

COEXISTENT PSYCHOPATHOLOGIES IN ESSENTIAL TREMOR PATIENTS: The effect of pharmacological treatment of coexistent pathologies to tremor severity

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ABSTRACT

Objective: Psychiatric evaluation of 50 essential tremor (ET) patients was performed to determine the coexistent psychopathologies. The patients with positive psychopathologies were intended to treat by appropriate medication to demonstrate a positive effect of the treatment to tremor severity.

Methods: Symptom check list (SCL - 90R) and structural clinical interview-nonpatient (SCID-NP) were used as screening tests for psychopathologic symptoms. The patients with positive psychiatric findings according to DSM IV criteria were asked to use appropriate medication for 6 weeks in addition to their antitremor drugs. Alprazolam 0.75 mg daily was used for generalized anxiety disorder and social phobia, and sertraline 50 mg daily was given for affective disorder. Tremor severity was assessed by a standard scale before and after treatment.

Results: The results revealed the presence of anxiety disorder in 42 %, social phobia in 18 %, and affective disorder in 16 % of the patients. Administration of alprazolam to patients with anxiety disorders demonstrated a statistically significant improvement in tremor severity ($p<0.05$), however, in patients with social phobia and affective disorders no significant

improvement was observed after alprazolam or sertraline treatment, respectively.

Conclusion: Although the present study lacked a post-treatment psychiatric evaluation and had a limited study period of 6 weeks to identify the effect of present psychopathology on tremor severity, the observed frequent coexistence of psychopathologies and ET was quite remarkable. The results reinforced the positive effect of alprazolam on tremor control of ET patients with anxiety disorder. However, we could not demonstrate a significant improvement in tremor severity following treatment in ET patients having social phobia or dysthymic symptoms.

Key Words: Essential tremor, Psychopathology, Treatment, Coexistent

INTRODUCTION

Essential tremor (ET) is the most common movement disorder encountered in neurology clinics. Tremor can be affected by several factors, and it is not unusual for patients to associate the onset of tremor with a specific incident or circumstance. Furthermore, in the

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intervening years a number of specific factors like emotional stress may exacerbate ET (1). In this respect, psychiatric evaluation of ET patients might play a role in the management and follow up of these patients. The aim of this study was to screen ET patients with standard psychiatric interview and self-reported questionnaire, followed up with appropriate treatment protocols, either antidepressive or anxiolytic agents for 6 weeks, in order to clarify the coexistence of psychological pathologies and the effect of these on tremor severity.

METHODS

Fifty consecutive patients were recruited from a movement disorder outpatient clinic of a University Hospital. All patients had a diagnosis of definite or probable ET based on the Tremor Research Investigation Group Criteria (2). Thirty-eight of 50 patients were on primidone with a mean daily dose of 167.2 mg (range 62.5-375), and 12 were on propranolol with a mean daily dose of 42 mg (range 10-60). A written informed consent was obtained from all patients and the study protocol was approved by the Ethics Committee of the Medical School. As psychological instrument, SCL-90R (Symptom Check List) (3) was used as screening test for psychopathologic symptoms. Nine subscales were included in the test such as somatization, obsessive-compulsive symptoms, depression and interpersonal sensitivity. General symptom index was used to measure the severity of the symptoms. SCID-NP (Structural clinical interview- nonpatient) was used to evaluate current depressive episodes, past major depressive episodes, current and past manic episodes, current dysthymia, psychotic symptoms and disorders, psychoactive substance related disorders, general anxiety disorders (panic disorder and social phobia), obsessive-compulsive disorders and eating disorders. The patients with positive psychiatric findings according to DSM IV criteria (4) were asked to use appropriate medication for 6 weeks in addition to their antitremor drugs. Alprazolam 0.75 mg daily was used for generalized anxiety disorder and social phobia, and sertraline 50 mg daily was given for affective disorder.

Tremor severity was assessed by a scale including 4 functional items namely: writing a

sentence and drawing a spiral, each rated from 0 to 4 (0: normal, 4: unable to keep pencil on paper); feeding (0: normal, 4: needs help to feed) and social activity (0: normal, 3: severe without social activity). Patients also self-rated global improvement on a scale of 0 to 3 (0: no tremor, 3: no change). Tremor assessment was repeated at the end of the 6 week period, and pre and post-treatment tremor scores were analyzed by nonparametric Wilcoxon test.

Significant difference between groups was assumed at an $\alpha = 0.05$.

RESULTS

There were 32 men and 18 women with a mean age of 52.2 (18-75), and with a mean disease duration of 6.2 (3-25) years. All patients had hand tremor, 5 with additional head tremor and 3 with voice tremor. No dropout was recorded during the study period, and the medications were well-tolerated without any significant side effect.

During interviews, 11 of 50 patients (23%) reported a visit to a psychiatrist, and 19 of these (38%) had experienced major depressive episodes in the past. Anxiety disorder was found in 21 patients (42%), and at the end of alprazolam therapy lasting 6 weeks, a significant 29.2% ($p < 0.05$) improvement was observed in tremor severity. (Fig. 1).

Affective symptoms reported by the patients did not reach the threshold of a major depressive episode at the end of psychiatric assessment, and the degree of symptoms was best titled into a borderline condition. This condition is described as a chronically depressed mood that lasts for most of the day over a period of for at least 2 years, and is categorized as dysthymia (4). Six of 50 patients (16%) were evaluated as dysthymic. Sertraline therapy lasting 6 weeks did not cause a significant change in tremor scores ($p = 0.078$) (Fig. 1).

Social phobia was diagnosed in 9 cases (18%), and alprazolam produced a 9.1% reduction in tremor scores, although the difference fell just short of statistical significance ($p = 0.069$) (Fig. 1).

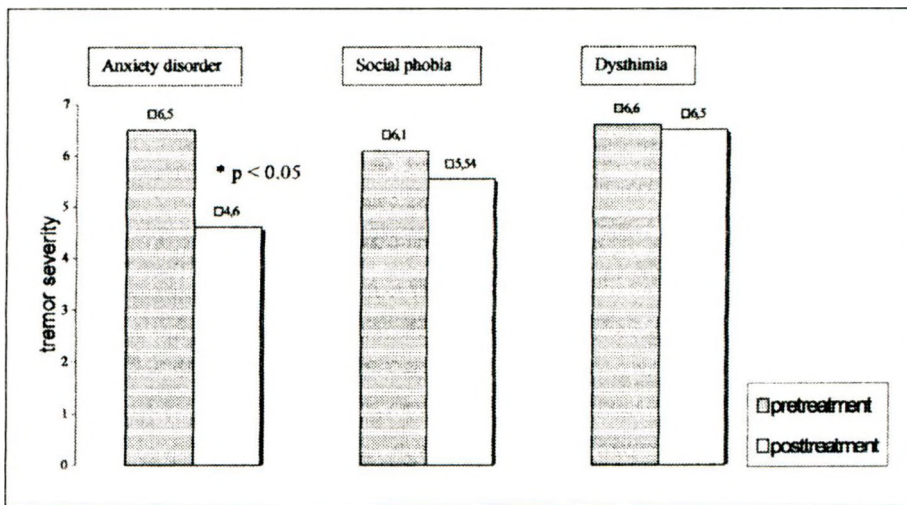


Fig. 1:
The effect of psychopathology-related medication on the tremor severity. Medications: alprazolam for anxiety disorders and social phobia, sertraline for dysthymia.

DISCUSSION

The present study discloses the presence of a psychopathology such as anxiety, social phobia and depression, in thirty-six of 50 (76 %) ET patients. Anxiety was present in 42 %, dysthymia in 16 %, and social phobia in 18 % of the patients. None of the patients reported any form of substance abuse or dependency despite the high percentage of generalized anxiety disorder and social phobia. This might be due to the cultural non-acceptance of alcohol or any other substance although the therapeutic effect of alcohol on ET was known by most of the patients (5,6).

The psychiatric evaluation of patients was quite frequently pathologic, however there was not enough data to estimate if these pathologies were secondary to their tremor. Anxiety disorder was the most common amongst those, and the combination of an anxiolytic agent with anti-tremor medication resulted in 29.2 % improvement in tremor severity. The effectiveness of alprazolam on ET has been shown in two double blind, placebo-controlled studies (7,8). Likewise, the present study reinforced the positive effect of alprazolam on tremor control of ET patients with anxiety disorder. Although the mechanism of the action of alprazolam anti-tremor effect is still not clear, its well recognized anxiolytic effect seems to be the most likely explanation.

Several recent surveys have documented the high prevalence of social phobia as symptom

secondary to ET (9,10). Pharmacological intervention of social phobia showed a tendency to decrease tremor severity (9.1 % reduction in tremor scores) in our patients, without reaching statistical significance. Furthermore, as the psychological evaluation was not repeated at the end of the six weeks, we cannot ascertain whether social phobia was treated properly in all patients. Moreover, additional behavioral approaches should have been applied together with alprazolam to determine, more reliably, the potential role of social phobia on ET.

The clinical reports of affective spectrum was one of the most challenging parts of the psychiatric assessment in the present study. Dysthymia was found in 16 % of the patients and sertraline, a serotonin reuptake inhibitor, was used for the treatment. Tremor scores of the patients did not show significant improvement after sertraline treatment, however, whether this is due to absence of relation between dysthymia, and tremor severity or if the antidepressant therapy was ineffective cannot be ascertained.

Other movement disorders, such as essential blepharospasm and hemifacial spasm, rather than ET, were studied for the presence of psychopathologic symptoms by Scheidt et al (11). Their results indicated that severe psychopathologic symptoms were not a prominent feature of these diseases, but they found increased phobic anxiety to be probably a consequence of neurological disability. In contrast, the coexistence of ET, and psychopathologies has not been studied

extensively. The present study revealed the existence of anxiety disorders, social phobia and affective disorders coexistent with ET. Whether the psychopathologies are illness-related, and secondary or pathologic personality traits cause ET is a challenging issue.

Either secondary to the disease itself or primary, psychopathologies in ET patients can be encountered as a whole, and appropriate medication can be applied to treat these symptoms. Although treatment of anxiety was demonstrated to improve tremor severity in the present study, no significant difference on tremor could be demonstrated in patients with dysthymia and social phobia after administration of treatment protocol. With limitations such as lack of post-treatment psychiatric evaluation and a rather brief study period, we might only remark on the quite common coexistence of some psychopathologies and ET. Randomized, controlled studies are needed to estimate the effect of underlying psychopathologies on tremor severity.

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