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Research report

Affective temperament, history of suicide attempt and family history of suicide in general practice patients

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ABSTRACT

Background: Untreated major affective disorders are strongly associated with suicidal behaviour; however, clinical, psychological and psycho-social risk factors also play a contributory role. Personal history and family history of suicide are also important predictors of suicidal behaviours, and are also a powerful marker of current major depressive episode in general practice patients. Affective temperaments, which can be considered the subaffective manifestations of major mood disorders also show a specific pattern of association with suicidal behaviour. In the present study our aim was to investigate the association between affective temperaments, personal history of suicide attempts and family history of completed suicide in primary practice patients.

Methods: Five hundred and nine patients from 6 primary care practices completed the TEMPS-A, and were assessed concerning self-reported history of personal or family suicide.

Results: We found that among those answering questions concerning suicide, 9.1% reported a family history of suicide in first and second degree relatives and 4.8% had at least one prior suicide attempt. Among those giving a positive answer to both questions, those who had a positive family history had significantly more frequent suicide attempts (15.4% vs. 4.0%). Patients with prior suicide attempts had a significantly higher score on the cyclothymic and depressive, and those with positive family history of suicide had on cyclothymic and anxious subscales.

Limitations: In the present study, personal and family history of suicide was assessed retrospectively and in a self-report way. The cross-sectional nature of this study and the facts that no current psychiatric morbidity has been investigated and only the documented history of depressive and anxiety disorders have been detected limit the generalisability of this study.

Discussion: We found a significant relationship between depressive and cyclothymic affective temperament and personal history of suicide attempts, and between cyclothymic and anxious temperament and family history of completed suicide in first and second degree relatives. This is in line with previous findings showing a strong relationship between these affective temperaments and major mood episodes and that these temperaments are overrepresented among suicide attempters. Our findings also suggest that the presence of cyclothymic (and to lesser extent depressive) affective temperament in a patient with family history of completed suicide indicates a very high risk of suicidal behaviour.

1. Introduction

Untreated unipolar or bipolar major depressive episode is the main clinical substrate of completed suicide, accounting for 56–87% of the cases (Hawton and van Heeringen, 2009; Rihmer, 2007). However, as the majority of depressed patients never complete suicide and about half of them never attempt it, special clinical, psychological and psycho-social risk factors also play a significant contributory role (Hawton and van Heeringen, 2009; Rihmer, 2007). As for psychological characteristics, it is well known for many decades that suicidality is also associated with certain personality features, such as aggressive/impulsive traits, hopelessness and pessimism, and the risk increases if these traits

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are present in combination (MacKinnon et al., 2005; Mann et al., 1999; Oquendo et al., 2004; Swann et al., 2007). Suicidal behaviour was also associated with aggressive traits in case of unipolar depression and bipolar disorder (Grunebaum et al., 2006).

Only in the last decade did it become evident that affective temperaments, known to be trait-related, subclinical manifestations and precursors of unipolar and bipolar major mood disorders (Akiskal et al., 2003), are also predisposing (risk) factors for suicidal behaviour (Kochman et al., 2005; Pompili et al., 2008b). Classically, temperament carries the temporally stable biological "core" of personality and plays a role in establishing an individual's activity level, rhythms, moods and related cognitions as well as their variability while personality, a broader phenotype, also refers to acquired characterologic determinants and interpersonal operations (Akiskal et al., 1983; Bouchard, 1994; Rihmer et al., 2010a). Premorbid affective temperament-types have an important role in the clinical evolution of minor and major mood episodes including the direction of polarity and the symptom-formation of acute mood episodes. They can also significantly affect the long-term course and outcome including suicidality and other forms of self-destructive behaviours (Akiskal et al., 2005; Rihmer et al., 2010b). Most recent studies have found that in contrast to hyperthymic temperament, which seems to be a protective factor against suicidal behaviour (Pompili et al., 2012, 2008b; Rihmer et al., 2009a; Vazquez et al., 2010) cyclothymic, irritable, depressive and anxious affective temperaments were significantly overrepresented in suicide attempters (Pompili et al., 2008b; Rihmer et al., 2009a). On the other hand, it has been reported that bipolar I, bipolar II and unipolar major depressive disorder patients with cyclothymic temperament have significantly higher rate of prior suicide attempt and lifetime/current suicidal ideation than non-cyclothymic patients (Akiskal et al., 2003; Azorin et al., 2009; Mechri et al., 2011; Young et al., 1994/1995). In addition, cyclothymic-hypersensitive temperament significantly predicted future bipolar transformation and suicide attempts in juvenile depressives (Kochman et al., 2005). A most recent study on 1381 healthy college students have shown that lifetime suicidal ideation (12.5% of the whole sample) was associated with anxious, depressive and cyclothymic temperament in both sexes and the irritable temperament in males (Skala et al., 2012).

Previously we have found that family history of suicide in first and second degree relatives was a powerful marker of current major depressive episode in general practice patients (Torzsa et al., 2009). The aim of the present study was to investigate the relationship between affective temperaments and personal history of suicide attempts as well as family history of completed suicide in primary care practice patients.

2. Patients and methods

2.1. Patients

The study was conducted in 6 Hungarian primary care practices for the adult population of Hungary (4 practices in Budapest, 2 practices in countryside) between February and May of 2011. The selected 6 general practitioners (GPs) practice for the principal primary care of 1500–2500 registered adult inhabitants among whom the monthly turnover is 700–900 patients. According to the Hungarian health-care system, the selected six general practitioners practice in single-handed surgeries with an average of 1500-2000 registered patients among whom the monthly turnover is 700-900 patients. Altogether 509 consecutively investigated chronically ill patients were collected from primary care practices. Patients visited their GP's office for their regular check-up. They were approached by their treating doctors to participate in the study voluntarily and ensured about non-discrimination regardless of their decision. Documented medical disorders, diagnosed by GPs or other specialists, and documented history of ICD-10 depressive and anxiety disorders, diagnosed by psychiatrists' were considered. Questions about their personal history of suicide attempt, and family history of completed suicide in first and second degree relatives were administered by the GP alongside the Temperament Evaluation of Memphis, Pisa, Paris & San Diego Autoquestionnaire (TEMPS-A) (Akiskal et al., 2005). Prior to involvement all participating patients gave written informed consent to the participation. The study has been approved by the competent local ethical committee and was carried out in accordance with the tenets of the Declaration of Helsinki.

2.2. Measures

The self-reported version of the Temperament Evaluation of Memphis, Pisa, Paris and San Diego-questionnaire (TEMPS-A) is a 110-item instrument to measure affective temperaments on a depressive, cyclothymic, hyperthymic, irritable and anxious subscale, requiring "yes" (score 1) or "no" (score 0) answers (Akiskal et al., 2005). To date, it has been translated into 30 languages and validated in more than 12, including Hungarian (Akiskal et al., 2005; Rozsa et al., 2008). It contains 21 questions for depressive, cyclothymic, hyperthymic and irritable (20 for men) subscales respectively and 26 for anxious temperament. TEMPS-A is used to assess the point scores of each subscale and also to measure the dominant form of affective temperaments by taking the mean of the subscale and adding up two standard deviations to it. Those reaching the mean+2SD on the subscale or score higher have been declared as having dominant affective temperament (score 1) on that subscale, while those below this level score 0. The internal consistency and concurrent validity of the Hungarian version of TEMPS-A were previously investigated against the Beck Depression Inventory (BDI), Temperament and Character Inventory (TCI) and the NEO Personality Inventory-Revised (NEO-PI-R) in a normative sample of Hungarian healthy persons. Like other language versions, the factorial structure of the Hungarian version of TEMPS-A showed good reliability and internal consistency (Rozsa et al., 2008).

2.3. Statistical analysis

The association between affective temperament scores and binomial variables was assessed using Mann–Whitney U test, while in case of dominant affective temperaments (mean+2SD) χ^2 test or Fisher's exact test was used. Statistical analysis was carried out using SPSS version 20.0.

3. Results

We have data on 509 patients: 195 males (38%) and 314 females (62%). Mean age was 53.9 year ($\pm$14.5, range 20–90 years). Seventy-three patients (14%) had a documented history of some kind of ICD-10 depressive and 56 (11%) had of documented history of any ICD-10 anxiety disorders. The most frequent diagnoses of documented medical disorders were primary hypertension (n=392), Type-2 diabetes mellitus (n=147), musculoskeletal disorders (n=126), gastrointestinal diseases (n=95), cardiovascular diseases (n=75) and peripheral artery disease (n=71).

Table 1 shows TEMPS-A scores and the rates of dominant affective temperaments according to the 5 subscales. Females scored significantly higher on the depressive subscale and males on the