Alexithymia, suicide risk and serum lipid levels among adult outpatients with panic disorder

Domenico De Berardis[a,b,*], Daniela Campanella[b], Nicola Serroni[b],
Francesco Saverio Moschetta[b], Fabiola Di Emidio[b], Chiara Conti[a],
Alessandro Carano[a], Tiziano Acciavatti[a], Giuseppe Di Iorio[a], Giovanni Martinotti[c],
Alberto Siracusano[d], Massimo Di Giannantonio[a]

[a]Department of Neurosciences and Imaging, Chair of Psychiatry, University "G. D'Annunzio" of Chieti, Italy
[b]NHS, Department of Mental Health, Psychiatric Service of Diagnosis and Treatment, Hospital "G. Mazzini" Teramo, Italy
[c]Department of Psychiatry, Catholic University Medical School, Rome, Italy
[d]Department of Neurosciences, University of Rome Tor Vergata, Rome, Italy

Abstract

To elucidate the relationships between alexithymia, suicide ideation and serum lipid levels in drug-naïve adult outpatients with a DSM-IV diagnosis of Panic Disorder (PD), 72 patients were evaluated. Measures were the Panic Attack and Anticipatory Anxiety Scale, the Toronto Alexithymia Scale (TAS-20), the Scale of Suicide Ideation (SSI) and the Montgomery Åsberg Depression Rating Scale (MADRS). Alexithymic patients showed higher scores on all rating scales and altered serum lipid levels than non-alexithymics. In the hierarchical regression model, the presence of lower HDL-C and higher VLDL-C levels and Difficulty in Identifying Feelings dimension of TAS-20 were associated with higher suicide ideation. In conclusion, alexithymic individuals with PD may show a cholesterol dysregulation that may be linked to suicide ideation. The authors discuss study limitations and future research needs.
© 2013 Elsevier Inc. All rights reserved.

1. Introduction

Alexithymia is characterized by difficulties in recognizing and verbalizing feelings, a paucity of fantasy life, concrete speech, and thought closely tied to external events [1]. Alexithymic individuals also suffer from affective dysregulation, the inability to self soothe and manage emotions because of a lack of emotional awareness [2]. Alexithymia may be present in 30% to 45% of patients with Panic Disorder (PD) [3–6].

Even if anxiety disorders are associated with suicide attempts and intent to die, with the greater risk for generalized anxiety disorder and social phobia [7], it is debated whether patients with PD may be at risk for suicidal behavior [8,9]. Although some researchers found a somewhat higher risk [10–12], others found the risk mainly accounted for by comorbid disorders [13]. In fact, affective disorders, substance abuse, eating disorders and personality disorders were found as risk factors for suicide in PD patients [14]. However, it has been demonstrated that the presence of alexithymia may increase suicide risk in individuals with PD and without comorbid disorders [4,15]. Moreover, several studies have shown that alexithymic features may be positively associated with a history of attempted suicide and increased suicide risk even in the absence of depressive symptoms [16–19].

The role of serum lipid levels in neuropsychiatric disorders has been widely investigated [20–23]. There are some data that suggest that serum lipid composition may be altered in PD patients than normal controls [24–27], but, to date, findings are somewhat inconsistent. Moreover, it has been reported that serum lipid levels may be somewhat related to suicidal ideation and external-cause mortality [23,28–31]

and this may be particularly true for low serum cholesterol levels [32].

However, to date, the interrelationships between alexithymia, suicide ideation and serum lipid profile in PD patients have not yet been studied. Moreover, evaluating PD patients with a relatively long history of illness may lead to potential biases because of current or previous pharmacological or psychotherapeutic treatments that may, on their own, influence alexithymia and serum lipid levels. Therefore, in the present exploratory study, we evaluated only drug naïve patients with PD at first treatment search. Specifically, the aims of this study were to: 1) evaluate possible clinical and laboratory differences between patients positive or not for alexithymia, and 2) investigate which clinical and laboratory variables were associated with suicide ideation using a blockwise linear regression analysis.

2. Methods

2.1. Participants

From December 2010 to July 2011, consecutive patients between 18 and 30 years with a diagnosis of PD according to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, at first treatment contact who had never received pharmacological or psychotherapeutic treatment were considered eligible for this study. Diagnoses were made by clinical assessment following the Structured Clinical Interviews for DSM-IV Axis I Disorders (SCID-I) [33].

Exclusion criteria included: any concomitant axis I disorder, organic mental disorders, mental retardation, pregnant or nursing women, known familial hypercholesterolemia and obesity. Subjects with diabetes, other endocrine disorders, hypertension, liver dysfunction or other conditions necessitating any chronic pharmacotherapy were excluded. Patients who received medication for cholesterol dysregulation in the last 6 months and those whose body mass changed substantially within the last 4 weeks prior to screening were also excluded from the study. Subjects with an IQ ≤ 70 as measured by the Wechsler Adult Intelligence Scale—Revised (WAIS-R) [34] were excluded from the study in order to avoid potential biases in interpreting results of the TAS-20. Past or current substance abuse was also considered as an exclusion criterion.

A total of 79 patients were considered eligible for the study. Five patients (6.3%) refused to participate and 2 patients (2.5%) provided incomplete tests and, therefore, were excluded. We recruited 72 never-medicated, drug-naïve adult outpatients with a diagnosis of PD at the Mental Health Center of University of Chieti.

The study was approved by the local ethical committee of the University of Chieti. Each patient had to understand the nature of the study and signed an informed consent document prior to laboratory testing and psychiatric evaluation.

2.2. Assessment

The Panic Attack and Anticipatory Anxiety Scale (PAAAS) [35], a clinician-rated scale, was used as the instrument of evaluation of PD severity, taking into consideration, specifically, the total number of major and minor panic attacks during the last week and the intensity of the anticipatory anxiety (evaluated on an analog scale without an anchor point, where 0: Absent and 10: Maximum intensity).

Alexithymia was evaluated by the Italian version of the 20-item Toronto Alexithymia Scale (TAS-20) [36]. A score of 61 or higher was considered indicative of alexithymia as stated by Taylor et al. [1]. The TAS-20 has a three-factor structure: Factor l assesses the capacity to identify feelings and to distinguish between the feelings and bodily sensations of emotional arousal (Difficulty in Identifying Feelings [DIF]); Factor 2 reflects the inability to communicate feelings to other people (Difficulty in Describing Feelings [DDF]); Factor 3 assesses Externally-Oriented Thinking (EOT). In our sample, the Cronbach's α for TAS-20 was 0.88.

To assess suicide ideation, the Scale of Suicide Ideation (SSI) scores [37], a 3 point clinician-rated scale with statements of suicidal intentions, were evaluated. In our sample, the inter-rater reliability was 0.89 (p < 0.001).

The Montgomery Åsberg Depression Rating Scale (MADRS) was used to evaluate depressive symptoms in PD patients [38]. In our sample, the inter-rater reliability was 0.92 and the mean score was 6.8 (2.5).

All rating scales were administered by psychiatrists with at least 5 years' clinical experience who were supervised by senior psychiatrists (NS, FSM, MDG).

Weight was measured (in light indoor clothing with shoes removed) using a balance beam scale, and height was measured using a stadiometer. Weight and height were used to calculate Body Mass Index (BMI) expressed as kg/m^2.

For all subjects the following determinations were performed: high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), total cholesterol (TC), triglyceridaemia (TG) and very-low-density lipoprotein cholesterol (VLDL-C). The ratios of TC/HDL-C and LDL-C/HDL-C were also evaluated. Serum lipid concentrations were determined by enzymatic methods with an Abbott ABA-100 Biochromatic analyzer (USA). Cholesterol and serum triglycerides were also measured using enzymatic methods (cholesterol: Boehringer Mannheim, Germany; serum triglycerides: Abbott). Serum HDL cholesterol was measured after phosphotungstic acid/$MgCl_2$ precipitation. Blood samples were taken between 7:00 and 8:30 a.m. after the patients had fasted for at least 10 h and after a psychiatric evaluation.

2.3. Statistics

Descriptive statistics and percentages for the study sample were computed on demographic variables and all