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Personality disorders and somatization in functional and organic movement disorders

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ABSTRACT

Psychiatric disturbances and somatizations are both criteria which support the diagnosis of functional movement disorders. It is unclear, however, whether these factors are helpful in differentiating functional and organic movement disorders. To address this issue, the Structured Clinical Interview for DSM-IV Axis I and II psychiatric disorders, the State-Trait Anxiety Inventory, the Beck Depression Inventory and the "somatization section" of the Dissociative Disorders Interview Schedule were administered to 31 functional movement disorder patients diagnosed, according to Fahn and Williams criteria and 31 sex- and age-matched control outpatients, with adult-onset dystonia. Axis I psychiatric diagnoses were similarly frequent in patients with functional and organic movement disorders. There was a trend to a greater frequency of personality disorders overall; when looking at individual personality disorders, there was no significant between-group difference. Depression and anxiety scores and mean number of somatizations per patient were also greater in the functional group. The number of somatic complaints significantly correlated with depression and anxiety scores. However, the presence of these disturbances in a proportion of patients with organic dystonia indicates that personality disorders and somatizations do not aid in distinguishing functional and organic movement disorders.

1. Introduction

Functional movement disorders (FMD) are abnormal movements that do not result from a known medical or neurological origin and are consistently altered by distraction or non-physiological manoeuvres (including dramatic placebo response) (Hallett, 2006; Morgante et al., 2013; Edwards and Bhatia, 2012; Fahn and Williams, 1988). The frequency of FMD in the general population is unknown, but the condition may affect 2–20% of patients in movement disorder clinics (Factor et al., 1995). Therefore, FMD may be a relevant confounding factor in the diagnostic approach to organic movement disorders (OMD).

Clinical features thought to be highly suggestive of FMD include incongruency/inconsistency of the movement symptom and suggestibility (Fahn and Williams, 1988). Traditionally, clues like psychiatric disturbances and somatizations (the tendency to experience and communicate somatic distress in response to psychosocial stress and to seek medical help for it) (Lipowski, 1988) are considered to be supportive criteria contributing to the degree of certainty of FMD diagnosis (Fahn and Williams, 1988). A recent controlled study (Kranick et al., 2011), however, showed that several FMD patients may have no obvious psychiatric disturbances, and suggested that the association of FMD with psychological issues may be less prominent than previously thought (Williams et al., 1995; Stone and Edwards, 2011). However, this study lacked information with regards to personality disorders and somatizations. Gupta and Lang also questioned the diagnostic role of somatizations (Gupta and Lang, 2009), but they did not provide any experimental data to support such a view.

In this paper, whether or not psychiatric disturbances may be helpful in differentiating functional and organic movement disorders, was evaluated. To this aim, we compared categorical diagnoses from the Structured Clinical Interview for DSM-IV Axis I and II psychiatric disorders (SCID-I and SCID-II) (Lobbestael et al., 2011), anxiety and depression scores from the State-Trait Anxiety Inventory and the Beck Depression Inventory, and the frequency of somatizations in FMD patients with chronic symptoms and in those with an organic movement disorder, namely idiopathic adult-onset dystonia.

2. Patients and methods

Study subjects were selected among outpatients attending our

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movement disorder clinic over an eight–month period. Thirty-one consecutive patients with FMD diagnosed by at least two neurologists (GD and RP) participated in the study. In order to be admitted into the study, patients had to be at least 18 years of age or older and could not have any other neurological or medical illnesses. According to Fahn and Williams criteria (1988), patients were diagnosed with documented FMD (n. 1), clinically established FMD (n. 17), or clinically probable FMD (n. 13). As said by Gupta and Lang clinical criteria (Gupta and Lang, 2009), all patients were diagnosed with clinically definite FMD. In the FMD group, many patients had more than one movement symptom. The most predominant movement symptoms were tremor in 8 patients, dystonia in 8 patients, and gait disturbance in 15 patients.

FMD patients were compared with 31 sex- and age-matched (± 5 years) control outpatients suffering from adult-onset focal/segmental dystonia (with or without dystonic tremor and/or tremor associated with dystonia) diagnosed according to published criteria (Albanese et al., 2013). A standardized spreadsheet was used to collect data on age, sex, years of schooling, age of movement disorder onset, and duration of disease. A psychiatric assessment was performed by the SCID I and SCID II (Lobbestael et al., 2011) and by the psychometric scales State-Trait Anxiety Inventory (STAI), form Y-1 and Y-2, and Beck Depression Inventory (BDI). The "somatization section" of the Dissociative Disorders Interview Schedule (DDIS) (Ross et al., 1989) was used to assess lifetime somatizations. The interview contained a total of 39 questions on neurological complaints (headache, dizziness, deafness, double vision, blurred vision, blindness, difficulty of swallowing, loss of voice, paralysis or muscle weakness, fainting or loss of consciousness, amnesia, seizure or convulsion, trouble of walking), gastrointestinal complaints (abdominal pain, nausea, vomiting, bloating, diarrhoea, intolerance of several different foods), cardiopulmonary complaints (shortness of breath when not exerting oneself, palpitations, chest pain), pain in different parts of the body (back pain, joint pain, pain in the extremities, pain in genitals, pain during urination, and other pain other than headache) and sexual complaints (urinary retention or difficulty urinating, long-periods with a loss of libido, pain during intercourse). The aforementioned conditions were considered as somatizations only when patients provided medical records which proved that the complaints could not be attributed to any medical cause. The number of somatizations reported in each domain was calculated. The rater (GP) was unaware of both the case/control status and the study hypotheses. The study was approved by the local ethics committee and written informed consent was obtained by participating patients.

Data were analyzed by Stata 11 package. Unless specified otherwise, data were expressed as mean ± SD. Differences between the groups were examined using *t*-test and chi-square test or Fisher's test as appropriate. Logistic regression models were used to estimate the relationship of personality disorders to case/control status and to assess the effect of potentially confounding variables. Odds ratio (OR), 95% confidence interval (CI) and p values were computed. A correlation analysis was performed by computing Spearman coefficients. P values < 0.05 indicated statistical significance.

3. Results

FMD and OMD groups were comparable for sex (13 men and 18 women in each group), education (9.9 ± 3.4 vs. 9.7 ± 3 years, $p = 0.4$), age (48.3 ± 15 vs. 52.2 ± 8 years, $p = 0.1$), age of disease onset (42.5 ± 17 0.2 vs. 46.2 ± 10, $p = 0.2$) and disease duration (6 ± 8 vs. 6.2 ± 8, $p = 0.5$). The two groups were also similar for frequency of patients with movement symptoms affecting more than one body part (12/31 vs. 15/31, $p = 0.4$).

A psychiatric diagnosis was obtained in more than two-thirds of FMD and OMD patients (24/31 vs. 22/31, $p = 0.2$). SCID-1 categorical psychiatric diagnoses were similarly distributed in FMD and OMD patients (Table 1). There was a non significant trend to a greater frequency of personality disorders in the FMD group, but there were no significant differences observed between case and control subjects in the type of personality disorders (Table 1). FMD patients scored more severely than OMD patients on BDI (17.5 ± 13.1 vs 9.9 ± 7.4; $p = 0.03$) and STAY-2 (56.6 ± 14.1 vs 49.7 ± 10.2; $p = 0.02$), whereas the STAY-1 score (49.3 ± 9.2 vs. 47.5 ± 9.2, $p = 0.3$) did not significantly differ between the two groups.

Lifetime somatizations (including neurological, pain, gastrointestinal and sexual complaints) were reported by a similar percentage of FMD and OMD patients (29/31 vs. 27/31, $p = 0.7$). Nevertheless, the average number of somatic complaints per patient was significantly greater in the FMD group, with neurological complaints mainly contributing to the finding (Table 2). Neither FMD patients nor OMD patients reported cardiopulmonary complaints. Non-neurological complaints were more common in FMD patients, although no difference was great enough to reach a level of statistical significance (Table 2). There was no significant relationship between the type of personality disorders and the number of somatic complaints (data not shown).

In the FMD group, personality disorders did not correlate with BDI score ($r = 0.25$, $p = 0.2$), STAY2 score ($r = 0.22$, $p = 0.2$), age ($r = -0.24$, $p = 0.2$), duration of disease ($r = 0.03$, $p = 0.90$), and number of lifetime somatization ($r = -0.004$, $p = 0.98$); by contrast, the number of somatic complaints significantly correlated with BDI score ($r = 0.45$, $p = 0.01$) and STAY2 score ($r = 0.39$, $p = 0.03$), but not with age ($r = 0.17$, $p = 0.35$), and duration of disease ($r = 0.12$, $p = 0.49$).

4. Discussion

In this study, SCID-I disorders were similarly frequent in FMD and OMD patients, even though BDI score, STAY-2 score, and mean number of somatizations per patient were greater in the FMD group. There was a trend to a greater frequency of personality disorders overall in patients with FMD. When looking at individual personality disorders there was no significant between-group difference.

The lack of significant differences in the frequency of SCID I disorders in FMD and focal hand dystonia patients is consistent with the findings of a prior controlled study (Kranick et al., 2011) and with the known high rate of psychiatric comorbidities in patients with organic dystonia and other movement disorders (Fabbrini et al., 2010). Although depressive and anxiety disorders were similarly common in the two groups, depressive and anxiety scores were greater in FMD patients from the present and previous studies (Kranick et al., 2011). This, therefore, suggests that depression and anxiety, when present, tend to be more severe in FMD patients.

The lack of association between personality disorders and FMD status is consistent with the results of another study showing that FMD patients did not differ from control patients on a self-rated measure of personality pathology (van der Hoeven et al., 2015). Owing to the small size of our sample, however, the non significant difference observed in the frequency of personality disorders between FMD and OMD patients could also be the consequence of low statistical power.

The greater number of somatic complaints per patient we observed in the FMD group replicates the results of studies showing that patients with pseudoseizures experience more symptoms of somatizations than patients with epileptic seizures (Wolf et al., 2015). In addition, patients with pseudoseizures are also characterized by a comorbid link between somatization and anxiety/depression (Wolf et al., 2015). Likewise, there was a significant correlation between overall number of somatic complaints and depression/anxiety scores in our FMD group. However, it is also possible that the higher scores on the BDI/STAY-2 merely reflect the patients' somatizations rather than depression or anxiety per se.

The present study may have a number of strengths and limitations. First, diagnostic accuracy was high in the case series given that FMD patients satisfied the higher diagnostic levels from Fahn and Williams (1988) and Gupta and Lang (2009) criteria. Case series also resembled demographic and clinical features of the general population of cases