Shanghai Archives of Psychiatry, 2017, Vol. 29, No. 5

•CASE REPORT•

Multidimensional Approaches for A Case of Severe Adult Obsessive - Compulsive Disorder

Zhongyong SHI,[1] Xinchun MEI,[1] Yingbo ZHU,[1] Yu SHUAI,[2] Yupeng CHEN,[3] Yujie WU,[1] Yuan SHEN[1]*

Summary: Obsessive-compulsive disorder (OCD) is a chronic, distressing and substantially impairing neuropsychiatric disorder, characterized by obsessions or compulsions. The current case describes a 44-year-old adult female diagnosed with OCD. The patient had an incomplete response to several SSRIs alone during her past treatment, and led a poor-quality life for at least three years. Current multidimensional approaches, including combined cognitive behavioral therapy (CBT) and the Selective Serotonin Reuptake Inhibitor (SSRI, Sertraline) with a small dose of antipsychotics (Aripiprazole) for augmentation, as well as familial support and resources from the internet were provided for the patient for six months. Standardized assessments with Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) every two months indicated significant reductions in obsessive and compulsive symptoms, with significant improvements in her social functioning and quality of life. A case such as this one provides preliminary support to multidimensional approaches for OCD treatment in order to achieve an optimal response, though further rigorous clinical trials are needed to provide more evidence.

Key words: Obsessive-compulsive disorder, Psychotherapy, Psychopharmacology

[*Shanghai Arch Psychiatry.* 2017; **29**(5): 304-309. doi: http://dx.doi.org/10.11919/j.issn.1002-0829.217019]

1. Case History

1.1 Presentation

Mrs. L. was a 44-year-old female with a college education. Her primary symptoms were strong fear of contamination and an uncontrollable desire to wash her hands or scrub "everything" (e.g., furniture and floor) where she worked (the Public Security Bureau) for the previous three years. However, without any obvious triggers, Mrs. L. began to worry about being infected by bacteria or HIV from reports about pornography. She was unable to control her hand washing and constantly disinfected with alcohol anything that had been touched. She becam sensitive to specific words in the newspaper or on television, such as "letter", "express" or "postal". These words would immediately cause her to associate thoughts of "bacteria" or "HIV". These obsessions made it difficult for Mrs. L. to work, as well as causing severe anxiety and insomnia. Consequently, she quit her job and spent most of her time in bed. She rarely did any housework or had dinner with her family. In general, she isolated herself from society. Moreover she compelled her husband and daughter to perform the same ritual behaviors. Once her family members refused to engage in these behaviors she became depressed and irritable. Mrs. L. had a relatively strong personality and some characteristics of perfectionism. There was no personal or familial history of physical illness or psychosis.

Mrs. L. had seen several psychiatrists and had a consistent diagnosis of OCD. Drug regimens included Clomipramine and several SSRIs (e.g., Fluoxetine and Fluvoxamine), however, they were repeatedly discontinued due to the lack of efficacy or because of adverse side effects. It was necessary to rule out specific

[1]Department of Psychiatry, Tenth People's Hospital of Tongji University, Shanghai, P. R. China

[2]Department of Psychiatry, Tongji Hospital of Tongji University, Shanghai, P. R. China

[3]School of Medicine, Tongji University, Shanghai, P. R. China

*correspondence: Dr. Yuan Shen. Mailing address: Department of Psychiatry, Tenth People's Hospital of Tongji University, 301 Yanchang Rd., Building 9, Floor 4th, Room 4405, Shanghai, China. Postcode: 200072. E-mail: kmshy@sina.com

phobias because of Mrs. L.'s fear of letters, express packages or postal deliveries. The core reasons for her fears were rooted in her uncontrolled obsessions and compulsions rather than a certain object or situation-specific phobia. Moreover, she exhibited excellent insight into the nature of her excessive and unreasonable symptoms during the whole course of this disorder. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)[1] was used to assess her symptoms every two months and baseline scores were 28 points, indicating severe OCD. Mrs. L. met the diagnostic criteria for OCD according to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV).[2]

1.2 Treatment

1.2.1 Cognitive Behavioral Therapy

During the first interview, individual CBT including two aspects was discussed: (1) Cognitive Therapy (CT), focusing on disputing irrational beliefs, teaching patients to identify and correct their dysfunctional beliefs about feared situations and developing cognitive restructuring skills; (2) Exposure-and-Response-Prevention therapy (ERP), involving repeated and prolonged exposures to fear-eliciting stimuli, combined with instructions for strict abstinence from compulsive behaviors.

30 minutes of CBT content was scheduled into each session. During the Cognitive Therapy section of the session, the psychiatrist provided initial psychoeducation about CBT, helped Mrs. L. to realize the irrationality of her obsessive thoughts, and introduced exposure therapy and how it would reduce anxiety when exposed to stimuli without ritual engagement. Afterwards, several behavioral experiments were conducted to challenge her illogical causality. For the ERP section, detailed procedures of behavior training were carefully made: (1) Have Mrs. L. list out situations that would cause her compulsive behaviors, and describe her feelings as well as the duration and frequency of rituals; (2) Establish a hierarchy of distressing situations, and ask Mrs. L. to progressively be exposed to the situations rated as moderately anxiety provoking without performing rituals; (3) As the anxiety habituated within those early exposures, further expose her to situations that were rated as highly anxiety provoking without engaging in behavioral rituals. Alternatively, she was encouraged to do her favorite things, such as playing with iPad to divert attention from obsessions and resist the desire to engage in compulsions. Mrs. L. was required to record all the symptom fluctuations and behavioral responses in a diary as homework, which would be discussed during the next interview.

1.2.2 OCD Medications

Sertraline was prescribed with an initial dose of 100 mg/d and titrated up to 150 mg/d within one week, while Aripiprazole at a flexible-dose of 5-10 mg/d was given as a synergistic agent. This was started at a lower dose of 5 mg/d, aiming to promote better and faster efficacy.

At the one-month follow-up, Sertraline was increased to 200mg/d in order to further strengthen the treatment effects. Unfortunately, after taking the higher dose of Sertraline for just for one week, Mrs. L. apparently became euphoric, overactive and more talkative than usual. Given this condition, the Sertraline was lowered back to 150 mg/d while Aripiprazole was increased to 10mg/d to consolidate the treatment effect. Soon afterwards, Mrs. L.'s hyperactivity went away. At the end of the fourth month, Mrs. L. had achieved significant improvements in both clinical symptoms and social functioning. At this point, Aripiprazole was decreased to 5mg/d and Sertraline was maintained at 150 mg/d. This medication plan was kept for maintenance treatment without a return of symptoms.

1.2.3 Family and Internet Supports

Most noteworthy was that, the psychiatrist set up a powerful therapeutic alliance with Mrs. L.'s family members. The family members were told not to assist with Mrs. L.'s rituals (e.g., agreeing to disinfect the floor for her, repeatedly washing hands at the her request), provide excessive reassurance regarding Mrs. L.'s obsessional anxiety (e.g., answering frequent questions about the probability of contamination), or aid Mrs. L. in avoiding obsessional stimuli (e.g., removing all "contaminated" clothes before entering her bedroom) because these compromising behaviors would have negative impacts on treatment outcomes. Instead, the family members were advised to supervise Mrs. L.'s responses and give timely feedback on progressive performances, thus to inspire her confidence and motivation in getting through bouts of high anxiety.

Furthermore, Mrs. L. was promised that she could communicate with the psychiatrist about her symptom fluctuations and uncomfortable feelings associated with taking medications through internet platforms, such as "We Doctor APP". Such mobile medical services were not only beneficial in establishing a good doctor-patient rapport and improving the patient's treatment compliance, but also convenient for the patient to make an online appointment or long-distance consultation even on non-working days.

1.3 Clinical efficacy

After two-month intensive treatments, Mrs. L. had significant improvement in OCD symptoms and social functioning. The total score of Y-BOCS showed a notable decline from 28 points to 17 points, indicating presence of moderate clinical symptoms. To our surprise, Mrs. L. intended to prepare for a new job. After another two months of consolidating treatment gains with the current treatment protocols, Mrs. L. started working and was willing to attend normal social activities. Although

still performing some of her rituals, she was generally satisfied with her current condition and agreed to "Let it be, it is what it is." The score on the Y-BOCS reduced to 12 points with the presence of mild OCD symptoms. Thereafter, monthly CBT and certain medications, as well as family and internet supports, were continued for maintenance treatment. Over six months of comprehensive treatments, Mrs. L. obtained marked improvements with a total Y-BOCS score of five points, demonstrating a good response (Table 1 and Figure 1). The few residual obsessions and rituals had little influence on her daily life and social functioning.

Up to the latest follow-up, Mrs. L remained stable without a return of symptoms. No other apparent adverse effects were reported. No clinically significant changes in weight or laboratory values were seen from the Aripiprazole.

2. Discussion

The World Health Organization has identified OCD as a leading cause of nonfatal burden, accounting for 2.5% of total global years lived with disability (YLDs).[3] Currently, the established first-line treatments for OCD are cognitive behavioral therapy (CBT) and the Selective Serotonin Reuptake Inhibitors (SSRIs).[4] Unfortunately, these treatments usually take several weeks to achieve full effect, and almost half of patients with OCD don't respond adequately and fail to experience complete remission of their symptoms.[5]

Mrs. L presented an extraordinary case of severe adult OCD. Given that CBT and SSRIs would take several weeks to achieve a full effect, additional augmented strategies, including second-generation antipsychotics and supports from family or internet resources, were administrated to achieve an optimal efficacy.

2.1 Psychotherapy

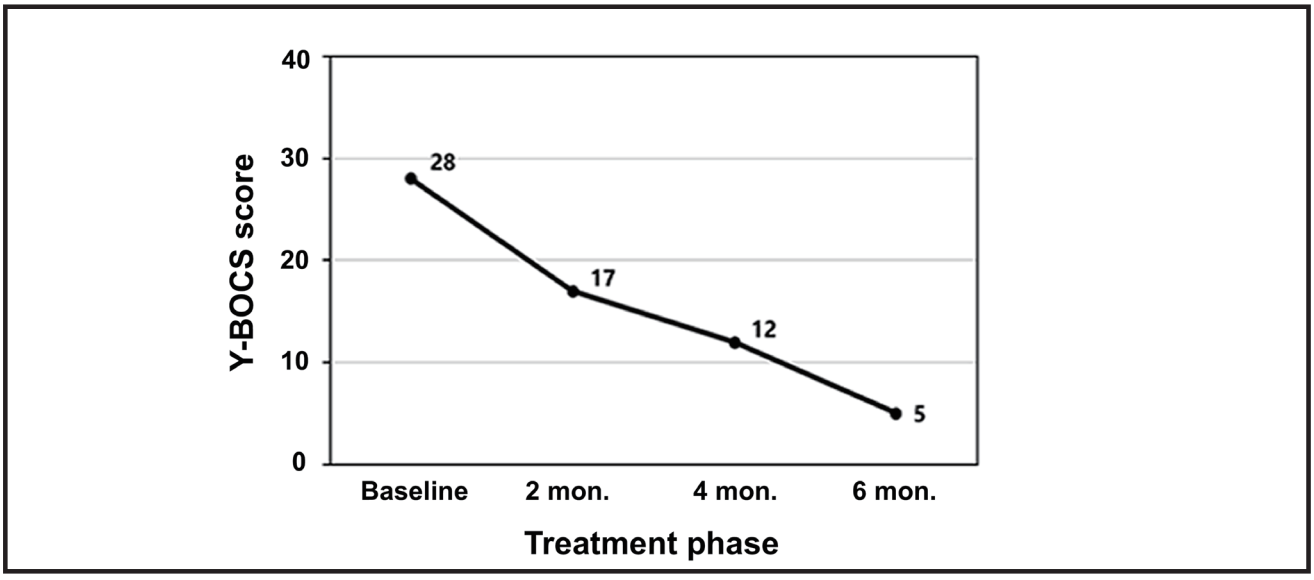
CBT is a well-documented intervention for adults with OCD. A systematic review of psychological treatments showed that psychotherapy derived from cognitive behavioral models, in specific for CT and ERP, was the most effective approach for adult patients with OCD.[6] With CT, patients directly confront unreasonable beliefs or an exaggerated sense of danger to develop insights into the real problem. With ERP, patients deliberately and voluntarily expose themselves to feared objects or ideas, either directly or by imagination (the exposure component).[7] Afterwards, they are discouraged or

Table 1. Changes in medication dosage and Y-BOCS scores at different phases of treatment

Measures	Pretreatment (*Baseline*)	Follow-up (*1 week*)	Follow-up (*1st month*)	Follow-up (*2nd month*)	Follow-up (*4th month*)	Follow-up (*6th month*)
Sertraline (mg)	100	150	150	150	150	150
Aripiprazole (mg)	5	5	10	10	10	5
Y-BOCS (score)	28	—	—	17	12	5

Note: Y-BOCS, Yale-Brown Obsessive-Compulsive Scale

Figure 1. Obsessive and compulsive symptoms measured by Y-BOCS at different phases of treatment with multidimensional approaches. Y-BOCS, Yale-Brown Obsessive-Compulsive Scale.



prevented with the patient's permission from carrying out usual compulsive responses (the ritual prevention component). For example, a compulsive hand washer would be urged to touch something he/she had believed to be contaminated but be denied the opportunity to wash. The patient would be punished with a rubber band as aversion therapy when he/she didn't control washing hands. If treatments worked well, the patient would gradually experience less anxiety (habituate) from the obsessive thoughts, and become able to get through without the compulsive actions for longer periods.

In addition, when administrating CBT, the following learning experiences drawn from this case should be taken into consideration: (1) Establishing a good rapport with the patient to improve their motivation to engage in therapy; (2) In addition to regular visits, it is important to require the patient to carefully complete "homework assignments", which not only serve as a record of the course of OCD symptoms but also their personal progress.

2.2 Medications

CBT has been shown to be an efficient psychotherapy for OCD. However, some patients drop out of therapy because of the unbearable anxiety from ERP or having an unsatisfactory partial response. Studies comparing pharmacological and psychotherapeutic treatment strategies for adults with severe OCD indicate that, combined interventions achieve a greater reduction in Y-BOCS score and superior efficacy in improving insight, functioning and quality of life.[8]

SSRIs are the first-line pharmacotherapy (over Clomipramine) owing to their potent effects on brain's serotonergic system and better adverse-event profile.[9] SSRIs tend to take longer to be effective (between 4 and 12 weeks) and higher doses are often required for OCD patients, as compared with depression or generalized anxiety.[10] Although all SSRIs appear to be equally efficacious in treating OCD, Fluoxetine, Fluvoxamine and Sertraline are more commonly used in clinical practice because of higher patient compliance. Regarding the current case study, the patient showed a poor response to Clomipramine, Fluoxetine and Fluvoxamine during previous treatments, thus Sertraline was a considerable alternative. However, the response rate (40%-60%) and the probability of full remission (11%) with monotherapy SSRIs for patients with OCD is still less than satisfactory. How to achieve sufficient efficacy remains to be seen.

Among pharmacological augmentation strategies, one very frequently administrated strategy was using adjunctive low-dose antipsychotic drugs with SSRI medications, which showed obvious efficacy and safety for treatment-refractory OCD patients.[11] Recently, Markus et al meta-analyzed 14 double-blind randomized controlled trials, and confirmed antipsychotic augmentation of SSRIs in treatment-resistant OCD patients.[12] Specifically, this systematic review indicated that Aripiprazole was significantly superior to placebo in reducing Y-BOCS total score, as well as treating obsessions and compulsions.[12] Aripiprazole was regarded as the augmenting drug of first choice, and may have particular merits in such difficult-to-treat OCD cases by virtue of its dual impacts on serotonergic and dopaminergic mechanisms.[13] Therefore, augmentation of SSRIs with antipsychotic drugs can be considered as an evidence-based treatment option, with great advantages such as faster efficacy and better compliance. Further studies in larger samples are warranted to validate this point, and to evaluate the optimum antipsychotic dose, the optimum duration of the adjunctive treatment, as well as the long-term tolerability.

2.3 Synergetic strategies

For optimal response, besides CBT and medications, we also gained some positive experiences from the current case which may be beneficial to achieving more sufficient and longer-lasting efficacy for OCD patients.

One is taking advantage of family resources. Recently, family accommodation of OCD symptoms in adults has received great attention. Most family members often engage in assisting patients with their rituals in order to alleviate anxiety, prevent conflicts or "help out" with time consuming compulsive behaviors (e.g., agreeing to check locks for the patient; washing hands frequently at the patient's request). Previous research has shown that higher levels of family accommodation at baseline predicted poorer treatment response and was associated with more severe OCD symptoms.[14,15] Therefore, interventions for OCD patients including the efforts from their family and uncovering the maladaptive accommodation may improve treatment outcomes. In Mrs. L.'s case, her family members were asked to reduce accommodation behaviors, cooperate with the psychiatrist to supervise completing of "homework assignments", and give timely feedback instead of following every request. Such a constant support system provided additional emotional encouragement which increased the patient's willingness to perform exposures, as well as removing roadblocks to preventing ritualistic compulsive behaviors.

Other resources were also drawn from the internet. Although CBT remains the most effective psychological intervention for OCD, there still exist many barriers to initiating and completing therapy in clinical practice, such as financial costs, difficulty in accessing long-term treatments and limited professional therapists, particular for individuals in rural and remote settings.[16] Large treatment effect sizes and similar rates of clinical significance in the treatment of OCD have been reported for internet-delivered CBT (iCBT), combining specific internet programs with clinician's support.[17] In this case, Mrs. L was able to communicate with her psychiatrist through "We Doctor APP", which improved her compliance with the on-going psychotherapy.

Compared with standard in-office CBT, technological innovations are promising to transform care for the most remote and marginalized patients, which could provide a platform for supervising and encouraging patients to complete homework or communicate about fluctuations in their condition.

3. Conclusions

This case study provided preliminary support for the feasibility and utility of multidimensional approaches for patients with severe OCD, including routine CBT and SSRIs (Sertraline) with a small dose of antipsychotics (Aripiprazole) for augmentation, as well as drawing support from family and internet-based resources.

Funding statement

No funding support was obtained for preparing this case report.

Conflict of interest statements

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

Informed consents

The patient signed an informed consent form and agreed to the publication of this case report.

Authors' contributions

Shi participated in patient interview and drafted the manuscript. Mei, Zhu, Shuai and Chen helped with data collection. Wu and Shen carried out the clinical diagnosis and treatments. Shen critically reviewed the manuscript. All authors read and approved the final manuscript.

一例多维整合治疗成人重度强迫症的案例

石中永，梅馨纯，竺映波，帅瑜，陈宇鹏，吴宇洁，申远

概述：强迫症 (OCD) 是一种慢性、痛苦和进行性损害的神经精神疾病，其特点是存在强迫意念或强迫动作。本文报道的一名 44 岁成年女性强迫症的病例。之前 3 年治疗中，患者对数个选择性 5 - 羟色胺再摄取抑制剂 (SSRIs) 疗效不佳，生活质量受到严重影响。经过 6 个月的多维整合治疗，包括认知行为治疗 (CBT)、舍曲林和低剂量抗精神病药物 (阿立哌唑)，以及家庭支持和网络支持。每两个月 Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) 标准化量表评估显示，强迫意念或强迫动作明显减少，其社会功能和生活质量得到明显改善。本病例初步显示 OCD 多维整合治疗有助于达到最佳治疗疗效较好治疗效果，期待今后更严格的临床试验验证。

关键词：强迫症、心理治疗、精神药理学

References

1. Goodman WK, Price LH, Rasmussen SA, Mazure C, Fleischmann RL, Hill CL, et al. The yale-brown obsessive compulsive scale: I. development, use, and reliability. *Arch Gen Psychiatry*. 1989; **46**(11): 1006-1011
2. Association AP. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*. Washington, DC: APA; 1997
3. Ayuso-Mateos JL. *Global Burden of Obsessive-Compulsive Disorder in the Year 2000*. Geneva: World Health Organization; 2006
4. Storch EA, Merlo LJ. Obsessive-compulsive disorder: strategies for using CBT and pharmacotherapy. *J Fam Pract*. 2006; **55**(4): 329-333
5. Grant JE. Clinical practice: Obsessive-compulsive disorder. *N Engl J Med*. 2014; **371**(7): 646-653. doi: http://dx.doi.org/10.1056/NEJMcp1402176
6. Gava I, Barbui C, Aguglia E, Carlino D, Churchill R, De Vanna M, et al. Psychological treatments versus treatment as usual for obsessive compulsive disorder (OCD). *Cochrane Database Syst Rev*. 2007; **2**: Cd005333
7. Abramowitz SJ, Larsen EK. Chapter 8 - Exposure therapy for obsessive-compulsive disorder A2. In: Richard, DCS. Edited by Lauterbach D. *Handbook of Exposure Therapies*. Burlington: Academic Press; 2007. p: 185-208
8. Simpson HB, Foa EB, Liebowitz MR, Huppert JD, Cahill S, Maher MJ, et al. Cognitive-behavioral therapy vs risperidone for augmenting serotonin reuptake inhibitors in obsessive-compulsive disorder: a randomized clinical trial. *JAMA Psychiatry*. 2013; **70**(11): 1190-1199. doi: http://dx.doi.org/10.1001/jamapsychiatry.2013.1932
9. Soomro GM, Altman D, Rajagopal S, Oakley-Browne M. Selective serotonin re-uptake inhibitors (SSRIs) versus placebo for obsessive compulsive disorder (OCD). *Cochrane Database Syst Rev*. 2008; **1**(1): CD001765-CD001765. doi: http://dx.doi.org/10.1002/14651858.CD001765.pub3
10. 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

11. Bloch MH, Landeros-Weisenberger A, Kelmendi B, Coric V, Bracken MB, Leckman JF. A systematic review: antipsychotic augmentation with treatment refractory obsessive-compulsive disorder. *Mol Psychiatry*. 2006; **11**(7): 622-632. doi: http://dx.doi.org/10.1038/sj.mp.4001823

12. Dold M, Aigner M, Lanzenberger R, Kasper S. Antipsychotic Augmentation of Serotonin Reuptake Inhibitors in Treatment-Resistant Obsessive-Compulsive Disorder: An Update Meta-Analysis of Double-Blind, Randomized, Placebo-Controlled Trials. *Int J Neuropsychopharmacol*. 2015; **18**(9): pii pyv047. doi: http://dx.doi.org/10.1093/ijnp/pyv047

13. Gao K, Muzina D, Gajwani P, Calabrese JR. Efficacy of typical and atypical antipsychotics for primary and comorbid anxiety symptoms or disorders: a review. *J Clin Psychiatry*. 2006; **67**(9): 1327-1340

14. Boeding SE, Paprocki CM, Baucom DH, Abramowitz JS, Wheaton MG, Fabricant LE, et al. Let me check that for you: Symptom accommodation in romantic partners of adults with Obsessive–Compulsive Disorder. *Behav Res Ther*. 2013; **51**(6): 316-322. doi: http://dx.doi.org/10.1016/j.brat.2013.03.002

15. Merlo LJ, Lehmkuhl HD, Geffken GR, Storch EA. Decreased family accommodation associated with improved therapy outcome in pediatric obsessive-compulsive disorder. *J Consult Clin Psychol*. 2009; **77**(2): 355-360. doi: http://dx.doi.org/10.1037/a0012652

16. Mancebo MC, Eisen JL, Sibrava NJ, Dyck IR, Rasmussen SA. Patient utilization of cognitive-behavioral therapy for OCD. *Behav Ther*. 2011; **42**(3): 399-412. doi: http://dx.doi.org/10.1016/j.beth.2010.10.002

17. Comer JS, Furr JM, Cooper-Vince CE, Kerns CE, Chan PT, Edson AL, et al. Internet-Delivered, Family-Based Treatment for Early-Onset OCD: A Preliminary Case Series. *J Clin Child Adolesc Psychol*. 2014; **43**(1): 74-87. doi: http://dx.doi.org/10.1080/15374416.2013.855127

Zhongyong Shi graduated with a master's degree in Psychiatry and Mental Health from Tongji University in 2016. She is currently pursuing her PhD and working as a resident in the Department of Psychology at the Shanghai Tenth People's Hospital. Her main research interest is biomarkers of cognitive impairment.