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Obsessive–Compulsive Symptoms and Positive, Negative, and Depressive Symptoms in Patients With Recent-Onset Schizophrenic Disorders

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Objectives: To study the relation between obsessive–compulsive symptoms (OCS) and positive, negative, and depressive symptoms in patients with recent-onset schizophrenic disorders.

Methods: We undertook a prospective study of 113 consecutively hospitalized patients with recent-onset schizophrenia or related disorders diagnosed according to DSM-IV criteria. We compared 3 subgroups: one without comorbid OCS, one with OCS not fulfilling DSM-IV criteria for obsessive–compulsive disorder (OCD), and one with comorbid OCD diagnosed according to DSM-IV criteria. We assessed OCS severity at admission and 6 weeks thereafter with the Yale-Brown Obsessive Compulsive Scale (Y-BOCS). The Positive and Negative Syndrome Scale (PANSS) and the Montgomery–Asberg Depression Rating Scale (MADRS) were independently administered.

Results: At admission, patients with schizophrenic disorders and OCD had higher mean MADRS scores than both other groups; patients with OCS not fulfilling DSM-IV criteria for OCD had lower mean PANSS negative subscale scores than both other groups. After 6 weeks, there were no significant between-group differences, and OCS severity remained constant.

Conclusions: Acute patients with recent-onset schizophrenia and OCD have more severe depressive symptoms but do differ in negative symptoms, compared with patients without comorbid OCD. Mild OCS may be related to less severe negative symptoms. During regular inpatient treatment, OCS severity remains constant.

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Information on funding and support and author affiliations appears at the end of the article.

Clinical Implications

- Acute patients with recent-onset schizophrenia and OCD have more severe depressive symptoms than patients without comorbid OCD.
- Acute patients with recent-onset schizophrenia and OCS have milder negative symptoms than patients with comorbid OCD and patients without OCS.
- Severity of OCD symptoms in patients with recent-onset schizophrenia does not diminish during 6 weeks of treatment with antipsychotic medication.

Limitations

- The validity of the Y-BOCS assessment of OCS severity in patients with schizophrenia is unknown.
- Only a 6-week course of symptoms was studied.
- Patients were consecutively admitted to a psychiatric hospital; this is not an epidemiologic sample.

Key Words: *obsessive–compulsive disorder, schizophrenia, psychopathology, positive symptoms, negative symptoms, depressive symptoms, prospective, longitudinal*

Identification of OCD in patients with schizophrenia may have prognostic and therapeutic implications. The point prevalence of OCD has been estimated to be 14% in patients with first-episode schizophrenia (1), and lifetime diagnoses of OCD among schizophrenia patients have repeatedly been reported to be about 30% (2). OCS may occur even more frequently in schizophrenia patients (3).

The differences in clinical features of patients in the early phase of schizophrenic disorders, with or without comorbid OCD, are sparsely studied. Reports are inconclusive on the relation of OCD to positive, negative, and depressive symptoms in schizophrenia patients. Formal thought disorder and affective blunting have been found to be less severe in patients with first-episode schizophrenia and OCD, compared with patients without comorbid OCD (1). Fewer negative symptoms and higher levels of functioning in patients with chronic OCD and schizophrenia have also been found (4). This finding contradicts other studies that report a worse outcome and higher levels of positive and negative symptoms in patients with comorbid schizophrenia and OCD (5–8). Recently, it was found that adolescent schizophrenia patients with OCD had higher affective flattening or blunting scores than those without OCD (9). Most of these studies are limited by cross-sectional design, inclusion of patients in different stages of their illness, and the inability to control for confounders such as the effects of chronicity or long-standing treatment effects.

We therefore sought to study the relation between OCD (and OCS) and positive, negative, and depressive symptoms in young patients with recent-onset schizophrenia in a longitudinal design. This study offers an opportunity to resolve the above-mentioned discrepancies. Elucidating the associations between psychopathological phenomena and their level of severity may be relevant for clinical care.

Abbreviations used in this article

MADRS	Montgomery–Åsberg Depression Rating Scale
OCD	obsessive–compulsive disorder
OCS	obsessive–compulsive symptoms
PANSS	Positive and Negative Syndrome Scale
SANS	Scale for Assessment of Negative Symptoms
SCID-P	Structured Clinical Interview for DSM-IV Axis I Disorders–Patient edition
SD	standard deviation
Y-BOCS	Yale-Brown Obsessive Compulsive Scale

We hypothesized that OCS severity is associated with severity of negative and depressive symptoms.

Methods

Subjects

We included consecutively admitted patients ($n = 113$) participating in a prospective study of recent-onset schizophrenia and related disorders. Diagnoses at discharge were identified according to DSM-IV criteria (10) and were based on a longitudinal, clinical, and heteroanamnesic assessment (Longitudinal Expert Assessment of Diagnosis, 11). Exclusion criteria were substance-induced psychosis, neurological or endocrine disease, and mental retardation. After they received a complete description of the study, all subjects gave written informed consent. All patients were treated with antipsychotic medication, both at admission and during the following 6 weeks. None of the patients were treated with antidepressive medication.

Instruments

We used the SCID-P (12) to identify the presence of OCS, defined as persistent, repetitive, intrusive, and distressful thoughts (obsessions) not related to the patient's delusions or repetitive, goal-directed rituals (compulsions) clinically distinguishable from schizophrenic mannerisms or posturing.

We identified OCS only if patients had insight into the exaggerated or unwarranted character of these symptoms and ascribed them to their own mental functioning. Moreover, we assessed OCS only if a clear distinction could be made in terms of content between psychotic symptoms and OCS (see Discussion).

Two trained psychiatrists administered the Y-BOCS (13) at admission (T1) and 6 weeks later (T2). Interrater agreement for the Y-BOCS total score in 4 categories was good (weighted $\kappa = 0.73$).

The PANSS (14) and the MADRS (15) were assessed by clinically trained researchers who were blind to the OCS status of the patients. The mean interrater reliabilities, expressed in mean percentage agreement for the PANSS and the MADRS (4 videotaped interviews were scored by 5 interviewers) were 91 and 86, respectively. The Y-BOCS, PANSS, and MADRS were administered within 1 week of each other.

Statistical Analysis

Subjects were divided into 3 groups: patients without OCS or OCD, patients with OCS not fulfilling DSM-IV criteria for OCD, and patients with comorbid OCD.

We determined between-group differences in PANSS positive and negative scores and MADRS total score at admission and after 6 weeks treatment, using nonparametric

Table 1 Mean psychopathology scores for OCS, positive and negative symptoms, and depressive symptoms in patients without OCS, patients with OCS but not OCD, and patients with comorbid OCD

Instrument	No OCS Mean (SD)		OCS but not OCD Mean (SD)		Comorbid OCD Mean (SD)	
	T1 (<i>n</i> = 80)	T2 (<i>n</i> = 68)	T1 (<i>n</i> = 15)	T2 (<i>n</i> = 14)	T1 (<i>n</i> = 17)	T2 (<i>n</i> = 15)
Y-BOCS total score			5.7 (3.1)	5.6 (2.1)	17.5 (7.0)	17.8 (5.8)
PANSS positive score	20.8 (7.7)	16.6 (5.6)	16.8 (7.1)	14.5 (4.4)	21.1 (6.4)	17.0 (4.6)
PANSS negative score	22.1 (6.7)	18.8 (6.3)	16.9 (6.8)	17.2 (7.1)	22.7 (6.5)	18.5 (5.3)
MADRS total score	18.5 (9.2)	13.9 (9.3)	17.4 (9.8)	18.4 (9.5)	26.0 (9.9)	15.2 (9.5)

T1 = at admission; T2 = 6 weeks after admission

Table 2 Primary obsessions and compulsions in patients with recent-onset schizophrenia and OCD^a

Content of obsessions	Rate ^a	<i>n</i>	Type of compulsions	Rate ^a	<i>n</i>
Aggressive	36.4	8	Checking	31.6	7
Sexual	18.2	4	Ordering–arranging	15.8	3
Contamination	9.1	2	Repeating rituals	15.8	3
Religious	9.1	2	Cleaning–washing	10.5	2
Symmetry or exactness	4.5	1	Counting	5.3	1
Miscellaneous	22.7	5	Miscellaneous	21.1	4

^aRate of each type of obsession or compulsion is expressed as a percentage of total primary obsessions and compulsions. More than one type of OCS was observed per patient.

Kruskal–Wallis and Mann–Whitney *U* testing (all tests were 2-tailed).

Results

The study included 113 patients (92 men and 21 women). Of these, 97 had schizophrenia, 7 had schizophreniform disorder, and 9 had schizoaffective disorder. The mean age at admission was 22.4 years, SD 3.2. At admission, 33 (29.2%) patients had OCS, and 80 (70.8%) patients had no OCS. Six weeks later 36 (31.9%) patients had OCS, and 77 (68.1%) patients had no OCS. Seventeen (15%) patients fulfilled DSM-IV criteria for OCD at both assessments (all had a Y-BOCS total score of 10 or higher). For 2 patients at T1 and for 16 patients at T2, we failed to administer the Y-BOCS, PANSS, and MADRS within 1 week of each other. Therefore, we performed analyses on 111 patients at T1 and on 97 patients at T2.

Table 1 shows mean scores on psychopathology rating instruments for patients without OCS, patients with OCS but not OCD, and patients with OCD.

At admission there were significant between-group differences in mean PANSS negative scores and mean total MADRS scores (Kruskal–Wallis chi-squares $H = 8.4$, $P = 0.02$; and $H = 7.9$, $P = 0.02$, respectively). Mann–Whitney testing revealed that patients with OCS but not OCD had lower negative symptom scores than patients without OCS ($U = 592.5$, $P < 0.01$) and than patients with OCD ($U = 63.0$, $P < 0.01$). Patients with OCD scored higher on the MADRS than patients without OCS ($U = 581.5$, $P < 0.01$) and than patients with OCS but not OCD ($U = 73.0$, $P = 0.04$).

After 6 weeks of treatment, there were no significant between-group differences in positive, negative, or depressive symptom scores. There were no significant

Figure 1 Mean total MADRS score at admission for groups with no OCS, with OCS but not OCD, and with comorbid OCD

between-group differences in any of the separate items of the PANSS, either at admission or after 6 weeks of treatment.

Table 2 shows the primary obsessions and compulsions of the patients with schizophrenic disorders and OCD ($n = 17$) rated according to the Y-BOCS symptom checklist. Aggressive and sexual obsessions were the most prevalent obsessions; checking and ordering—arranging, together with repeating rituals, were the most prevalent compulsions.

Discussion

At 15%, the comorbidity rate of OCD in our sample was similar to the 14% reported by Poyurovsky and others (1). Another 15% of our patients had OCS that were not severe enough to fulfil DSM-IV criteria for OCD—also similar to earlier reports—which emphasizes the importance of a dimensional view of the cooccurrence of OCS and schizophrenia.

Our main finding was that, at time of admission, acute patients with recent-onset schizophrenic disorders and comorbid OCD had more severe depressive symptoms than patients without OCD. After 6 weeks of clinical treatment, positive, negative, and depressive symptoms diminished in all groups. OCS severity, however, remained unchanged during this period. This finding agrees with Berman and others' hypothesis that the occurrence of OCS is independent of the severity of schizophrenic symptoms (3). We can only speculate on the clinical significance of this finding. To improve OCS, treatment should perhaps also focus on comorbid OCD. Conversely, it is also possible that, in this group, OCS diminish in the long term without specific treatment. Nevertheless, OCD

has been shown to require more than the habitual response time to specific pharmacologic and psychotherapeutic treatments. We propose that specific therapeutic intervention is indicated for patients with schizophrenia and comorbid OCD. Longitudinal and intervention studies are needed to provide evidence on which we can base our interventions. The severity of the depressive symptoms we found in acute patients with recent-onset schizophrenia and comorbid OCD should alert clinicians to the possibility of an increased risk of suicidal behaviour in these patients. Up to 75% comorbidity of depression and OCD has been reported in patients without psychosis (16). Depression can be viewed as a result of living with OCD; however, we think that OCS and depressive symptoms may be independent phenomena, since we found that OCS remained stable during 6 weeks of inpatient treatment, whereas the severity of depressive symptoms diminished during this period.

Contrary to our results, Poyurovsky and others found less affective blunting in patients with schizophrenia and OCD than in patients with schizophrenia without OCD (1). Poyurovsky and others used the SANS Affective Blunting subscale score, whereas we used the PANSS Negative subscale total score. Our assessment may be less subtle but more robust. This could explain our failure to replicate Poyurovsky and others' findings (1). Post hoc, we did not find significant differences between groups concerning the PANSS item "blunted affect." However, we did find milder negative symptoms in patients with OCS not fulfilling DSM-IV criteria for OCD. We suppose that mild OCS may

Figure 2 Mean PANSS Negative score at admission for groups with no OCS, with OCS but not OCD, and with comorbid OCD

indicate a group with milder negative symptoms. One could speculate that mild OCS indicates an effort to enhance self-control. Nechmad and others found higher affective flattening or blunting in patients with schizophrenia and comorbid OCD (9), which is not in line with the findings of Poyurovsky and others (1). Our results concerning negative symptoms fall between the results of both studies.

The distinction between OCS and psychotic symptoms is problematic (17). OCS severity was assessed with an instrument developed for patients without psychosis. We opted to ascertain OCS only if a clear distinction could be made between content in psychotic symptoms and content in OCS. For example, we did identify OCS in a young man who repeatedly checked whether he had locked the door to his house properly and whether he had asked a question correctly and who, in addition, suffered from acoustic hallucinations in which strangers commented on his thoughts. Conversely, we did not identify OCS in another young man who repeatedly checked to see whether anyone had entered his room in his absence and who, in addition, was convinced that others were following him and aimed to harm him, because his obsessive actions were related to his delusions. Another criterion used to differentiate psychotic symptoms from OCS is the degree to which patients are aware that the obsessive thoughts, impulses, or ideas are products of their own mind. Fenton and McGlashan suggest that this criterion should not be used to differentiate between psychosis symptoms and OCS in patients with schizophrenia (5). Although OCS accompanied by a temporary lack of insight can occur in OCD, we identified

OCS in our study only if patients had insight into the exaggerated or unwarranted character of the symptoms and ascribed them to their own mental functioning.

By using this narrow definition of OCS, we avoided overidentifying OCS in our patients. The repetitive and intrusive character of many psychosis symptoms might otherwise lead to a too frequent identification of OCS.

We conclude that acute patients with recent-onset schizophrenic disorders and comorbid OCD have more severe depressive symptoms but do not differ in negative symptoms from patients without comorbid OCD. Mild OCS may be related to less severe negative symptoms. Our results indicate the need for further study of the course of OCD and the effects of treatment in patients with schizophrenia and comorbid OCD.

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Résumé : Les symptômes obsessionnels-compulsifs et les symptômes positifs, négatifs et dépressifs chez les patients souffrant de troubles schizophréniques d'apparition récente

Objectifs : Étudier la relation entre les symptômes obsessionnels-compulsifs (SOC) et les symptômes positifs, négatifs et dépressifs chez les patients souffrant de troubles schizophréniques d'apparition récente.

Méthodes : Nous avons mené une étude prospective auprès de 113 patients hospitalisés consécutivement qui souffraient de schizophrénie d'apparition récente ou de troubles connexes, diagnostiqués selon les critères du *DSM-IV*. Nous avons comparé 3 sous-groupes : l'un avec des SOC comorbides, l'un avec des SOC ne satisfaisant pas aux critères du *DSM-IV* concernant le trouble obsessionnel-compulsif (TOC), et le dernier avec un TOC comorbide diagnostiqué selon les critères du *DSM-IV*. Nous avons évalué la gravité des SOC à l'admission, puis 6 semaines plus tard au moyen de l'échelle obsessionnelle-compulsive de Yale-Brown (Y-BOCS). L'échelle du syndrome positif et négatif (PANSS) et l'échelle de la dépression Montgomery-Åsberg (MADRS) ont été administrées indépendamment.

Résultats : À l'admission, les patients souffrant de troubles schizophréniques et du TOC avaient des scores moyens plus élevés à la MADRS que les deux autres groupes; les patients avec des SOC ne satisfaisant pas aux critères du *DSM-IV* pour le TOC avaient des scores moyens à la sous-échelle négative de la PANSS moins élevés que les deux autres groupes. Après 6 semaines, il n'y avait pas de différences significatives entre les groupes, et la gravité des SOC demeurait constante.

Conclusions : Les patients aigus souffrant de schizophrénie d'apparition récente et de TOC ont des symptômes dépressifs plus graves mais différent pour ce qui est des symptômes négatifs, comparativement aux patients sans TOC comorbide. Des SOC bénins peuvent être associés à des symptômes négatifs moins graves. Durant le traitement à l'hôpital, la gravité des SOC demeure constante.