

## Comorbid bipolar disorder and obsessive-compulsive disorder

Daihui PENG, Kaida JIANG\*

**Summary:** Obsessive-compulsive symptoms are common in patients with bipolar disorders. This comorbid condition complicates the clinical treatment of the two disorders, so identifying these individuals is important. We discuss the comorbid occurrence of obsessive-compulsive disorder and bipolar disorder, introduce possible etiological mechanisms that could result in this common comorbid condition, discuss recent research advances in the area, and propose some clinical principles for managing such patients.

**Key words:** obsessive-compulsive disorder; bipolar disorder; comorbidity

[*Shanghai Arch Psychiatry*. 2015, 27(4): 246-248. doi: <http://dx.doi.org/10.11919/j.issn.1002-0829.215009>]

Previous studies have documented high rates of comorbidity of other psychiatric conditions among individuals with bipolar disorders (BD).<sup>[1]</sup> One study estimated that obsessive-compulsive disorders (OCD) accounted for 21% of all comorbidities in BD.<sup>[2]</sup> There is continuing debate about whether (a) these are two independent conditions that can co-occur or (b) OCD is a specific subtype of BD. Regardless of the inter-relationship of the two conditions, the comorbid occurrence of these two types of symptoms can cause a clinical dilemma because selective serotonin reuptake inhibitors (SSRIs) – which are quite commonly used to treat OCD – increases the risk of precipitating manic symptoms.<sup>[3-6]</sup>

The OCD symptoms that occur in individuals with BD often occur during the depressive episodes or during the intervals between episodes of depressive or manic symptoms.<sup>[7,8]</sup> This timing of OCD symptoms during BD is consistent with the cyclic nature of BD and suggests shared biological mechanisms between the two disorders. In support of this hypothesis, a study using Positron Emission Tomography (PET) found that in untreated persons with BD the serotonin-transporter binding potential in the insular and dorsal cingulate cortex was higher among BD patients with pathological obsessions and compulsions than among BD patients without such symptoms.<sup>[9]</sup> Moreover, a linkage study found that compared to OCD patients without comorbid BD, patients with comorbid OCD and BD were more likely to have a family history of mood disorders but less likely to have a family history of OCD.<sup>[10]</sup> However, another study found no significant difference in the rates of a positive family history of OCD between patients with OCD alone and those with comorbid OCD and BD.<sup>[11]</sup> Further support for the hypothesized

common etiology comes from a preliminary molecular genetic study which found that hyperpolarization activated cyclic nucleotide-gated channel 4 (HCN4) is a common susceptible locus for both mood disorders and OCD, but further studies with larger sample sizes are needed to replicate this finding.<sup>[12]</sup>

The presence of OCD in BD complicates the clinical presentation. Compared to patients with BD without comorbid OCD, those that have comorbid BD and OCD often have a more severe form of BD, have more prolonged episodes, are less adherent to medication, and are less responsive to medication. Recent studies about comorbid BD and OCD have reported the following:

- (a) **Temporal relationship.** Some studies suggest that OCD is an antecedent of BD,<sup>[10]</sup> but others report concurrent onset of OCD and BD.<sup>[13,14]</sup>
- (b) **Course of disease.** In 44% of patients with comorbid BD and OCD the episodes are cyclic.<sup>[15]</sup> The course of disease is more chronic among BD patients with OCD compared to those without comorbid OCD.<sup>[16,17]</sup> OCD is more commonly observed in patients with Type II BD, among whom the prevalence of OCD has been reported to be as high as 75%.<sup>[18]</sup>
- (c) **Compulsive behaviors.** The most commonly reported compulsions among patients with comorbid OCD and BD are compulsive sorting,<sup>[14,19,20,21]</sup> controlling or checking,<sup>[20]</sup> repeating behaviors,<sup>[13,22]</sup> excessive washing,<sup>[20]</sup> and counting.<sup>[19]</sup> Obsessive reassurance-seeking is also commonly reported in these patients.<sup>[23]</sup> In children and adolescents with BD, compulsive hoarding, impulsiveness,<sup>[24]</sup> and sorting<sup>[25]</sup> are more common.

Division of Affective Disorders, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China

\*correspondence: [jiangkaida@aliyun.com](mailto:jiangkaida@aliyun.com)

A full-text Chinese translation of this article will be available at <http://dx.doi.org/10.11919/j.issn.1002-0829.215009> on October 26, 2015.

- (d) **Substance and alcohol abuse.** A study found a higher prevalence of sedative, nicotine, alcohol, and caffeine use among individuals with comorbid OCD and BD compared to those with BD without OCD.<sup>[14]</sup> Similarly, compared to OCD patients without comorbid mood disorders, those with a comorbid mood disorder were more likely to have a substance abuse diagnosis (OR=3.18, 95%CI=1.81–5.58) or alcohol abuse diagnosis (OR=2.21, 95%CI=1.34–3.65).<sup>[11,13,26,27,28]</sup>
- (e) **Suicidal behaviors.** Compared to BD patients without OCD, a greater proportion of patients with both disorders had a lifetime history of suicidal ideation and suicide attempts.<sup>[2,11,13,29,30]</sup>

The clinical management of comorbid OCD and BD requires first focusing on stabilizing the patient's mood, which requires the combined use of multiple medications such as the use of lithium with anticonvulsants or atypical antipsychotic medications such as quetiapine;<sup>[31-33]</sup> adjunctive treatment with aripiprazole may be effective for the comorbid OCD symptoms.<sup>[4]</sup> In the case of OCD comorbid with type II BD, after full treatment of the mood symptoms with

mood stabilizers the clinician can, while monitoring for potential drug interactions, cautiously try adjunctive treatment with antidepressants that are effective for both depressive symptoms and OCD symptoms and that have a low risk of inducing a full manic episode, including the selective serotonin reuptake inhibitors (SSRIs): fluoxetine, fluvoxamine, paroxetine, and sertraline.<sup>[32,35]</sup>

In summary, BD comorbid with OCD may be etiologically distinct from either of the disorders. Clinicians should pay attention to its complex clinical manifestations and carefully consider the treatment principles outlined above.

#### Conflict of Interest

The authors declare no conflict of interest related to this manuscript.

#### Funding

There was no funding support provided for the preparation of this report.

## 双相障碍与强迫症的共病

彭代辉, 江开达

**概述:** 在双相障碍患者中强迫症状是常见的。因为双相障碍和强迫症的共病状态会令这两种障碍的临床治疗复杂化, 所以确定这些共病的患者是很重要的。我们讨论了强迫症和双相障碍的共病, 介绍了可能导致这种常见共病状态的发病机制, 也讨论了该领域最新的研究进展, 并提出一些管理这些患者的临床原则。

**关键词:** 强迫症; 双相障碍; 共病

本文全文中文版从 2015 年 10 月 26 日起在 <http://dx.doi.org/10.11919/j.issn.1002-0829.215009> 可供免费阅读下载

#### References

- Krishnan KR. Psychiatric and medical comorbidities of bipolar disorder. *Psychosom Med.* 2005; **67**: 1–8
- Chen YW, Dilsaver SC. Comorbidity for obsessive-compulsive disorder in bipolar and unipolar disorders. *Psychiatry Res.* 1995; **59**: 57–64
- Schruers K, Koning K, Luermans J, Haack MJ, Griez E. Obsessive-compulsive disorder: a critical review of therapeutic perspectives. *Acta Psychiatr Scand.* 2005; **111**: 261–271. doi: <http://dx.doi.org/10.1111/j.1600-0447.2004.00502.x>
- Fineberg NA, Reghunandanan S, Brown A, Pampaloni I. Pharmacotherapy of obsessive-compulsive disorder: evidence-based treatment and beyond. *Aust N Z J Psychiatry.* 2013; **47**: 121–141. Epub 2012 Nov 2. doi: <http://dx.doi.org/10.1177/0004867412461958>
- Vieta E, Bernardo M. Antidepressant-induced mania in obsessive-compulsive disorder. *Am J Psychiatry.* 1992; **149**: 1282–1283
- Tondo L, Vazquez G, Baldessarini RJ. Mania associated with antidepressant treatment: comprehensive meta-analytic review. *Acta Psychiatr Scand.* 2010; **121**: 404–414. Epub 2009 Dec 2. doi: <http://dx.doi.org/10.1111/j.1600-0447.2009.01514.x>
- Boyd JH, Burke JD Jr, Gruenberg E, Holzer CE 3rd, Rae DS, George LK, et al. Exclusion criteria for DSM-III. A study of co-occurrence of hierarchy-free syndromes. *Arch Gen Psychiatry.* 1984; **41**: 983–989. doi: <http://dx.doi.org/10.1001/archpsyc.1984.01790210065008>
- Mayer-Gross W, Slater E, Roth M. *Clinical Psychiatry*, 3<sup>rd</sup> ed. London: Elsevier Health Sciences; 1969
- Cannon DM, Ichise M, Fromm SJ, Nugent AC, Rollis D, Gandhi SK, et al. Serotonin transporter binding in bipolar disorder assessed using [<sup>11</sup>C] DASB and positron emission tomography. *Biol Psychiatry.* 2006; **60**: 207–217. doi: <http://dx.doi.org/10.1016/j.biopsych.2006.05.005>
- Zutshi A, Kamath P, Reddy YC. Bipolar and nonbipolar obsessive-compulsive disorder: a clinical exploration. *Compr Psychiatry.* 2007; **48**: 245–251. doi: <http://dx.doi.org/10.1016/j.comppsy.2006.12.005>
- Angst J, Gamma A, Endrass J, Hantouche E, Goodwin R, Ajdacic V, et al. Obsessive-compulsive syndromes and disorders: significance of comorbidity with bipolar and anxiety syndromes. *Eur Arch Psychiatry Clin Neurosci.* 2005; **255**: 65–71. doi: <http://dx.doi.org/10.1007/s00406-005-0576-8>

12. Kelmendi B, Holsbach-Beltrame M, McIntosh AM, Hilt L, George ED, Kitchen RR, et al. Association of polymorphisms in HCN4 with mood disorders and obsessive compulsive disorder. *Neurosci Lett*. 2011; **496**(3): 195-199. doi: <http://dx.doi.org/10.1016/j.neulet.2011.04.026>
13. Maina G, Albert U, Pessina E, Bogetto F. Bipolar obsessive-compulsive disorder and personality disorders. *Bipolar Disord*. 2007; **9**: 722-729. doi: <http://dx.doi.org/10.1111/j.1399-5618.2007.00508.x>
14. Perugi G, Toni C, Frare F, Traverso MC, Hantouche E, Akiskal HS. Obsessive-compulsive-bipolar comorbidity: a systematic exploration of clinical features and treatment outcome. *J Clin Psychiatry*. 2002; **63**: 1129-1134
15. Koyuncu A, Tukul R, Ozyildirim I, Meteris H, Yazici O. Impact of obsessive-compulsive disorder comorbidity on the sociodemographic and clinical features of patients with bipolar disorder. *Compr Psychiatry*. 2010; **51**: 293-297. doi: <http://dx.doi.org/10.1016/j.comppsy.2009.07.006>
16. Issler CK, Monkul ES, De Mello Siqueira Amaral JA, Tamada RS, Shavitt RG, Miguel EC, et al. Bipolar disorder and comorbid obsessive-compulsive disorder is associated with higher rates of anxiety and impulse control disorders. *Acta Neuropsychiatr*. 2010; **22**: 81-86. doi: <http://dx.doi.org/10.1111/j.1601-5215.2010.00457.x>
17. 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**: 465-471
18. Tukul R, Ofiaz SB, Ozyildirim I, Aslantaş B, Ertekin E, Sözen A, et al. Comparison of clinical characteristics in episodic and chronic obsessive-compulsive disorder. *Depress Anxiety*. 2007; **24**: 251-255. doi: <http://dx.doi.org/10.1002/da.20234>
19. Hasler G, Lasalle-Ricci VH, Ronquillo JG, Crawley SA, Cochran LW, Kazuba D, et al. [Obsessive-compulsive disorder symptom dimensions show specific relationships to psychiatric comorbidity]. *Psychiatry Res*. 2005; **135**: 121-132. doi: <http://dx.doi.org/10.1016/j.psychres.2005.03.003>
20. Issler CK, Amaral JA, Tamada RS, Schwartzmann AM, Shavitt RG, Miguel EC, et al. Clinical expression of obsessive-compulsive disorder in women with bipolar disorder. *Rev Bras Psiquiatr*. 2005; **27**: 139-142. doi: <http://dx.doi.org/10.1590/S1516-44462005000200013>
21. Tukul R, Meteris H, Koyuncu A, Tecer A, Yazici O. The clinical impact of mood disorder comorbidity on obsessive-compulsive disorder. *Eur Arch Psychiatry Clin Neurosci*. 2006; **256**: 240-245. doi: <http://dx.doi.org/10.1007/s00406-006-0632-z>
22. Perugi G, Akiskal HS, Gemignani A, Pfanner C, Presta S, Milanfranchi A, et al. Episodic course in obsessive-compulsive disorder. *Eur Arch Psychiatry Clin Neurosci*. 1998; **248**: 240-244. doi: <http://dx.doi.org/10.1007/s004060050044>
23. Mahasuar R, Janardhan Reddy YC, Math SB. Obsessive compulsive disorder with and without bipolar disorder. *Psychiatry Clin Neurosci*. 2011; **65**: 423-433. doi: <http://dx.doi.org/10.1111/j.1440-1819.2011.02247.x>
24. Masi G, Millepiedi S, Perugi G, Pfanner C, Berloffia S, Pari C, et al. A naturalistic exploratory study of the impact of demographic, phenotypic and comorbid features in pediatric obsessive-compulsive disorder. *Psychopathology*. 2010; **43**: 69-78. doi: <http://dx.doi.org/10.1159/000274175>
25. 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**: 175-183
26. Timpano KR, Rubenstein LM, Murphy DL. Phenomenological features and clinical impact of affective disorders in OCD: a focus on the bipolar disorder and OCD connection. *Depress Anxiety*. 2012; **29**: 226-233. doi: <http://dx.doi.org/10.1002/da.20908>
27. Boylan KR, Bieling PJ, Marriott M, Begin H, Young LT, MacQueen GM. Impact of comorbid anxiety disorders on outcome in a cohort of patients with bipolar disorder. *J Clin Psychiatry*. 2004; **65**: 1106-1113. doi: <http://dx.doi.org/10.4088/JCP.v65n0813>
28. Magalhaes PV, Kapczinski NS, Kapczinski F. Correlates and impact of obsessive-compulsive comorbidity in bipolar disorder. *Compr Psychiatry*. 2010; **51**: 353-356. doi: <http://dx.doi.org/10.1016/j.comppsy.2009.11.001>
29. Simon NM, Otto MW, Wisniewski SR, Fossey M, Sagduyu K, Frank E, et al. Anxiety disorder comorbidity in bipolar disorder patients: data from the first 500 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Am J Psychiatry*. 2004; **161**: 2222-2229. doi: <http://dx.doi.org/10.1176/appi.ajp.161.12.2222>
30. Goes FS, McCusker MG, Bienvenu OJ, Mackinnon DF, Mondimore FM, Schweizer B, et al. Co-morbid anxiety disorders in bipolar disorder and major depression: familial aggregation and clinical characteristics of co-morbid panic disorder, social phobia, specific phobia and obsessive-compulsive disorder. *Psychol Med*. 2012; **42**: 1449-1459. Epub 2011 Nov 21. doi: <http://dx.doi.org/10.1017/S0033291711002637>
31. American Psychiatric Association. Practice guideline for the treatment of patients with bipolar disorder (revision). *Am J Psychiatry*. 2002; **159**(4 Suppl): 1-50
32. Koran LM, Hanna GL, Hollander E, Nestadt G, Simpson HB. Practice guideline for the treatment of patients with obsessive-compulsive disorder. *Am J Psychiatry*. 2007; **164**(7 Suppl): 5-53
33. Yatham LN, Kennedy SH, Parikh SV, Schaffer A, Beaulieu S, Alda M, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) collaborative update of CANMAT guidelines for the management of patients with bipolar disorder: update 2013. *Bipolar Disorders*. 2013; **15**(1): 1-44. doi: <http://dx.doi.org/10.1111/bdi.12025>
34. Uguz F. Successful treatment of comorbid obsessive-compulsive disorder with aripiprazole in three patients with bipolar disorder. *Gen Hosp Psychiatry*. 2010; **32**(5): 556-558. doi: <http://dx.doi.org/10.1016/j.genhosppsy.2010.07.004>
35. Perugi G, Toni C, Frare F, Traverso MC, Hantouche E, Akiskal HS. Obsessive-compulsive-bipolar comorbidity: a systematic exploration of clinical features and treatment outcome. *J Clin Psychiatry*. 2002; **63**(12): 1129-1134

(received, 2015-03-03; accepted, 2015-05-26)



Dr. Peng obtained his Doctoral Degree in Medicine (M.D.) from the Fudan University School of Medicine in 2006. He is currently the vice director of the Mood Disorder Unit of the Shanghai Mental Health Center where he works as an attending physician. His main research interests are clinical and neuroimaging studies on mood disorders.