Obsessive-Compulsive Hoarding: Symptom Severity and Response to Multimodal Treatment

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Background: Compulsive hoarding and saving symptoms, found in many patients with obsessive-compulsive disorder (OCD), are part of a clinical syndrome that has been associated with poor response to medications and cognitive-behavioral therapy (CBT). We sought to determine whether patients with the compulsive hoarding syndrome had more severe symptoms and functional impairment than nonhoarding OCD patients and whether they would respond to intensive, multimodal treatment previously found to be effective for treatment-refractory OCD.

Method: We studied 190 consecutive patients with DSM-IV OCD treated openly for approximately 6 weeks with intensive CBT, medication, and psychosocial rehabilitation in a partial hospitalization program for severely ill OCD patients. Twenty of the 190 patients (11%) were identified as having the compulsive hoarding syndrome. All patients were assessed before and after treatment with the Yale-Brown Obsessive Compulsive Scale (YBOCS), Hamilton Rating Scale for Depression (HAM-D), Hamilton Rating Scale for Anxiety (HAM-A), and Global Assessment Scale (GAS). We compared the symptom severity and response to treatment of compulsive hoarders versus nonhoarding OCD patients.

Results: Compulsive hoarders were significantly older than nonhoarders ($p < .001$). Hoarders had significantly lower GAS scores and higher HAM-A scores than nonhoarders both before ($p = .04$) and after ($p = .002$) treatment, but had similar pretreatment YBOCS scores. Both groups improved significantly with treatment as assessed by YBOCS score ($p < .001$), but nonhoarders had significantly greater decreases in YBOCS scores than hoarders ($p = .02$).

Conclusion: While the compulsive hoarding syndrome appears to be a distinct, more disabling, variant of OCD that does not respond as robustly to treatment, it may still improve significantly with intensive, multimodal treatment tailored to its specific features and associated deficits.

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Although standard diagnostic classifications consider obsessive-compulsive disorder (OCD) to be a single diagnostic entity, it has become clear that several different symptom factors or subtypes of OCD exist. Baer[1] identified 3 symptom factors in OCD patients: "pure" obsessions, contamination and checking, and symmetry and hoarding symptoms. A factor analysis of OCD symptoms by Leckman et al.[2] yielded 4 principal symptom factors: (1) aggressive, sexual, and religious obsessions with checking compulsions; (2) symmetry obsessions with ordering, arranging, and repeating compulsions; (3) contamination obsessions with washing and cleaning compulsions; and (4) hoarding, saving, and collecting symptoms.

Hoarding is defined as the acquisition of and inability to discard worthless items even though they appear (to others) to have no value.[3] Hoarding and saving compulsions are found in 18% to 42% of OCD patients[4,5] as well as in other psychiatric disorders[6,7] and nonclinical populations.[8] Compulsive hoarding is most commonly driven by obsessional fears of losing important items that the patient believes will be needed later,[7] distorted beliefs about the importance of possessions, and excessive emotional attachments to possessions.[3] Hoarders usually fear making "wrong decisions" about what to discard and what to keep, so they acquire and save items to prepare for every imaginable contingency. The most commonly saved items include newspapers, magazines, old clothing,

bags, books, mail, notes, and lists.[3,9] Living spaces become sufficiently cluttered so as to preclude the activities for which they were designed, causing significant impairment in social and/or occupational functioning.

Defining OCD symptom factors such as compulsive hoarding/saving is important for establishing more specific phenotypes for research studies. Frost and Show[10] argue persuasively that hoarding and saving compulsions are part of a discrete clinical syndrome that also includes pervasive indecisiveness, perfectionism, procrastination, and behavioral avoidance. Genetic and family studies[2,9] suggest that hoarding may have a different inheritance pattern than other OCD symptoms. In 1 study,[9] 16 of 19 OCD patients with compulsive hoarding (84%) reported a family history of hoarding behaviors in at least 1 first-degree relative, whereas only 37% reported a family history of DSM-IV OCD. Compulsive hoarders may also have a different pattern of neurocognitive and information processing deficits than nonhoarding OCD patients.[11] Thus, the compulsive hoarding syndrome may represent an etiologically or neurobiologically distinct subgroup or variant of OCD.[12]

Although prior case reports[6,9] have described the symptoms of OCD patients with compulsive hoarding, only 1 study[13] to date has directly compared hoarding and nonhoarding OCD patients. Frost et al.[13] found that obsessive-compulsive hoarders were older than nonhoarding OCD patients and had significantly higher scores than nonhoarding OCD patients on severity measures of anxiety, depression, and social and family disability. Hoarding and nonhoarding OCD patients did not differ in severity of OCD symptoms, but hoarders had more dependent and schizotypal personality disorder symptoms than nonhoarding OCD patients. That study, however, did not measure treatment response in either hoarding or nonhoarding OCD patients.

Understanding differences between symptom subtypes may allow for prediction of differential treatment response and the development of more syndrome-specific treatments. The compulsive hoarding syndrome does not respond well to standard outpatient treatments for OCD. Hoarding and saving compulsions have been strongly associated with poor response to pharmacotherapy with serotonin reuptake inhibitors (SRIs)[9,12,14] as well as cognitive-behavioral therapy (CBT).[1,15] However, patients with hoarding symptoms have been underrepresented in CBT studies of OCD,[16] limiting the generalizability of the results of these studies for this symptom subtype. Frost and Hartl[17] have developed a specific cognitive-behavioral model and treatment strategy for patients with the hoarding syndrome, but have thus far described only 7 patients treated with their approach.[18]

Although not all studies agree, recent trials suggest that the combination of medications and CBT is superior to either modality alone for OCD.[19,20] Intensive treatment approaches combining aggressive medication management with daily CBT and psychosocial rehabilitation in a controlled setting have been found to be effective for severe, treatment-refractory OCD.[21,22] In a prior study,[22] our group found that over 70% of previously treatment-refractory OCD patients responded to treatment in the University of California at Los Angeles OCD Partial Hospitalization Program (OCD PHP), a specialized 6-week treatment program for severely ill patients with OCD and related disorders that utilizes the intensive, multimodal treatment approach. Compared with outpatient treatment, this program has the advantages of strict enforcement of compliance with medication and CBT, as well as massed exposure and response prevention on a daily basis. But the efficacy of such multimodal treatment for the compulsive hoarding syndrome has never been assessed.

Therefore, we sought to compare the response of compulsive hoarding versus nonhoarding OCD patients to multimodal treatment combining medications and intensive CBT, to determine whether this treatment approach would benefit patients with the compulsive hoarding syndrome and whether the treatment would be as effective for hoarding as for nonhoarding OCD. Based on previous findings,[13] we predicted that patients with the compulsive hoarding syndrome would have more severe anxiety and depressive symptoms and poorer overall functioning than nonhoarding OCD patients. Because most patients treated in our intensive OCD PHP in the past experienced significant clinical improvement,[22] we predicted that compulsive hoarders would show improvements in OCD symptoms and overall functioning after intensive, multimodal treatment. However, given several prior reports associating hoarding symptoms with poor response to treatment,[9,12,14,15] we hypothesized that patients with the compulsive hoarding syndrome would not improve to the same degree as nonhoarding OCD patients.

METHOD

The subjects were 190 consecutive adult patients (aged 18–65 years) with DSM-IV OCD treated openly between 1994 and 2000 in the OCD PHP. Diagnoses were made by semistructured clinical interview, as well as with standardized screening and rating scales, including the Anxiety Disorders Interview Schedule-Revised (ADIS-R)[23] and the Yale-Brown Obsessive Compulsive Scale (YBOCS)[24] and its Symptom Checklist. The latter instrument also provided a listing of the specific OCD symptom factors present in each patient, including the following categories of obsessions and compulsions: harm and aggression, contamination and cleaning, sexual, hoarding and saving, religious/scrupulosity, symmetry and order, somatic, and miscellaneous. Symptom severity and level of functioning were assessed at entry into the program and at discharge. OCD symptom severity was measured with the YBOCS. The

severity of depressive and anxiety symptoms was measured by the Hamilton Rating Scale for Depression (HAM-D)[25] and the Hamilton Rating Scale for Anxiety (HAM-A).[26] Overall psychosocial functioning was measured with the Global Assessment Scale (GAS).[27]

Twenty-seven of the 190 patients reported hoarding/saving obsessions and/or compulsions on the YBOCS Symptom Checklist and clinical interview. Of these, 7 patients had only mild, nonimpairing hoarding/saving symptoms, while 20 reported that compulsive hoarding/saving was their primary symptom OCD factor that was causing significant distress or functional impairment. All 20 of these patients were found to have associated symptoms of indecisiveness, procrastination, and avoidance by clinical interview and YBOCS and, therefore, were classified as having the compulsive hoarding syndrome.[10] The remainder of patients did not report any hoarding/saving symptoms on the YBOCS checklist or on clinical interview. Other OCD symptoms were identified in 9 of the 20 hoarders with the YBOCS Symptom Checklist, but these symptoms were milder and less impairing, so they were not the primary focus of treatment.

Patients presented with a wide range of comorbid diagnoses, including major depression, bipolar disorder, psychotic disorders, other anxiety disorders, and substance abuse disorders, that were addressed with medication but not symptom-specific behavioral therapy. Patients with dementia, mental retardation, or other cognitive impairments were excluded. For all patients included in the analysis, OCD was the primary diagnosis that caused the most distress and impairment. Patients with the delusional variant of OCD were included because previous data suggest that OCD encompasses a range of insight, from full awareness to delusional beliefs.[28,29] The majority of the patients had failed to respond to previous outpatient trials of SRIs and at least 1 previous outpatient trial of exposure and response prevention.

As described in our previous reports,[22,30] all patients treated in the OCD PHP received intensive daily CBT (in both individual and group settings) for several hours a day, for approximately 6 weeks. CBT consisted of exposure and response prevention targeted to patients' individual obsessive fears and compulsive behaviors, along with cognitive restructuring to improve insight, decrease depressive and general anxiety symptoms, and address distorted beliefs.

The 20 patients classified as compulsive hoarders received CBT that focused primarily on the compulsive hoarding syndrome. The goals of treatment for hoarders included (1) creating living and work space, (2) increasing appropriate use of space, (3) improving decision-making skills, (4) decreasing procrastination and avoidance, (5) improving organizational and time management skills, (6) decreasing obsessional fear of discarding items, (7) discarding unneeded possessions, (8) decreasing compulsive buying and acquisition, and (9) preventing future hoarding/saving. These goals were pursued with a systematic CBT program for compulsive hoarding, adapted from the model of Frost and Hartl,[17] that included the following steps: detailed assessment of all obsessions, compulsions, and avoidance behaviors; education to improve the patient's insight into his/her hoarding/saving syndrome; selecting target areas in the patient's home or workplace that were excessively cluttered; creating a hierarchy of items in the target area that the patient feared discarding; creating appropriate categories and storage systems; and assigning excavation exposure tasks. Excavation required the patient to categorize each possession, make a decision to discard or store, and permanently remove it from the current pile. This exposed the patient to fears of making wrong decisions and losing items that might be needed in the future, without allowing saving compulsions. Patients were to continue excavating until the area was clear. Finally, plans were made for appropriate use of living and workspaces and for the prevention of future cluttering. Specific cognitive restructuring employed for hoarders focused on perfectionism, overresponsibility, doubts about memory, excessive emotional attachments to possessions, and the negative consequences of filling a home or workplace with clutter (disruption of daily functioning, potential fire and health hazards, conflicts with family members or colleagues, inability to have others come to their homes, etc.).

Patients in the program also received medication and psychosocial rehabilitation. Medications included SRIs, as well as medications prescribed to augment the response of OCD symptoms to SRIs[31] and to treat comorbid disorders. These included antipsychotics, antidepressants, mood stabilizers, and anxiolytics. Pharmacotherapy proceeded according to the algorithm for treatment-refractory OCD described in our previous report.[22] Medication selection was based on diagnosis, clinical judgment of the study physicians (A.B., R.M.R., or S.S.), history of efficacy and tolerability, and patient preference. Psychosocial rehabilitation was based on the multimodal approach developed by Liberman and colleagues[32] and included groups to educate patients about diagnoses, medications, and CBT, along with groups focusing on communication skills, stress management, relapse prevention, time management, and independent living skills. At the time of discharge from the OCD PHP, patients who experienced a ≥ 35% decrease in YBOCS score and a ≥ 10-point increase in GAS score were classified as responders to treatment. Patients who had previously been treated in the OCD PHP were excluded from the data analysis.

Statistical Analysis

For purposes of analysis, patients were retrospectively divided into 2 groups: hoarders (patients with the full compulsive hoarding syndrome, N = 20) versus nonhoarders

Table 1. Demographics and Treatment of Subjects With Obsessive-Compulsive Hoarding[a]

Variable	Hoarders (N = 20)	Nonhoarders (N = 170)	Pearson Chi-Square χ^2 (df = 1)	p
Age, mean (SD), y	44.8 (9.2)	33.2 (11.4)	…†	
Gender distribution, N/N (%) female	15/20 (75.0)	71/170 (41.8)	7.98	.005
Current comorbid major depression, N/N (%)	12/20 (60.0)	77/170 (45.3)	1.55	.213
Treated with SRIs, N/N (%)	17/20 (85.0)	146/170 (85.9)	0.01	.915
Treated with antipsychotics, N/N (%)	12/20 (60.0)	64/170 (37.6)	3.73	.054
Treated with intensive CBT, N/N (%)	20/20 (100.0)	170/170 (100.0)	0.00	1.0
Duration of treatment, mean (SD), d	30.0 (5.5)	36.1 (28.8)	…‡	…
Responders, N/N (%)	9/20 (45)	107/170 (63)	2.42	.119

[a]Abbreviations: CBT = cognitive-behavioral therapy, SRI = serotonin reuptake inhibitor.
†Student t = 4.37, df = 188, p < .001.
‡Student t = –0.94, df = 188, p = .348.

(patients with either minimal or no hoarding/saving symptoms, N = 170), on the basis of symptom profiles ascertained with the YBOCS Symptom Checklist and clinical interview at study entry. We then compared symptom severity and treatment response of the 2 groups. Data were entered into a Microsoft Excel[33] database and analyzed using SPSS statistical software (Chicago, Ill.). The data were first screened for distributional properties, outliers, and missing values. No variables were rejected by this process. Chi-square tests were used to compare the gender distribution, prevalence of comorbid major depressive episodes, proportions of patients treated with SRIs and antipsychotic medications, and proportion of responders among hoarders versus nonhoarders. Student t tests for independent samples with equal variances were used to compare the mean age and duration of treatment of hoarders versus nonhoarders. Pretreatment symptom severity scores (YBOCS, HAM-D, HAM-A, and GAS), posttreatment scores, and pretreatment-to-posttreatment changes were compared between the 2 groups with 3 separate omnibus multivariate analyses of variance (MANOVAs), using diagnostic group (hoarders vs. nonhoarders) as the between-subject factor and symptom severity ratings and change scores as the dependent variables with age, gender, and treatment duration as covariates. Univariate analyses of variance were then performed for only those variables and covariates found to have significant effects in the omnibus MANOVAs. Paired-sample t tests were used to determine whether each diagnostic group experienced significant changes in YBOCS and GAS scores. All analyses are intent-to-treat with last observation carried forward. All subjects who completed at least the initial week of treatment were included in the analyses.

RESULTS

Hoarders were significantly older than nonhoarding OCD patients (t = 4.37, df = 188, p < .001; Table 1). There was a significantly higher proportion of women in the compulsive hoarding group than in the nonhoarding group (p = .005). The prevalence of comorbid major depression was similar for the 2 groups. All patients received intensive CBT, and the vast majority received medications. The proportions of patients treated with SRIs and antipsychotic medications and mean duration of treatment (length of stay in the OCD PHP) did not differ significantly between groups (see Table 1).

Omnibus MANOVA revealed a significant effect of diagnostic group on pretreatment symptom severity (Hotelling's F = 2.58, df = 185, p = .04). Pretreatment YBOCS and HAM-D scores were nearly identical in the 2 groups, but compulsive hoarders had significantly lower pretreatment GAS scores than nonhoarders (p = .006), indicating lower levels of social and occupational functioning and greater global symptom severity. Hoarders also had significantly higher pretreatment HAM-A scores than nonhoarding OCD patients (p = .05), indicating greater severity of anxiety symptoms (Table 2).

Both hoarders and nonhoarders experienced significant improvements in OCD symptoms (Student t = 9.12, df = 19, p < .001 for hoarders; t = 28.07, df = 169, p < .001 for nonhoarders). As hypothesized, nonhoarding OCD patients had significantly larger declines in YBOCS scores than compulsive hoarders (p = .021), indicating greater improvement of OCD symptoms with treatment (see Table 2). Fewer hoarders (9/20; 45%) than nonhoarders (107/170; 63%) were considered responders to treatment according to the criteria defined in the Method, but this difference did not reach statistical significance (Table 1). Both groups had significant increases in GAS scores (t = –7.07, df = 19, p < .001 for hoarders; t = –17.53, df = 169, p < .001 for nonhoarders), indicating improvement in overall functioning. Contrary to our prediction, hoarders had a similar magnitude of improvement on the GAS as nonhoarders. Pretreatment-to-posttreatment declines in HAM-D and HAM-A scores also did not differ between hoarders and nonhoarders, since both groups experienced similar improvements in anxiety and depression (see Table 2).

Although both groups responded well to intensive, multimodal treatment, patients with the compulsive hoard-

Table 2. Symptom Severity Before and After Intensive, Multimodal Treatment[a]

Variable	Hoarders (N = 20) Mean (SD)	Nonhoarders (N = 170) Mean (SD)	Hoarders vs Nonhoarders ANOVA[b] F (df = 1,187)	p
YBOCS total				
Pretreatment	30.4 (3.6)	29.0 (4.4)	…	…
Posttreatment	19.9 (5.1)	15.6 (5.4)	11.84	.001
Mean change	–10.6 (5.2)	–13.4 (6.2)	5.42	.021
HAM-D				
Pretreatment	20.7 (9.5)	19.0 (7.7)	…	…
Posttreatment	15.8 (5.7)	12.7 (6.7)	…	…
Mean change	–6.3 (7.8)	–6.2 (7.4)	…	…
HAM-A				
Pretreatment	35.6 (10.4)	32.0 (7.4)	3.85	.050
Posttreatment	30.9 (7.3)	25.2 (7.1)	7.04	.009
Mean change	–5.8 (8.4)	–6.7 (7.3)	…	…
GAS				
Pretreatment	41.3 (7.6)	48.3 (11.0)	7.62	.006
Posttreatment	53.5 (8.7)	62.4 (10.2)	15.68	< .001
Mean change	14.1 (9.6)	13.9 (10.6)	…	…

[a]Abbreviations: ANOVA = analysis of variance, GAS = Global Assessment Scale, HAM-A = Hamilton Rating Scale for Anxiety, HAM-D = Hamilton Rating Scale for Depression, YBOCS = Yale-Brown Obsessive Compulsive Scale.
[b]Univariate ANOVA for effect of group (hoarders vs. nonhoarders).

ing syndrome continued to have greater overall symptom severity and functional impairment than nonhoarding OCD patients at the time of discharge from the program (Hotelling's $F = 4.33$, $df = 182$, $p = .002$, covarying for age, gender, and treatment duration). Hoarders had significantly higher posttreatment scores on the YBOCS ($p = .001$) and HAM-A ($p = .009$) and significantly lower posttreatment GAS scores ($p < .001$) than nonhoarders (see Table 2).

DISCUSSION

Compulsive hoarding/saving was present in 14% of patients and was the primary symptom factor in 11% of patients treated in the OCD PHP, similar to previous estimates of prevalence of such symptoms in OCD patients.[4,5] As hypothesized, significant differences between the hoarding and nonhoarding OCD groups were found in the severity of anxiety symptoms and overall functioning, as well as in the magnitude of response to multimodal treatment. Our findings support the theory that patients with the compulsive hoarding syndrome may represent a distinct subgroup of OCD patients[12] with a unique behavioral profile and a characteristic pattern of associated symptoms and functional deficits that require intensive, specialized treatment.

As hypothesized, OCD patients with the compulsive hoarding syndrome had significantly poorer overall functioning than nonhoarding OCD patients, even after treatment. The difference in functioning was not due to greater baseline severity of OCD or depressive symptoms, as hoarders and nonhoarders had very similar pretreatment YBOCS and HAM-D scores. These results are similar to those of 2 prior studies[13,34] that found similar YBOCS scores but greater disability in hoarders compared with nonhoarding OCD patients. Compulsive hoarders had more severe anxiety than nonhoarding OCD patients in our study, both before and after treatment. Higher anxiety in hoarders may be related to poorer insight,[6] greater perfectionism,[3] more overvalued ideation, or the severe consequences of the compulsive hoarding syndrome on social/occupational functioning. Our findings replicate those of Frost et al.,[13] indicating that the compulsive hoarding syndrome is a more disabling form of OCD, and extend them to show that higher levels of anxiety and functional impairment may persist in hoarders even after response to treatment. In our sample, unlike that of Frost et al.,[13] depression severity was roughly similar in compulsive hoarders and nonhoarding OCD patients. This is quite likely due to the high comorbidity of mood disorders and greater severity of depression in our sample of severely ill OCD PHP patients compared with Frost and colleagues' sample of outpatients.

Despite their greater pretreatment functional impairment, compulsive hoarders showed significant improvement of OCD symptoms with intensive, multimodal treatment that combined a tailored CBT approach with aggressive medication treatment, psychosocial rehabilitation, and training in organizational skills and time management. To our knowledge, this is the first report of a treatment approach that was effective for a diverse sample of patients with the compulsive hoarding syndrome, including previously treatment-refractory patients. Even though many of our patients with the compulsive hoarding syndrome had failed trials of SRIs or outpatient CBT prior to admission into the OCD PHP, they responded better than we expected to treatment in the program, with a mean decrease of 35% in YBOCS score. The results of the present open study suggest that controlled studies of combined treatment utilizing medications and intensive CBT for the compulsive hoarding syndrome are warranted.

However, compulsive hoarders did not improve as much as nonhoarding OCD patients, who showed a mean decline of 46% in YBOCS scores with intensive treatment. The difference between groups was significant even after controlling for the effects of age, gender, and duration of treatment. These results are concordant with earlier findings of hoarding/saving compulsions being strongly associated with worse treatment response to SRI medications[9,12,14] and CBT[15] and add further support to the theory that the compulsive hoarding syndrome may be a neurobiologically distinct variant of OCD.[12] Poorer response in hoarders might also be related to the higher prevalence of personality disorders in this group,[13,35] which could conceivably be associated with worse compliance with treatment.

Both hoarding and nonhoarding OCD patients showed significant improvements in depressive and anxiety symptoms, suggesting that intensive, multimodal treatment can be effective for not only different types of OCD, but also a range of comorbid affective syndromes. Contrary to our hypothesis, hoarding and nonhoarding OCD patients had very similar improvements in overall functioning as measured by increase in GAS scores, even though hoarders did not have as much improvement in OCD symptoms as nonhoarders. Our previous report[30] also showed that intensive, multimodal treatment improved subjective and objective indices of general and social functioning, independent of patients' symptomatic improvement.

The duration of treatment required to achieve improvement in symptoms and functioning (mean = 30.0 days) in this study was relatively short compared with a previous report[18] that up to 1 year of treatment may be required for this syndrome. While short-term responses in intensive treatment settings do not always translate into long-term responses when patients return to their usual environment, our previous data have shown that the treatment response of OCD patients treated in the OCD PHP for an average of 6 weeks was sustained over an 18-month follow-up period.[22] Longitudinal follow-up studies of patients with the compulsive hoarding syndrome that assess long-term, symptomatic, and functional outcome are currently underway, to better characterize the functional impact of the syndrome and to determine whether hoarders will be able to retain improvements made in the program.

This study had the usual limitations associated with a naturalistic case series. The analyses were done retrospectively, symptoms were not rated by independent or blind raters, and treatments were administered openly and without standardization. However, the blend of medications and intensive CBT administered was very similar for hoarders as for nonhoarders. The same algorithm[22] was followed for both groups. The proportion of patients in each group treated with SRIs and antipsychotics was similar, as was the proportion with comorbid major depression. CBT was administered to both patient groups by the same therapists, using the same approaches of exposure, response prevention, and cognitive restructuring. Also, both groups of patients attended the same groups for psychosocial rehabilitation. There were some significant differences between the hoarding and nonhoarding groups that could have influenced the comparison of treatment response: the hoarding group was older, had more women, and had a shorter treatment duration than the nonhoarding group. Therefore, we attempted to eliminate these potential confounds by covarying for age, gender, and duration of treatment in all statistical analyses. The presence or absence of these covariates did not significantly change the results of any analysis conducted.

Another potential limitation is that hoarding/saving symptoms were not rated independently of other OCD symptoms, since the Hoarding Scale developed by Frost and Steketee[11] was not validated or available to us until after this study was already well underway. Therefore, it is theoretically possible that reductions in YBOCS scores seen in the hoarding group were due not to improvements in hoarding symptoms per se, but rather to improvements in their other OCD symptoms. However, this is unlikely, since the 20 patients classified as compulsive hoarders all received treatment focused primarily on the compulsive hoarding syndrome, rather than on other OCD symptoms that may have been present. Only 9 of 20 hoarders reported any other OCD symptoms, and these were mild and nonimpairing and so were not addressed with CBT. Thus, the decrease in YBOCS score seen in the hoarding group quite likely reflects improvement in the core symptoms of the compulsive hoarding syndrome that were the focus of intensive treatment. Moreover, validation studies of the hoarding scale and the YBOCS show that the 2 scales are highly correlated,[8] making it unlikely that our results would have differed significantly had the more specific hoarding measure been used. Our use of the same scale for both hoarding and nonhoarding OCD patients did allow for a direct comparison of their overall response to treatment. Nevertheless, because of the limitations inherent in the design of this study, caution must be exercised in making conclusions based on its results.

In summary, our results suggest that although patients with the compulsive hoarding syndrome often present with a complex array of symptoms, behaviors, and functional deficits, they may respond well to a comprehensive, multimodal approach, similar to that found effective for other types of refractory OCD, but tailored to the specific features of the hoarding syndrome. To develop more effective treatments for this syndrome, much needs to be learned about its pathophysiology. Our group is currently conducting a study of the functional neuroanatomy of compulsive hoarding, using positron emission tomography to determine whether the hoarding syndrome is associated with unique cerebral metabolic abnormalities that are different from those seen in other OCD patients and to identify cerebral metabolic patterns that may be associated with response to treatment in compulsive hoarding patients.

Disclosure of off-label usage: The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents has been presented in this article that is outside U.S. Food and Drug Administration–approved labeling.

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