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Research paper

The relation between depressive and obsessive-compulsive symptoms in obsessive-compulsive disorder: Results from a large, naturalistic follow-up study

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ABSTRACT

Objective: Despite the frequent occurrence of depressive symptoms in obsessive-compulsive disorder (OCD), little is known about the reciprocal influence between depressive and obsessive-compulsive symptoms during the course of the disease. The aim of the present study is to investigate the longitudinal relationship between obsessive-compulsive and depressive symptoms in OCD patients.
Method: We used the baseline and 1-year follow-up data of the Netherlands Obsessive Compulsive Disorder Association (NOCDA) study. In 276 patients with a lifetime diagnosis of obsessive-compulsive disorder, depressive and obsessive-compulsive symptoms were assessed at baseline and at one-year follow-up with the Beck Depression Inventory (BDI) and the Yale-Brown Obsessive Compulsive Symptom (Y-BOCS) scale. Relations were investigated using a cross-lagged panel design.
Results: The association between the severity of depressive symptoms at baseline and obsessive-compulsive symptoms at follow-up was significant ($\beta = 0.244$, $p < 0.001$), while the association between the severity of obsessive-compulsive symptoms at baseline and depressive symptoms at follow-up was not ($\beta = 0.097$, $p = 0.060$). Replication of the analyses in subgroups with and without current comorbid major depressive disorder (MDD) and subgroups with different sequence of onset (primary versus secondary MDD) revealed the same results.
Limitations: There may be other factors, which affect both depressive and obsessive-compulsive symptoms that were not assessed in the present study.
Conclusion: The present study demonstrates a relation between depressive symptoms and the course of obsessive-compulsive symptoms in OCD patients, irrespective of a current diagnosis of MDD and the sequence of onset of OCD and MDD.

1. Introduction

Obsessive-compulsive disorder (OCD) is a disabling and often chronic psychiatric disorder which leads to significant impairment in daily life and diminished well-being (Farris et al., 2013; Hollander et al., 2010; Albert et al., 2010; Eisen et al., 2006). About 0.5–3% of the general population develops OCD in their lifetime (Grabe et al., 2001; Kessler et al., 2012; Subramaniam et al., 2012). Comorbidity is the rule rather than the exception, with major depressive disorder (MDD) being one of the most frequent comorbid diagnoses (Lochner et al., 2014; Klein Hofmeijer-Sevink et al., 2013). Comorbidity rates differ largely due to methodological differences, but overall approximately one third of the patients

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with OCD suffer from a current comorbid MDD, and about two-third have lifetime comorbidity of MDD (Viswanath et al., 2012; Quarantini et al., 2011; Torres et al., 2006; Pinto et al., 2006; La-Salle et al., 2004). Moreover, many OCD patients suffer from depressive symptoms, but do not fulfill the diagnostic criteria for a depressive episode.

Depressive symptoms often are regarded as a consequence of the burden of OCD. OCD is associated with a decreased quality of life and an increased functional impairment in work, family and social life (Huppert et al., 2009). OCD patients spend more time thinking of the obsessions and performing compulsions, accompanied by anxiety, and thus experience less positive activities and emotions, which may lead to depressive symptoms. However, although several studies found a correlation between depressive symptoms and diminished quality of life as well as functional impairment, depressive symptoms appeared to be rather a mediating factor between the severity of the obsessive-compulsive symptoms and these factors than a consequence of them (Kugler et al., 2013; Storch et al., 2014).

Several studies found evidence for common genetic factors of obsessive-compulsive and depressive symptoms. MDD occurs more often in first-degree relatives of OCD patients compared to relatives of healthy controls and vice versa, which demonstrates the familial aggregation of this comorbidity (Carter et al., 2004; Goes et al.; 2012). In addition, Bolhuis et al. found that the co-occurrence of obsessive-compulsive and depressive symptoms is mainly explained by shared genetic factors while the contribution of non-shared environmental factors is considerably smaller (Bolhuis et al., 2014).

Despite the frequent occurrence of comorbid obsessive-compulsive and depressive symptoms, the treatment of comorbid depression in OCD is still a matter of debate. Some authors suggest to address also the depressive symptomatology while treating OCD (Olatunji et al., 2013; Abramowitz 2004; Rector et al., 2009), whereas others expect the depressive symptoms to improve along with the obsessive-compulsive symptoms, and recommend to focus on the treatment of the OCD only, without specific interventions addressing the depression (Anholt et al., 2011; Zandberg et al., 2015; Zitterl et al., 2000).

Further knowledge about the relationship between obsessive-compulsive and depressive symptoms may help to solve this debate. Most cross-sectional studies found a correlation between obsessive-compulsive and depressive symptoms in OCD patients (Besiroglu et al., 2007; Abramowitz and Foa, 2000; Demal et al., 1996) but no conclusions about the direction of this relationship can be drawn from correlational analyses alone. To that end, obsessive-compulsive and depressive symptoms have to be studied over time.

The present study aims to investigate the longitudinal relationship between obsessive-compulsive and depressive symptoms in OCD patients during the disease course. First, we studied the influence of comorbid depression on the severity and the course of OCD. We hypothesized that comorbid depression is associated with more severe obsessive-compulsive symptoms and a worse course. Second, we investigated the direction of the longitudinal relationship between obsessive-compulsive and depressive symptoms, to examine whether obsessive-compulsive symptoms lead to depressive symptoms or vice versa. Based on the literature, we expected a reciprocal influence with a greater impact of obsessive-compulsive symptoms on the depressive symptoms than vice versa. Third, we studied whether the relationship between obsessive-compulsive and depressive symptoms differs between patients with and without a diagnosis of current MDD, and between patients who first had MDD and developed OCD later in life (primary depression) and those who developed MDD during the course of the OCD (secondary depression). We hypothesized a greater influence of depressive symptoms on the obsessive-compulsive symptoms in OCD patients with a comorbid depression and in patients with primary MDD.

2. Methods

2.1. Participants

Data were obtained from the NOCDA study (Schuurmans et al., 2012). The NOCDA study is an ongoing longitudinal naturalistic multicenter cohort study which examines the course of OCD in 419 OCD patients. Patients were included between September 2005 and November 2009 at one of seven participating mental health care centers in the Netherlands. All referred patients aged 18 years and older with a lifetime diagnosis of OCD were asked for permission to be contacted for research purposes, irrespective of the stage of the disease, the severity of the obsessive-compulsive symptoms and comorbid diagnoses. The only exclusion criterion was an inadequate understanding of the Dutch language for the completion of the interviews and questionnaires.

Six hundred eighty-seven patients with OCD were invited to participate in the study. Ninety-seven subjects (28.7%) refused tot participate, 32 subjects (4.7%) were not able to participate due to mental or physical health problems and 39 (5.7%) subjects could not be contacted. Subjects who participated in the study and eligible patients who chose not to participate did not differ regarding sex, age or years of education (Schuurmans et al., 2012). At one of the participating centers (Academic Anxiety Center, PsyQ Maastricht) the subjects who participated in the NOCDA study were compared to those who did not participate regarding clinical characteristics, yielding no significant differences (results not published).

All included patients gave written informed consent to participate. The study is approved by the Medical Ethical Committee VUmc (Amsterdam) and the local Medical Ethical Committees of all participating centers.

The present study is based on the data from the semi-structured interviews and the self-administered questionnaires of the baseline measurement and the self-administered questionnaires of the follow-up after one year.

2.2. Measures

At baseline, we used the Structured Clinical Interview for the DSM-IV-TR (SCID-I/P) to assess the axis-I morbidity (First et al., 1999). Among others, current and lifetime OCD as well as current and lifetime MDD were diagnosed according to the criteria of the DSM-IV-TR (APA, 2000). We assessed retrospectively the age of onset of the OCD and the MDD using the SCID-I/P. Age of onset was defined by the age of the participant when the DSM-IV-TR criteria of OCD and MDD were first met. If the onset of the lifetime diagnosis of MDD preceded the onset of lifetime diagnosis of OCD, we defined it as primary depression. If the lifetime onset of the MDD succeeded the onset of the OCD, we defined it as secondary depression. If the criteria of OCD and MDD were met at the same age, we considered it as simultaneous onset.

The severity of obsessive-compulsive symptoms was measured at baseline using the clinician rated Yale-Brown Obsessive Compulsive Symptom (Y-BOCS) severity scale (Goodman et al., 1989a, 1989b) and at one-year follow-up using the self-rate version of the Y-BOCS (Steketee et al., 1996). The severity of depressive symptoms was measured at baseline and at one-year follow-up by the Beck Depression Inventory (BDI, Beck et al., 1961).