Brief communication

Awareness of illness and suicidal behavior in delusional disorder patients

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Abstract

Background: The relationship between insight and suicidal behavior among psychotic patients is poorly studied and possibly mediated by clinical variables. **Objectives:** Our goal was to investigate clinical differences in suicidal and non-suicidal delusional disorder (DD) patients, and to evaluate the relationship between insight, psychotic and depressive symptoms. **Methods:** Cross-sectional study in 64 consecutive DD patients. For assessment, we used the Positive and Negative Syndrome Scale (PANSS), the Hamilton Rating Scale for Depression (HRSD-17), the Columbia Suicide Severity Rating Scale (C-SSRS), the Personal and Social Performance Scale (PSP), and the first three items of the SUMD scale for insight. The sample was divided according to the presence of suicide attempts. To investigate psychopathological associations, bivariate correlation coefficients were used. Age at onset served as covariate in subsequent analyses. **Results:** Suicidal DD patients had higher depressive symptoms and were more frequently admitted than non-suicidal patients. A logistic regression model confirmed that insight, depressive symptoms and age at onset were predictors of suicidal behavior. Unawareness of the effects of medication was negatively related to depressive symptoms. After adjustment, depressive symptoms were weakly correlated to better insight into the effects of medication. No other statistically significant correlations were found. **Discussion:** Depressive symptoms, insight and age at onset of disease may be potential predictors of suicidal behavior in DD patients.

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Keywords: Psychosis, insight, delusional disorder, paranoia, suicide, suicidal behaviour, psychopathology.

Introduction

For many decades, poor insight has been considered a prevalent feature in patients diagnosed with chronic psychotic disorders[1]. The vast majority of scientific literature has defined insight as a multidimensional concept that includes awareness of a mental illness, recognition of the need for medication, awareness of the social consequences, and awareness of the presence of psychotic symptoms and the attribution of symptoms to the illness[2].

Suicide attempts before first psychiatric consultation are prevalent in psychotic patients and associated with depressive comorbidity[3,4], and insight has also been related to suicidal behavior rates[5]. Several studies have indicated that high levels of insight, or some aspects of insight, may increase the risk for suicidal behavior[5]; on the other hand, other authors have found no relationships between insight and suicidal ideation or behavior in first-episode of psychosis patients[5,6], as well as in schizophrenia patients[7].

A recent systematic review reported that the association between suicidal behavior or ideation and insight may be mediated by other clinical variables such as depressive symptoms[2]. On the other hand, the authors hightlighted that inconsistency of findings regarding the influence of insight on suicidal behaviour may be explained by some methodological problems identified in the reviewed studies. However, this subject has been poorly studied in delusional disorder (DD) patients.

The main aims of this study were to investigate clinical differences in suicidal and non-suicidal DD patients, and to examine the relationship between insight, psychotic and depressive symptoms, as this topic has been shown to be of clinical interest in delusional patients.

Methods

Study design and participants

We carried out a cross-sectional study by including all consecutive cases of DD outpatients who attended the Barcelona Clinic Schizophrenia Unit (Barcelona, Spain), between 2008 and 2013. All patients fulfilled the following inclusion criteria: (a) diagnosis of DD according to DSM-IV-TR criteria, (b) age over 18 years, and (c) not having a previous diagnosis of schizophrenia, mental retardation or organic psychosis.

The present study is a part of an ongoing study on schizophrenia and related disorders, which was approved by the Ethics Committee of the Hospital Clinic (Ref. 2007/3699).

Assessment measures

The diagnosis of DD was confirmed by using the psychosis module of the Structured Clinical Interview for DSM-IV axis I disorder, clinical version (SCID-I CV), which was assessed by two senior psychiatrists in charge of the cases.

We used the Positive and Negative Syndrome Scale[8] to assess positive, negative and general psychotic symptoms. Depressive symptoms were assessed by using the Spanish version of the 17-item Hamilton Rating Scale for Depression (HRSD)[9], and functionality by the Personal and Social Performance Scale (PSP)[10]. Furthermore, the severity of suicidal ideation and number of suicide attemps were obtained by using the Columbia Suicide Severity Rating Scale (C-SSRS)[11]. The first three items of the Scale to Assess Unawareness of Mental Disorder (SUMD)[12] Spanish Version, were used for assessing awareness of illness, awareness of the need for medication and social consequences. The SUMD scale has shown a good reability and validity, and ranges from 1 to 5 in which higher scores are indicative of unawareness of the multiple components.

Mean scores of the assessment scales were considered outcome variables, and sociodemographic and other clinical data served as secondary outcomes. The sample was divided into two groups according to the presence or absence of suicidal attempts at lifetime.

Statistical analysis

All data were analyzed by using SPSS for Windows (Version 19.9; SPSS Inc., Chicago, Illinois, USA). Univariate differences in sociodemographic and clinical characteristics, and assessment scales between patients who attempted suicide and those who were not attempters were tested by using Mann-Whitney U test, $\chi 2$ and Fisher's exact tests, as the distribution of data were non-parametric. A logistic

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regression analysis was conducted to identify potential predictors of suicidal behavior in DD patients using depressive symptoms (HRSD-17), age at onset of DD, social network, and SUMD total scores. The relationship between the three first items of the SUMD scale and insight total scores, psychopathological symptoms and functionality were investigated using the Spearman correlation coefficients. In this analysis, the original sample was not divided. In a second step, partial correlation coefficients were applied with age at onset of DD as confounding variable. Significance level was set at 0.05 (two-tailed).

Results

Sociodemographic and clinical features in suicidal and non-suicidal DD patients

Of the 64 DD patients included in the study, 10 (15.6%) had attempted suicide at lifetime. No statistically significant differences were found with regard to sociodemographic variables between DD patients who attempted suicide and those who did not attempt.

Suicidal DD patients showed higher rates of depressive comorbidity (p = 0.025), were more likely to receive antidepressants (p = 0.011) and were more frequently admitted to a psychiatric ward (p = 0.026) than non-suicidal patients.

Regarding insight and psychopathological symptoms, suicide attempters showed higher depressive symptoms measured by the HRSD-17 scale (p = 0.011), higher severity of suicidal ideation (p < 0.001) and less awareness of social consequences with higher scores of the SUMD scale item 3 (p = 0.022).

A logistic regression analysis was conducted to predict suicidal behavior using potential confounders as predictors. The Wald criterion demonstrated that insight (p = 0.048), depressive symptoms (0.004) and age at onset of disease (p = 0.038) made a significant contribution to prediction. Social support as measured by total number of cohabiters was not a significant predictor of suicidal behavior (Table 1).

Table 1. Demographic and clinical data, and assessment scales by clinical groups

Variables	Total sample n = 64	No suicide attempters n = 54	Suicide attempters n = 10	Statistic
Sociodemographic measures				
Age, mean (SD)	55.02 (12.78)	54.85 (13.49)	55.90 (8.33)	U (63) = 254, Z = -0.269, p = 0.767
Marital status [n(%)]				χ^2 = 0.598, df = 2, p = 0.742
Single	23 (35.9)	20 (37.04)	3 (30)	
Married/living together	16 (25)	14 (25.93)	2 (20)	
Separated/divorced/widowed	25 (39.1)	20 (37.1)	5 (50)	
Educational level, years [n(%)]				χ^2 = 0.238, df = 3, p = 0.971
< 8	7 (11)	6 (11.11)	1 (10)	
8-9	16 (25)	14 (25.93)	2 (20)	
10-11	22 (34.4)	18 (33.33)	4 (40)	
12 or >	19 (29.6)	16 (29.63)	3 (30)	
Employment status [n(%)]				χ^2 = 1.392, df = 2, p = 0.707
Unemployed	4 (6.25)	4 (7.4)	0 (0)	
Employed	21(32.81)	18 (33.33)	3 (30)	
Economic benefit	39 (60.94)	32 (59.26)	7 (70)	
Clinical measures				
Age at onset of DD, mean (SD)	48.83 (12.61)	47.87 (13.07)	54 (8.5)	U (63) = 192, Z = -1.44, p = 0.149
Accumulated years of disease, mean (SD)	12.25 (11.64)	12.78 (12.13)	9.4 (8.4)	U (63) = 241, Z = -0.538, p = 0.591
DD type [n(%)]				χ^2 = 2.735, df = 4, p = 0.603
Persecutory	52 (81.25)	42 (77.78)	10 (100)	
Erotomanic	5 (7.81)	5 (9.26)	0 (0)	
Jealous	3 (4.69)	3 (5.56)	0 (0)	
Grandiose	2 (3.13)	2 (3.71)	0 (0)	
Somatic	2 (3.13)	2 (3.71)	0 (0)	
Depressive comorbidity, [n(%)]	22 (34.4)	15 (27.78)	7 (70)	p = 0.025*; FET
Antidepressant use, [n(%)]	26 (40.63)	18 (33.33)	8 (80)	p = 0.011*; FET
Lifetime admissions, mean (SD)	1.02 (1.13)	0.89 (1.09)	1.7 (1.16)	U (63) = 156.5, Z = -2.22, p = 0.026*
Number of suicide attemps, mean (SD)	0.23 (0.66)	0 (0)	1.5 (0.972)	U (63) = 0.0, Z = -7.913, p = 0.000*
Assessment scales, mean (SD)				
PANSS total scale	83.83 (18.46)	84.04 (17.58)	82.70 (23.74)	U (63) = 247, Z = -0.060, p = 0.952
PANSS positive subscale	22.59 (5.83)	23.04 (5.85)	20.2 (5.33)	U (63) = 190.5, Z = -1.472, p = 0.141
PANSS negative subscale	18.17 (5.71)	18.07 (5.67)	18.70 (6.26)	U (63) = 251.5, Z = -0.343, p = 0.732
PANSS general subscale	43.06 (9.2)	42.93 (8.41)	43.8 (13.24)	U (63) = 244, Z = -0.481, p = 0.630
SUMD scale	14.19 (1.47)	14.11 (1.54)	14.60 (0.97)	U (63) = 215, Z = -1.176, p = 0.239
SUMD, awareness illness	4.81 (0.56)	4.81 (0.55)	4.80 (0.63)	U (63) = 268, Z = -0.068, p = 0.946
SUMD, awareness effects of medication	4.73 (0.57)	4.72 (0.6)	4.80 (0.42)	U (63) = 265, Z = -0.132, p = 0.895
SUMD, awareness social consequences	4.64 (0.574)	4.57 (0.60)	5 (0)	U (63) = 170, Z = -2.282, p = 0.022*
PSP score	52.64 (15.26)	52.26 (15.91)	54.70 (11.55)	U (63) = 258, Z = -1.36, p = 0.174
HRSD-17 score	10.48 (6.21)	9.54 (5.62)	15.60 (7.03)	U (63) = 132.5, Z = -2.552, p = 0.011*
Suicidal ideation severity (C-SSRS)	3.97 (7.31)	1.94 (4.92)	14.90 (8.62)	U (63) = 72.5, Z = -4.803, p = 0.000*

* P < 0.05.

C-SSRS: Columbia Suicide Severity Rating Scale; DD: delusional disorder; df: degrees of freedom; FET: Fisher's Exact Test; HRSD: Hamilton Rating Scale for Depression; p: p-value; PANSS: Positive and Negative Syndrome Scale; PSP: Personal and Social Performance Scale; SD: Standard deviation; SUMD: total for items 1, 2 and 3; U: Mann-Whitney U test; χ^2: Chi-square test.

Correlational analysis between insight and psychopathological symptoms

SUMD total score was negatively associated with the age at the study inclusion (r = 0.335, p = 0.007) and age at onset of DD (r = -0.375, p = 0.002).

Prior to the correction by potential confounding factors, although no statistical significance was reached, total insight showed a tendency toward a positively correlation with accumulated years of disease (r = 0.227, p = 0.072) and was negatively related to PANSS general subscale scores (r = -0.225, p = 0.073). SUMD total scores were not related to positive and negative symptoms, functionality, depressive symptoms or severity of suicidal ideation, as measured by the C-SSRS scale. Unawareness of disease and of the effects of medication showed a tendency to be negatively associated with depressive symptoms (r = -0.215, p = 0.088; r = -0.235, p = 0.062). Unawareness of the social consequences was negatively associated with PANSS total scale (r = -0.266, p = 0.034), PANSS general subscale (r = -0.258, p = 0.040), current age (r = -0.344, p = 0.005) and age at onset of DD (r = -0.368, p = 0.003), and positively associated with number of suicide attempts (r = 0.287, p = 0.022). A tendency toward positively correlation was shown between unawareness of social consequences and functionality (r = 0.235, p = 0.061).

In a second step, age at onset of DD was included into the correlational analysis as confounding variable. After adjustment, unawareness of the effects of medication was negatively related to depressive symptoms (r = -0.264, p = 0.037). Other correlations were no longer statistically significant.

Discussion

In our sample, suicidal delusional disorder (DD) patients had higher depressive symptoms and were more frequently admitted to a psychiatric ward than non-suicidal patients. These findings are consistent with a previous study carried out by our team[4]. In the aforementioned study we found that DD patients with depressive comorbidity (DC) had higher rates of suicidal behavior and suicidal ideation than patients without DC. Thus, based on our findings, it is not possible to exclude a relationship between insight and suicidal behavior in DD patients, as suggested by some authors[7].

In the present study, after conducting regression models, depressive symptoms, insight and age at onset of disease were confirmed to be clinical predictors of suicidal behavior in DD patients. Further, this is in agreement with a recent systematic review carried by López-Moríñigo and coworkers[2], who concluded that if any relationship exists between insight and suicidal behavior in psychotic patients, it may be related to other clinical variables, such as depressive symptoms.

In a further step, we carried out a correlation analysis between total insight scores, the first three items of the SUMD scale, and psychopathological symptoms. When uncorrected for potential confounders, DD patients with high clinical insight in terms of awareness of disease and recognition of the effects of medication had significantly higher depression scores and greater histories of suicide attempts compared to patients with low clinical insight. Although statistical significance was not reached, these findings are in agreement with the systematic review mentioned above[2]. Furthermore, patients with better awareness of the social consequences had a later age at onset of DD.

In a second step, we included age at onset of DD into the correlational analysis as confounding variable, as it was significantly correlated with insight scores in the non-controlled correlation analysis. When adjusted, DD patients with higher depressive symptoms showed better insight into the effects of medication, which was probably mediated by age at onset of DD. In our point of view, it is reasonable that patients with an earlier psychotic diagnosis would show lower insight levels than patients with a later age at onset.

To the best of our knowledge, this is the first study to specifically investigate sociodemographic and clinical differences in two clinical subgroups of DD patients, those who have attempted suicide at lifetime and those who did not attempt it. Furthermore, the main strength of our study is that it is the first to specifically investigate clinical correlations between insight, depressive and psychotic symptoms, and number of previous suicide attempts, specifically in a sample formed by DD patients. Some limitations in our study should be taken into account. Our study has a cross-sectional design and the sample size is small.

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Conflicts of interest

Dr. Miquel Bernardo has received honoraria from Bristol-Meyer-Squibb y Wyeth, Janssen-Cilag, Eli Lilly, Pfizer, Synthelab, Glaxo Smith Kline, and Astra-Zeneca; however, these are not related with the content of the manuscript. The remaining authors have no conflicts of interest to declare.

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