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Outcome predictors for severe obsessive–compulsive patients in intensive residential treatment

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Abstract

Intensive residential treatment (IRT) is an effective management approach for those with severe obsessive–compulsive disorder (OCD). This study aimed to identify IRT response predictors for clinical and research use. Consecutive subjects admitted to the Massachusetts General Hospital/McLean OCD Institute (OCDI) between February 1997 and June 2003 were included ($N = 476$). IRT responder and non-responder group characteristics were compared using t-tests and χ^2 analyses. Multiple regression analysis modeled relationships between final OCD severity (Yale-Brown Obsessive–Compulsive scale scores) and predictor variables, while accounting for multicollinearity and potential outliers. Treatment responders comprised 59.3% of the treatment sample. Responders had significantly fewer males ($p = 0.02$), lower depression severity ($p = 0.03$), poorer psychosocial functioning ($p = 0.03$) and fewer tic disorders (0.04), but were not different with respect to admission length, age, marital or employment status, OCD onset, family OCD history, treatment or admission history. In the final regression model, decreased initial OCD severity ($p < 0.001$), female gender ($p = 0.003$) and better initial psychosocial functioning (Work and Social Adjustment scale scores) ($p = 0.003$) were predictors of less severe OCD at discharge (adjusted R-square $= 0.28$). Depression severity (Beck Depression Inventory scores) and insight were not predictive of treatment outcome. Future research is necessary to elucidate putative relationships between gender and OCD psychopathology, and to understand the interplay of psychosocial factors, OCD severity and treatment outcome.

Keywords: Obsessive–compulsive disorder; Outcome; Treatment; Predictor; Gender; Severity

1. Introduction

Obsessive–compulsive disorder (OCD) is the fourth most common psychiatric illness and is associated with significant morbidity (Kaplan and Sadock, 1998; Steketee, 1997) and impaired quality of life (Hollander et al., 1997). Recent decades have brought effective pharmacologic and cognitive-behavior therapy (CBT) treatments for this disorder (Stein, 2002). Despite this, many OCD cases persist since standard treatments do not uniformly induce full remission (Ackerman and Greenland, 2002; Mataix-Cols et al., 2002b; Pigott and Seay, 1997; Steketee and Pigott, 1999). Intensive residential treatment (IRT) for severe, refractory OCD is a promising management approach (Willis et al., 1998) with demonstrated effectiveness in North American (Stewart et al., 2005) and European samples (Drummond, 1993; Thornicroft et al., 1991). Outcome predictors for IRT have not been rigorously examined to date.

The identification of reliable outcome predictors represents a critical area of OCD treatment investiga-

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tion. Studies of outcome determinants may lead to evolving theories of OCD pathogenesis and allow targeting of specific treatment strategies toward more homogeneous OCD subgroups. Although response predictors have been determined for behavioral and pharmacologic OCD therapy (Alarcon et al., 1993; Ball et al., 1996; Expert Consensus Treatment Guidelines for OCD, 1997; Hurley et al., 2002; Ravizza et al., 1995) these may not directly apply to IRT (Willis et al., 1998).

Predictors of positive medication response that have been reported include later OCD onset (Erzegovesi et al., 2001; Ackerman et al., 1994, 1999; Ravizza et al., 1995); initial side effects of nervousness and sexual complaints (Ackerman et al., 1999); decreased illness length (Alarcon et al., 1993; Ravizza et al., 1995; Stein et al., 2001), family OCD history (Erzegovesi et al., 2001), improved insight (Erzegovesi et al., 2001), lower overvalued ideation (Neziroglu et al., 2004) and absence of past SSRI trials (Stein et al., 2001), social phobia (Carrasco et al., 1992) or personality disorders (Baer et al., 1992; Cavedini et al., 1997; Ravizza et al., 1995). Symptom types and dimensions found to be related to negative treatment response include hoarding (Mataix-Cols et al., 1999).

An association between positive medication response and the following variables has been reported in some studies but not others: female gender (Ackerman et al., 1998; DeVeaugh-Geiss et al., 1990; Mundo et al., 1999; Steiner et al., 1996), decreased OCD severity (Ackerman et al., 1998; Alarcon et al., 1993; DeVeaugh-Geiss et al., 1990; Stein et al., 2001) and absent depression (MDD) (Ackerman et al., 1994, 1998; DeVeaugh-Geiss et al., 1990; Erzegovesi et al., 2001; Koran et al., 2000, 2005). Age appears to be unrelated to OCD medication response (DeVeaugh-Geiss et al., 1990; Stein et al., 2001).

Positive CBT response predictors include motivation (Keijsers et al., 1994) and decreased OCD severity (Keijsers et al., 1994; Mataix-Cols et al., 2002a; Piacentini et al., 2002). For a combination of medications and CBT, predictors of poor response include the presence of personality disorders (AuBuchon and Malatesta, 1994) and sexual/religious obsessions (Alonso et al., 2001) and inconsistently reported predictors of response include a shorter OCD duration (Foa et al., 1983) and absent MDD (Emmelkamp and Rabbie, 1981; Foa et al., 1983; Keijsers et al., 1994; Mataix-Cols et al., 2002a). The study done to date on positive IRT response predictors identified them as the presence of contamination obsessions, overt rituals, living with family members, current employment and the absence of depression or past treatment (Buchanan et al., 1996). The presence of that single report on IRT outcome predictors called for replication with rigorous statistical methods and a larger study sample.

Initial response to treatment, lower severity, motivation for treatment and fewer cluster A personality disorder traits appear to predict longer-term improvement (de Haan et al., 1997). Several biological markers have also been identified as predictors for OCD treatment. These include metabolic findings on neuroendocrine (Mathew et al., 2001), evoked potential (Morault et al., 1998) and PET imaging (Rauch et al., 2001; Saxena et al., 1999), which have demonstrated patterns distinguishing CBT and medication responders (Brody et al., 1998).

Predictors of long-term outcome have also been studied. In studies of children, those with a history of depression and substance abuse were more likely to develop OCD (Douglass et al., 1995), and predictors of positive outcome at longer-term follow-up included shorter duration (Thomsen, 1995), lower severity at baseline and following medication treatment, absence of a tic disorder and absence of parental psychiatric illness (Leonard et al., 1993). Females were also found to have a more episodic and less chronic course than males (Thomsen, 1995). In a meta-analysis of childhood OCD, predictors of remission included later OCD onset, decreased OCD duration and outpatient status (Stewart et al., 2004). Psychosocial factors are also very important as predictors of long-term course in OCD. Although marital dissatisfaction has not been a predictor of poor outcome, expressed anger and criticism have predicted poor outcome (Steketee et al., 1999). Furthermore, marital status and global severity scores predict course (Steketee et al., 1999).

Predictors of response to the outpatient treatment of OCD have been extensively studied as described above. OCD severity has been identified as a predictor in medication, CBT treatment, long-term course and outcome studies (Alarcon et al., 1993; Leonard et al., 1993; Mataix-Cols et al., 2002a; Stein et al., 2001). Although the mechanism for this finding is not fully understood, it is likely that those who are incapacitated by severe OCD are less able to engage in CBT, and have more extensive and perhaps less reversible neuropathology. Thus initial lower OCD severity was hypothesized to be a predictor of positive response in this study. Later OCD onset has also been a fairly consistent predictor of improved outcome, both in child and adult populations (Ackerman et al., 1994, 1999; Erzegovesi et al., 2001; Ravizza et al., 1995; Stewart et al., 2004). In a landmark study by Skoog and Skoog early-onset of OCD in males was predictive of worse outcome after a mean 47 year follow-up period (1999). We hypothesized that female gender and later onset OCD would also be predictors of positive IRT outcome. Given the fact that ongoing substance use and depression may interfere with compliance and motivation in a highly structured, demanding treatment program such as IRT, we also hypothesized that these two comorbidities would predict