, Cooke RG, Hasey GM, Jorna T, Persad E. Comorbidity of obsessive compulsive disorder in bipolar disorder. J Affect Disord. 1995;34(2):117-20.
4. Pini S, Cassano GB, Simonini E, Savino M, Russo A, Montgomery SA. Prevalence of anxiety disorders comorbidity in bipolar depression, unipolar depression and dysthymia. J Affect Disord. 1997;42(2-3):145-53.
5. McElroy SL, Altshuler LL, Suppes T, Keck PE Jr, Frye MA, Denicoff KD, et al. Axis I psychiatric comorbidity and its relationship to historical illness variables in 288 patients with bipolar disorder. Am J Psychiatry. 2001;158(3):420-6.
6. Lensi P, Cassano GB, Correddu G, Ravagli S, Kunovac JL, Akiskal HS. Obsessive-compulsive disorder. Familial-developmental history, symptomatology, comorbidity and course with special reference to gender-related differences. Br J Psychiatry. 1996;169(1):101-7.
7. Perugi G, Akiskal HS, Pfanner C, Presta S, Gemignani A, Milanfranchi A, et al. The clinical impact of bipolar and unipolar affective comorbidity on obsessive-compulsive disorder. J Affect Disord. 1997;46(1):15-23.
8. Shavitt, RG. Fatores preditivos de resposta ao tratamento em pacientes com o transtorno obsessivo-compulsivo. [tese]. São Paulo (SP): Universidade de São Paulo; 2002.
9. Perugi G, Toni C, Frare F, Travierso MC, Hantouche E, Akiskal HS. Obsessive-compulsive-bipolar comorbidity: a systematic exploration of clinical features and treatment outcome. J Clin Psychiatry. 2002;63(12):1129-34.
10. Perugi G, Akiskal HS, Toni C, Simonini E, Gemignani A. The temporal relationship between anxiety disorders and (hypo)mania: a retrospective examination of 63 panic, social phobic and obsessive-compulsive patients with comorbid bipolar disorder. J Affect Disord. 2001;67(1-3):199-206.
11. Masi G, Perugi G, Toni C, Millepiedi S, Mucci M, Bertini N, et al. Obsessive-compulsive bipolar comorbidity: focus on children and adolescents. J Affect Disord. 2004;78(3):175-83.
12. Miguel EC, Rosario-Campos MC, Prado HS, do Valle R, Rauch SL, Coffey BJ, et al. Sensory phenomena in obsessive-compulsive disorder and Tourette's disorder. J Clin Psychiatry. 2000;61(2):150-6; quiz 157.
13. Leckman JF, Walker DE, Cohen DJ. Premonitory urges in Tourette's syndrome. Am J Psychiatry. 1993;150(1):98-102.
14. Leckman JF, Walker DE, Goodman WK, Pauls DL, Cohen DJ. "Just-right" perceptions associated with compulsive behavior in Tourette's syndrome. Am J Psychiatry. 1994;151(5):675-80.
15. Altshuler LL, Post RM, Leverich GS, Mikalauskas K, Rosoff A, Ackerman L. Antidepressant-induced mania and cycle acceleration: a controversy revisited. Am J Psychiatry. 1995;152(8):1130-8.
16. Rosario-Campos MC, Leckman JF, Mercadante MT, Shavitt RG, Prado HS, Sada P, et al. Adults with early-onset obsessive-compulsive disorder. Am J Psychiatry. 2001;158(11):1899-903.
17. Rosario-Campos MC, Hounie AG, Brotto AS, Diniz JB, Chacon P, Prado HS, et al. Protocolo de pesquisa do ambulatório de adultos do PROTOC. 3ª ed. São Paulo: Depto. de Psiquiatria da Faculdade de Medicina da Universidade Federal de São Paulo; 2000.
18. Miguel EC, Coffey BJ, Baer L, Savage CR, Rauch SL, Jenike MA. Phenomenology of intentional repetitive behaviors in obsessive-compulsive disorder and Tourette's disorder. J Clin Psychiatry. 1995;56(6):246-55.
19. Diniz JB, Rosario-Campos MC, Shavitt RG, Curi M, Hounie AG, Brotto SA, et al. Impact of age of onset and duration of illness in the expression of comorbidities in obsessive-compulsive disorder. J Clin Psychiatry. 2004;65(1):22-7.
20. Geller D, Biederman J, Jones J, Park K, Schwartz S, Shapiro S, et al. Is juvenile obsessive-compulsive disorder a developmental subtype of the disorder? A review of the pediatric literature. J Am Acad Child Adolesc Psychiatry. 1998;37(4):420-7.
21. Strakowski SM, Sax KW, McElroy SL, Keck PE Jr, Hawkins JM, West SA. Course of psychiatric and substance abuse syndromes co-occurring with bipolar disorder after a first psychiatric hospitalization. J Clin Psychiatry. 1998;59(9):465-71.
22. Zohar AH, Pauls DL, Ratzoni G, Apter A, Dycian A, Binder M, et al. Obsessive-compulsive disorder with and without tics in an epidemiological sample of adolescents. Am J Psychiatry. 1997;154(2):274-6.
23. Coffey BJ, Miguel EC, Biederman J, Baer L, Rauch SL, O'Sullivan RL, et al. Tourette's disorder with and without obsessive-compulsive disorder in adults: are they different? J Nerv Ment Dis. 1998;186(4):201-6.
24. Kendell RE, Discipio WJ. Obsessional symptoms and obsessional personality traits in patients with depressive illnesses. Psychol Med. 1970;1(1):65-72.
25. White K, Keck PE Jr, Lipinski J. Serotonin-uptake inhibitors in obsessive-compulsive disorder: a case report. Compr Psychiatry. 1986;27(3):211-4.
26. Gordon A, Rasmussen SA. Mood-related obsessive compulsive symptoms in a patient with bipolar affective disorder. J Clin Psychiatry. 1988;49(1):27-8.
27. McElroy SL, Strakowski SM, Keck PE Jr, Tugrul KL, West SA, Lonczak HS. Differences and similarities in mixed and pure mania. Compr Psychiatry. 1995;36(3):187-94.