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Relationship between personality traits and panic disorder

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Panic disorder is a chronic course disorder that causes important distress and impaired social function. The relationship between personality disorders and panic disorder has been studied, and determines its severity, course and treatment, but it has not been studied the relationship between personality traits and outcome of panic disorder. 82 patients with a first episode of panic disorder are selected and followed during 1 year, to analyze the existence and kind of relationship between their personality traits and the outcome of their disorder.

Keywords: Panic disorder, Personality traits, Personality, outcome

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Relación entre rasgos de personalidad y evolución del trastorno de angustia

El trastorno de angustia es un trastorno de curso crónico que causa importante malestar y un deterioro de la función social. La relación entre trastornos de la personalidad y trastorno de angustia ha sido estudiada, y determina la severidad, curso y tratamiento del mismo, pero no se ha estudiado tanto la relación entre rasgos de personalidad y ansiedad. Ochenta y dos pacientes con un primer episodio de trastorno de angustia son seleccionados y seguidos durante un año, para estudiar la existencia y tipo de relación entre sus rasgos de personalidad y el curso evolutivo de su trastorno.

Palabras clave: Trastorno de pánico, Rasgos de personalidad, Personalidad, Evolución

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INTRODUCTION

Panic disorder (PD) is a chronic and fluctuating disease that generates intense malaise, entailing worse quality of life and social deterioration.[1] It is calculated that there is a 6.4% prevalence-year in Europe. This is one of the 10 principal causes of lost days of work, with high costs.[2] This has also been studied in countries as the United States of America or Australia.[3,4]

Its etiopathogeny includes the following factors: A) Genetic: Vulnerability in persons having affected first degree relatives is greater,[5,6] although the transmission mechanism is unknown.[7] Investigations have focused on phenotype studies, studies on association and interactions and pharmacogenetic studies.[8,9] B) Biological: In PD, there is hypersensitivity of many brain areas, causing behavioral, vegetative, and neuroendocrine changes[10-12] as well as non-specific EEG abnormalities in 25% of the patients. Provocation studies show vulnerability against some substances compared to the controls.[13] C) Psychosocial: appearance and maintenance of negative or distorted cognitions[14] explain the PD. Stressful events, losses, abuses and migratory phenomena are also involved.[15-18]

Pharmacological and psychotherapy treatments are available for panic disorder.[19] PD requires an individualized approach and solid therapeutic alliance, this being included in the principal clinical guidelines.[20-22]

Several factors are related to the course of panic disorder. Among the most outstanding are presence of agoraphobia at the onset, coexistence of social phobia, post-traumatic stress disorder, or involvement of daily functioning.[23-25] Better understanding of them can help to identify patients at risk of suffering more resistant symptoms and planning of the treatment.[26] One factor related with worse course and adherence of PD is comorbidity with a personality disorder.[27] Personality disorders may affect severity of the panic disorder (PD) picture[28] regarding its course and response to short-term drug treatment[29] and the

efficacy of cognitive-behavioral treatment in many cases.[30]

Personality disorders most associated to PD are cluster C and the traits that occur in them. However, there are also associations with those of cluster B, so that patients with PD and said characteristics are more dysfunctions, take longer to improve or suffer more recurrences. Thus, it can be stated that the existing comorbidity between PD and personality disorder implies an early onset age of PD, more several symptoms and worse course of PD.[28-31]

The relation existing between personality traits (PT) and PD is also interesting. According to the DSM-IV, PTs are persistent patterns of ways of perceiving, relating and thinking about oneself and the setting that are manifested in a wide range of social and personal contexts[32] which may be pathological or not. It has been observed that there are PTs that are associated more frequently to panic disorder (PD), such as the following dimensions: phobic, passive-aggressive, self-destructive, schizotypal, borderline, paranoiac, anxiety, histeriform, dysthymia, drug abuse, psychotic thoughts and major depression.[33] However, it is not clear if there is any relation between PT and long term evolution of PD, and to what degree they could be used as their predictors.[34] There are also studies that suggest the influence of anxious symptoms in the PTs, exaggerating them, and their consequent scores on the instruments that evaluate this influence. It is possible that this would not reflect the premorbid functioning of the patients and stresses the need to compare the PT after an adequate period of treatment in later studies.[35]

Our objective is to see if there is a relationship between the personality traits and evolution at one year of treatment of panic disorder in its earliest phases. It is interesting because there are very few studies that show data on this and because knowledge of this could have applications in the etiopathogeny of the PD, new therapeutic approaches and comorbidity with the personality.

METHODOLOGY

The patients originated from the Panic Disorders Program of the Hospital Universitario Marqués de Valdecilla, in Santander. This program was created to study and treat PD in its initial phases. They had not been previously treated and did not have any other psychiatric condition. This made it possible to follow them up from the first *de novo* symptoms and to obtain a more complete and specific idea about PD and its approach. Furthermore, these programs are characterized by minimum data "contamination" because the patient remembers them more accurately than a long-term patient. The bias of the cross-sectional sample section, which can include patients who are more resistant to treatment is avoided. Furthermore, as they are untreated patient, the disease manifestations do not change.

Inclusion criteria:

- Patients with principal diagnosis of PD with or without agoraphobia who have not received previous treatment for the disorder (e.g. effective drugs at sufficient doses for the necessary time - 2 previous months).
- Belonging to the Mental Health Units Area of Santander.
- Age over 18 years.

Exclusion criteria:

- Patients for whom it is considered that the PD is secondary to another mental disorder.
- Patients with problems to fill out the evaluation instruments and to follow the psychotherapeutic indications: Mental retardation and illiteracy.
- Pregnant patients or those with likelihood of becoming pregnant during the protocol.
- Patients with repeated failure of therapeutic compliance.

Treatment of the patients: A) Pharmacotherapy: citalopram 20-40 mg/day, fluoxetine 20-40 mg/day, fluvoxamine 100-300 mg/day, paroxetine 20-60 mg/day, sertraline 50-200 mg/day, and up to 5 mg/day of diazepam or equivalent dose of another benzodiazepine if considered necessary and B) psychotherapy: Panic Management Program, supported by many studies.[36-38] It consists of 12 weekly sessions with the possibility of 4 additional sessions if agoraphobia persists. It includes psychoeducation, progressive muscular relaxation technique, cognitive component and behavioral component.

Evaluation instruments: To confirm the psychiatric diagnosis, the structured diagnostic interview Mini International Neuropsychiatric Interview (MINI)[39] was used. The severity of the picture was evaluated with the Clinical Global Impression (CGI) scale.[40] The Millon Clinical Multiaxial Inventory or MCMI-II[41] evaluated the PTs.

Study design: An observational, retrospective naturalistic study was designed to see the relation existing between the variables of evolution at one year and the PT. The SPSS program, version 12.0, was used for the statistical analysis.

Course: We consider that those patients who obtain scores of less than 50% of those registered at the initiation of the study on the CGI scale after one year of treatment and follow-up to have a good course. Patients with poor course were those who obtained scores greater than or equal to 50% after said year.

Personality traits: The values for the items schizoid, schizotypal, paranoid, narcissist, antisocial, histrionic, borderline, phobic, compulsive and dependent of the MCMI-II, collected at the onset and end of the program were used for this variable.

Table 1 Sample characteristics

		Frequency	Percentage
Age	Mean: 34.5±10.054		
Gender	Male	24	29.3
	Female	58	70.7
Civil Status	Married/partner	45	54.9
	Single	31	37.8
	Divorced	5	6.1
	Widow(er)	1	1.2
Studies	Basic	28	34.1
	Middle	37	45.1
	Upper	17	20.7
Occupation	Working	57	69.5
	Housework	11	13.4
	Unemployed	3	3.7
	Retired	3	3.7
	Student	8	9.8
Social Class	Professional Managers	20	24.4
	Wage earners	47	57.3
	Workers	15	18.3
Psychiatric Family backgrounds	Absent	45	54.8
	Present	37	45.2
Personal backgrounds (vital pathology)	Absent	76	92.6
	Present	6	7.3
Alcohol	0-60 g/week	70	85.5
	61-120 g/week	7	8.5
	121-180 g/week	3	3.6
	180-240 g/week	2	2.4
Smoking habit	0-10 /day	62	75.6
	10-20 /day	17	20.4
	>20 /day	3	3.6
Drugs	No drugs	80	97.6
	Sporadic	1	1.2
	Habitual	1	1.2
Precipitators of the episode	Absence	43	52.4
	Presence	27	32.9
	Cannot specify	12	14.7
First symptom of the panic episode	Cannot specify	1	1.2
	Palpitations	7	8.5
	Sweating	1	1.2
	Suffocation	22	26.8
	Choking	2	2.4
	Chest tightness	6	7.3
	Nausea	7	8.5
	Dizziness	15	18.3
	Derealization	4	4.9
	Depersonalization	2	2.4
	Loss of control	1	1.2
	Numbing	4	4.9

RESULTS

Of the 256 patients enrolled in the Program, 92 were initially excluded because they had exclusion criteria in the first evaluation, 85 because they did not meet the study criteria and 6 because they were discharged due to remission before one year so that the data required were not available. Finally, 82 patients remained in the study.

Characteristics of the sample: The sociodemographic and clinical characteristics of the sample are collected in table 1. The following comorbid psychiatric pathologies were found: specific phobia (24.1%), major depressive disorder (15.7%), generalized anxiety (8.4%), eating disorders (6.3%), obsessive-compulsive disorder (1.2%, social phobia (1.2%) and psychosis (1.2%). Of these, 65.1% evolved with agoraphobia at the onset (evaluated with the MINI) (Table 1).

Characteristics of the variables: The mean score of the CGI scale at onset was 4.33±0.98 points (max=7; min=3) and at one year of follow-up was 1.65±0.93 (max=4; min=1). Mean percentage of improvement was 60.04 % (95% CI±25.15; max=100%; min=-66.67%). Regarding the PT, net scores both at the onset of the study and at one year were less than 75 in all the items. They were distributed normally in our sample ($p<0.05$ with the Student's T score).

Relation between variables: Pearson's index showed a weak direct relation (<50%) between severity at onset according to the CGI and higher scores in the following personality traits - schizoid, histrionic, narcissist, antisocial, compulsive and paranoid. No significant relation $p=0.05$ was found for Schizotypal, phobic and borderline (however, there was a weak direct relation with $p=0.01$) and there is an inverse weak relation with the dependent. A weak direct relation (=0.211±0.06) was also found between the presence of agoraphobia and initial severity. However, the linear regression analyses did not show a relation with good or bad evolution. The distribution of the direct scores of the PTs at the onset is equal among the patients with good and bad evolution of PT (Mann-Whitney U test with 95% CI show values of $p>0.05$). The Student's T test for paired data indicates differences between the means of the initial scores and at one year of schizoid ($p=0.008$), schizotypal ($p=0.018$), borderline ($p=0.000$), phobic ($p=0.007$) and dependent ($p=0.000$) personality traits. However, the linear regression analyses do not show a relationship with evolution ($p>0.05$), following verification of the equality of variances with the Levene test ($p>0.05$). Said analyses also do not show a relation between the initial and final scores of the PT, measured independently, and the good or bad evolution of PD.

CONCLUSIONS

Standing out as principal limitations of the study are: A) Evaluation of personality in this disorder, above all at the onset, may be affected by the symptoms and complications of the PD, aspects that are not considered in this study. B) Our sample is clinical, with the screening bias entailed in this. A community sample would be preferable. C) The study design is retrospective and relational, with its consequent biases, so that it is difficult to establish causal relations.

Up to date, personality traits and their influence on panic disorder continue to be an object of study.[42] The first controversy arose when the PTs were measured with the MCMI-II, which is classically used to evaluate pathological personality. In order to consider it as pathological, the trait measured must obtain a net score greater than 75, this even being 85 according to some authors.[41,43,44] As this did not occur in our sample, we consider the traits to be more or less exacerbated, but normal.

In our sample, we found significant standardization of schizoid, schizoid, schizotypal, borderline, phobic and dependent PT after one year of evolution of the PD. Marchessi et al.[45] and Hoffart et al.[46] also defend the paranoid, dependent and avoidance PTs decrease in intensity after correct pharmacological treatment of PD. The same does not occur with borderline PT, whose presence at the onset may worsen response to pharmacological treatment. However, with correct psychotherapeutic approach to the panic disorder, it is possible to obtain the same remission rates as in other patients.[47] This indicates that borderline PT may affect the pharmacological response, but not the course of the PD, which also occurs in our sample.

There is a relation between initial severity of PD and a stronger presence of PT of the clusters A and B and of phobic and compulsive of cluster C. Bienvenu et al., on the contrary, showed that only the PTs related with dependence may be risk factors to suffer PD with and without agoraphobia and that their presence may be explained with low levels of extraversion. However, they point out the need for more studies that approach the relation of PD and PT, including etiopathogenic association, evolution, approach and prevention.[48-50]

Carrera et at., using the NEO Five-Factor Inventory (NEO-FFI), concluded that there are no personality traits that are related with short-term evolution of PD.[51] Already in 1990, J. Reich[52] concluded that there was no relation between paranoid and borderline PT and the global evolution of PD. Our results speak about the absence of long-term relation, providing new data in this regards.

Kipper et al. showed that there is a decrease in the MMPI scores (Minnesota Multiphasic Personality Inventory) at 16 weeks of treatment with sertraline in a sample of patients with PD. They formulated new hypotheses on the relation between PT and anxiety.[53] If we keep this in mind, it can be deduced that there is no relation between the traits analyzed and evolution of PD, as also occurs in our study. Võhma et al. reached the same conclusion, using the SSP (Swedish Universities Scales of Personality).[54]

Therefore, having more pronounced PTs does not affect the potential evolution of PD. As a result of this, we cannot use them as predictors. Regarding their clinical application, we can conclude that when PDs are correctly and comprehensively treated, evolution can be good independently of the character traits of the patients, at least

in some early phases and that in the beginning, specific programs do not need to be designed for certain subtypes of patients.

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