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Clinical correlates of obsessive-compulsive symptom dimensions in at-risk mental states and psychotic disorders at early stages

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ABSTRACT

We studied the clinical correlates of obsessive-compulsive symptom dimensions in 109 individuals with early psychosis (31 At-Risk Mental States [ARMS], 78 psychotic disorders with < 3 years of illness) and 59 healthy subjects. Obsessive-compulsive symptoms were assessed by the Obsessive-Compulsive Inventory – Revised. We also assessed the severity of psychotic symptoms, depressive symptoms and functioning. ARMS and psychotic disorder patients reported more obsessive-compulsive symptoms than did healthy subjects. The ARMS individuals also reported more overall and checking obsessive-compulsive symptoms compared with the PD patients. Different types of obsessive-compulsive symptoms were related with depressive symptoms in both diagnostic groups. However, a different pattern was observed in the relationship between obsessive-compulsive dimensions and functioning by diagnosis (better functioning in ARMS; poorer functioning in psychotic disorders). Our study suggests that obsessive-compulsive symptoms are present in the early stages of psychotic illness, as well as in individuals at risk for psychosis. Future prospective studies are needed to elucidate how obsessive-compulsive symptoms in ARMS may influence the prognosis in terms of global functioning and the risk of psychosis transition.

1. Introduction

People with a psychotic disorder experience obsessive-compulsive symptoms (OCS) more frequently than did the general population. A recent meta-analysis (Swets et al., 2014) conducted in patients with schizophrenia suggests that the prevalence of obsessive-compulsive disorder (OCD) is 13.6% and the prevalence of OCS is 30.3% in this group. Co-morbidity with OCS/OCD in schizophrenia is associated with depressive and anxiety symptoms (Öngür and Goff, 2005; Hagen et al., 2013), social dysfunction (Berman et al., 1995), worse premorbid functioning (De Haan et al., 2013a) and lower quality of life (De Haan et al., 2013b).

Most previous studies have been conducted in patients with chronic schizophrenia, and there are only a few studies that have included drug-naïve first episodes of psychosis or examined At-Risk Mental States (ARMS). Studies of OCS/OCD in ARMS patients have shown heterogeneous results, most likely due to differences in the diagnostic criteria for ARMS and OCS/OCD. The prevalence of co-morbid OCS/OCD in ARMS individuals is likewise higher than in the general population: 11–60% for OCS and 5–30% for OCD (Niendam et al., 2009; DeVylder et al., 2012; Fontenelle et al., 2012; Zink et al., 2014). Most studies have reported more depressive symptoms in ARMS individuals with co-morbid OCS/OCD (Niendam et al., 2009; DeVylder et al., 2012; Fontenelle et al., 2012), although other studies did not find such differences (Zink et al., 2014). Studies conducted in individuals with a first episode of psychosis have reported similar prevalence rates for OCD (7–10%) compared with studies in chronic schizophrenia, as well as an association between obsessive and depressive symptoms (De Haan et al., 2013a; Hagen et al., 2013).

OCD is a clinically heterogeneous disorder with symptoms from different dimensions (contamination, symmetry/ordering, aggressive/checking, sexual/religious obsessions, hoarding), which are mediated by different components of fronto-striato-thalamic circuits involved in cognitive and emotional processing (Mataix-Cols et al., 2003, 2004). To our knowledge, there has been only one small study that has examined the content of obsessions and compulsions (DeVylder et al., 2012) in ARMS individuals. In this previous study, which included 20 young individuals with ARMS, 60% of the participants reported at least one OCS. All patients who endorsed an OCS also endorsed aggressive obsessions. Other prevalent obsessions exhibited contamination (40%), sexual (35%) or

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symmetry (30%) contents. Of all compulsions, the most prevalent contents were somatic (35%), checking (35%) and repeating (30%). The presence and severity of aggressive obsessions was associated with depression, suicidal ideation and social impairment. A limitation of this study was not including a comparative group of healthy subjects.

Most previous studies that have explored the comorbidity between psychosis and OCS have been conducted in individuals with chronic schizophrenia; thus, we explored this topic in people in the early stages of psychotic illness. The main aim of our study was to explore the clinical correlates of OCS in three different clinical populations (ARMS, early psychosis with <3 years of illness, healthy subjects). The main hypothesis of our study was that ARMS and early psychosis patients experience more OCS compared with healthy subjects. In a secondary aim of our study, we conducted an exploratory analysis to identify the association between OCS and psychopathological symptoms (e.g., positive and negative symptoms and depressive symptoms).

2. Methods

2.1. Participants

We studied 109 outpatients (31 ARMS individuals and 78 individuals with psychotic disorders [PD] with a duration of illness <3 years) aged between 18 and 35 years old, attending the Early Psychosis Program from Reus (HPU Institut Pere Mata, Spain). Of the 78 early psychotic patients, 56 (72%) patients were experiencing a first episode of psychosis. We also included a control group of 59 healthy subjects (HS) with similar age and gender proportions who were screened to rule out past or current history of psychiatric disorder.

All participants were recruited from a larger research project that focused on stress biomarkers and cognition. Thus, the following exclusion criteria were applied: pregnancy, mental retardation, severe head injury or neurological disease, active glucocorticoid treatment, language or speech problems that made it difficult to complete the clinical assessment with the administration of questionnaires or interviews, visual impairment and alcohol, cocaine or heroin dependence.

Ethical approval was obtained from the Committee for Ethical Clinical Investigation of the Hospital Sant Joan de Reus. After a complete description of the study to all the participants, written informed consent was obtained.

2.2. Clinical assessment

All participants were assessed with the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) (Wing et al., 1990). The OPCRIT checklist v. 4.0 (available at http://sgdp.iop.kcl.ac.uk/opcrit/) was used to generate DSM-IV diagnoses for PD (schizophrenia, schizophreniform disorder, schizoaffective disorder or psychotic disorder not otherwise specified). ARMS individuals were also assessed with the Comprehensive Assessment of At Risk Mental States (CAARMS) to ensure that they met criteria for any of the three ARMS groups defined by At Risk Mental State criteria (Yung et al., 1998).

Socio-demographic and clinical variables (age, education level [the number of years of study], antipsychotic and antidepressant treatment, substance use) were assessed by semistructured interview. Tobacco, cannabis and alcohol consumption were registered in cigarettes/day, joints/day and standard units/day, respectively. We also used a dichotomic variable for active cannabis consumption. The participants were considered to be active cannabis users if they consumed at least one joint per week. The Positive and Negative Syndrome Scale (PANSS) (Kay et al., 1990) was administered to explore positive, negative and overall psychotic symptoms. The Calgary Depression Scale for Schizophrenia (CDSS) (Addington et al., 1990) was administered to explore depressive symptoms. Reported suicidal ideation was derived from the CDSS item 8 ("suicidality") and defined as rating 1 or more on this CDSS item. All hetero-administered scales (PANSS, CDSS) and interviews (SCAN, CAARMS) were administered by experienced psychiatrists who were trained in the administration of these instruments. Global Assessment of Functioning (GAF) was used to measure social, occupational, and psychological functioning. OCS were assessed with the Obsession-Compulsion Inventory – Revised (OCI-R) (Foa et al., 2002). The OCI-R is a brief (18-item) instrument that assesses distress associated with common OCS. In addition to yielding a total score, the OCI-R has six subscales: washing, checking, ordering, obsessing, hoarding, and neutralizing. Each antipsychotic dose was transformed into chlorpromazine equivalents in mg/day (Gardner et al., 2010). Antidepressant treatment was also registered.

2.3. Statistical analysis

SPSS version 19.0 software (SPSS Inc., Chicago, Illinois, USA) was used to carry out the statistical analyses. Chi-square tests and one-way ANOVA were used to compare categorical and continuous data between groups. Post-hoc ANOVA analyses were adjusted with a Bonferroni correction. The comparison of ordinal variables between groups was conducted with a Kruskal–Wallis test (post-hoc comparisons were conducted with a Mann–Whitney test). Spearman correlation was used to explore the association between continuous or ordinal variables. Significance was set at $p<0.05$ (two-tailed). We first divided the sample by diagnostic group (HS, ARMS and PD). A stratified analysis by diagnostic group was conducted to explore the association between OCS dimensions and psychopathological measures in each subgroup of participants. To determine whether cannabis use influenced OCS expression, we repeated the analysis by diagnostic subgroup after the exclusion of the patients with active cannabis consumption. We also compared the early psychotic patients with or without cannabis consumption.

We adjusted for multiple comparisons with the Bonferroni correction for the main confirmatory analyses (comparison of the OCS among 3 diagnostic groups). Because there were 7 comparisons (1 OCS overall score and 6 OCS symptom dimensions), we considered a p value <0.007 (adjusted $p=0.05/7$) to be significant. Other exploratory analyses were not adjusted because the correction for multiple testing is not strictly necessary in analyses that are exploratory in nature (Bender and Lange, 2001).

Finally, to adjust all analyses for covariates (age, gender, education level, cannabis use, and antidepressant and antipsychotic treatments), we conducted an ANCOVA analysis for each OCS variable. We previously tested all OCS variables for normality and used a log transformation (ln) to reduce skewness. All transformed variables were considered the dependent variables in these parametric analyses.

3. Results

Socio-demographic and psychopathological variables of the sample are described in Table 1. PD patients were more frequently treated with antipsychotics, whereas ARMS individuals more frequently received antidepressants. We did not observe significant differences in the severity of psychotic symptoms, depressive symptoms or functionality between the ARMS and PD groups. The severity of the depressive symptoms in both clinical populations