Available online at www.sciencedirect.com
ScienceDirect
Comprehensive Psychiatry 52 (2011) 556–561
Comprehensive PSYCHIATRY
www.elsevier.com/locate/comppsych

Effects of selective serotonin reuptake inhibitors on thought-action fusion, metacognitions, and thought suppression in obsessive-compulsive disorder

Lutfullah Besiroglu[a,*], Nuralay Çetinkaya[b], Yavuz Selvi[a], Abdullah Atli[a]

[a]*Department of Psychiatry, Faculty of Medicine, Yuzuncu Yil University, Van, 65200, Turkey*
[b]*Department of Psychiatry, Erzurum State Hospital, Erzurum, 25000, Turkey*

Abstract

Objective: We aimed to assess whether cognitive processes change over time in patients with obsessive-compulsive disorder (OCD) receiving selective serotonin reuptake inhibitors without cognitive behavioral therapy and to investigate the factors associated with probable cognitive changes.

Methods: During the 16 weeks of the study, 55 patients who met the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,* criteria for OCD received open-label treatment with sertraline (100-200 mg/d) or fluoxetine (40-80 mg/d) and were assessed using the Yale-Brown Obsessive-Compulsive Scale, Beck Depression Inventory (BDI), Thought-Action Fusion Scale (TAFS), Metacognitions Questionnaire (MCQ-30), and White Bear Suppression Inventory (WBSI).

Results: The Yale-Brown Obsessive-Compulsive Scale ($P < .001$), BDI ($P < .001$), TAFS morality ($P < .005$), MCQ-30 ($P < .01$), and WBSI ($P < .005$) scores at follow-up were significantly lower than baseline scores. When we excluded OCD patients with depressive disorder (n = 12), statistical significance in paired comparisons for MCQ and WBSI disappeared. Similarly, when OCD patients with religious obsessions (n = 16) were excluded, paired comparisons for MCQ and TAF morality were not statistically significant. Changes in BDI, TAFS morality, MCQ-30, and WBSI ($P < .005$) were significantly correlated with changes in severity of obsessions, but not that of compulsions. After controlling for the change in depression severity, significant correlations between changes in obsessive and cognitive scales did not continue to have statistical significance. The BDI changes ($P < .05$) significantly explained the changes in symptom severity in a linear regression model.

Conclusions: Our findings suggest that selective serotonin reuptake inhibitors can change appraisals of obsessive intrusions via their effects on negative emotions.

1. Introduction

Cognitive models in obsessive-compulsive disorder (OCD) are interested in what processes and structures of the information processing system account for the persistence, uncontrollability, aversiveness, and idiosyncratic nature of obsessional phenomena [1]. Several researchers have explored the thought suppression theory, focusing on its role in the exacerbation of intrusive thoughts [2-4]. According to this theory, efforts at controlling thoughts may result in a paradoxical increase in thought frequency. Another cognitive theory germane to development of obsessions, described as *thought-action fusion* (TAF), is defined as the belief that specific intrusive thoughts can directly influence the relevant external event and/or the belief that having these intrusive thoughts is morally equivalent to carrying out a prohibited action [3,5]. Recently, metacognitive theory as the tendency to focus attention on and monitor thinking has been proposed to explain how intrusive thoughts or doubts activate metabeliefs and emotional reactions [6,7].

Although different cognitive factors have been suggested to explain the emergence and maintenance of OCD, the

This research was conducted at Yuzuncu Yil University Hospital, Van, Turkey, and has not been supported by any commercial or noncommercial organization. For all authors, there is no actual or potential conflict of interest including any financial, personal, or other relationships with other people or organizations.

* Corresponding author. Yüzüncü Yıl University, School of Medicine, Department of Psychiatry, Van 65200, Turkey. Tel.: +90 432 216 4711; fax: +90 432 216 7519.
E-mail address: lbesiroglu@gmail.com (L. Besiroglu).

0010-440X/$ – see front matter © 2011 Elsevier Inc. All rights reserved.
doi:10.1016/j.comppsych.2010.10.003

cognitive predictors of outcome in OCD patients having treatment have scarcely been reported in the literature. It is reasonable that putative cognitive processes associated with OCD may change during cognitive therapy. Consistent with this hypothesis, several studies found that cognitive behavioral therapy (CBT) produced significant changes in measures of obsessional conviction and beliefs [8,9]. In addition, good response to exposure and response prevention (ERP) treatment was found to be associated with reduction in metacognitions [10].

Whereas pharmacologic and cellular actions of selective serotonin reuptake inhibitors (SSRIs) are relatively well characterized, there is little understanding of how such effects act to improve OC symptoms and how to influence cognitive appraisals. Given that SSRIs are known as effective treatments for OCD [11-13], the current study explored whether cognitive appraisals change over time in the OCD patients receiving SSRIs but not CBT. In addition, we aimed to investigate whether a probable change in cognitive domains is related with comorbid depression and specific symptom categories.

2. Method

2.1. Participants

Sixty-seven adult OCD patients were consecutively selected for the study. Subjects with a history of psychotic disorder, bipolar disorder, alcohol/substance abuse/dependence, mental retardation, neurologic disease, head trauma, or a serious concomitant medical disorder that could be caused by psychiatric disorders or functional disability (cancer, renal failure, diabetes mellitus, ischemic heart disease, cardiac failure, epilepsy, asthma, etc) were excluded. Subjects with other comorbid psychiatric diagnoses were not excluded when OCD was the dominant disorder for which treatment was sought. Pregnancy, breastfeeding, and illiteracy were the other exclusion criteria. All subjects were free from psychotropic drugs for at least 2 weeks (and at least 5 weeks for fluoxetine) before starting the study. Patients with scores of at least 2 on the Clinical Global Impression Severity of Illness (CGI-SI) or at least 8 on the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS) at baseline were eligible.

2.2. Instruments

2.2.1. Diagnosis and OCD symptoms and global severity (clinician assessment)

Each subject was administered the Structured Clinical Interview Instrument for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,* Axis-I Disorders [14]; CGI [15]; and Y-BOCS [16]. We also assessed the subjects' insight degree by means of the specific item on the Y-BOCS (item 11). High scores of this item signify poor insight degree. Secondary instrument for rating severity was the CGI-SI.

2.2.2. Depressive mood and cognitive measures (self-report instruments)

The Beck Depression Inventory (BDI) is a 21-item self-report inventory, which has been shown to be a reliable and valid measure of depression severity in both clinical and nonclinical populations [17].

The Thought-Action Fusion Scale (TAFS) developed by Shafran et al [5] to evaluate the fusion of thought and action is a 19-item scale using a 5-point response format. The TAFS has 2 dimensions: TAF likelihood is the conviction about an increment in the probability of an unpleasant event by merely thinking about it, whereas TAF morality refers to the belief that having immoral thoughts is as unacceptable as actually engaging in immoral behaviors.

The Metacognitions Questionnaire (The MCQ-30) [18] is a 30-item self-report scale rated on a 4-point Likert scale. The MCQ assesses a range of metacognitions (positive beliefs about worry, negative beliefs about the controllability of thoughts and corresponding danger, cognitive confidence, negative beliefs about thoughts in general/need to control thoughts, and cognitive self-consciousness).

The White Bear Suppression Inventory (WBSI) is a 15-item self-report instrument that addresses the habitual tendency to suppress unwanted intrusive thoughts [19]. Items are answered on a 5-point scale.

The reliability and validity of the Turkish version of the Y-BOCS [20], BDI [21], TAFS [22], MCQ [23], and WBSI [24] had been examined and found to be as high as their original versions.

2.3. Procedure and statistical analyses

The study was approved by the Ethical Committee for Medical Research at Yuzuncu Yil University in Van. Written informed consent was obtained from all subjects. Psychiatric diagnoses were established with the Structured Clinical Interview Instrument for *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,* Axis-I Disorders by a psychiatrist with 5 years of clinical experience. One patient with concomitant polycystic ovary syndrome, 3 patients with comorbid psychotic disorder, 4 patients with bipolar disorder, 3 illiterate patients, and 1 patient in lactation period were not included in the study. Subjects were interviewed the Y-BOCS to measure of the severity of OCD symptoms and insight degree level. They were administered the self-report materials (BDI, TAFS, MCQ, and WBSI). Following baseline assessments, consistent with relevant literature [25-27], the patients were consecutively assigned to receive either sertraline or fluoxetine because of their availability in the country. The treatment was started with a dose of 50 mg/d for sertraline or 20 mg/d for fluoxetine, and the doses were increased within the first 4 weeks to a maximum tolerated daily dose of 200 and 80 mg/d, respectively. Thus, patients received the maximum tolerated dose of the SSRI for at least 12 weeks. The lowest