ORIGINAL ARTICLE

The Efficacy of Antidepressants in Post-stroke Depression

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Abstract. The aim of the present study was to confirm the efficacy of antidepressants in post-stroke depression and to identify the factors related to outcome. Subjects consisted of 20 inpatients suffering from post-stroke in a rehabilitation hospital. The subjects were treated with various antidepressants, mainly imipramine, amitriptyline, and amoxapine. After 4 weeks of treatment, 13 showed some improvement; significant improvement in 5, moderate improvement in 5, mild improvement in 3 by a clinical global impression. Whereas all the patients aged less than 65 yr were responders, only 3 of the 10 patients over 65 yr were responders. All of the male patients, but only half of the female patients, were responders. With regards to the presence of a spouse, 13 of the 16 patients with a spouse, but none of 4 patients without, showed a response. No significant correlation was found between the occurrence of each depressive symptom and outcome. Thus, the responders were younger and had better social support in comparison with the non-responders. This result implies that antidepressants are effective for post-stroke depression. (Keio J Med 46 (1): 25–26, March 1997)

Key words: antidepressant, depression, stroke, post-stroke depression, rehabilitation

Introduction

Although post-stroke depression is reported to be not uncommon, it is generally underestimated and untreated.1,2 When patients with post-stroke depression are not sufficiently treated and remain depressed, their rehabilitation may not be very effective through lack of motivation.3 Although reports on the use of antidepressants in post-stroke depression are very limited, some investigators have shown that antidepressants are effective in this situation.

The present study was done to investigate the efficacy of antidepressants in post-stroke depression and to identify some of the factors related to outcome.

Subjects and Methods

The subjects comprised 20 post-stroke patients who admitted in a rehabilitation hospital for rehabilitation. They were 6 males and 14 females, aged between 39 and 83 years (mean = 65.3 years). All the patients fulfilled the diagnostic criteria for major depression (DSM III R).4 Two of the patients had had previous episodes of depression. Sixteen patients lived with their spouses. Seven and 13 were diagnosed as suffering from brain infarction and brain hemorrhage, respectively. The localization of brain lesions were as follows; 8 were right sided, 7 were left sided, and 5 were bilateral. The length of post-stroke state ranged from one month to 3 years; 9 cases were below 6 months and 11 cases were over 6 months. The subjects were divided into two groups in terms of the level of activity of daily life; those who needed care for almost every activity of daily life were defined as being severely disabled (12 cases) and the rest of subjects as being mildly disabled (8 cases).

None of the patients was receiving medication for depression at the time of admission. All the patients were given various antidepressants, mainly imipramine, amitriptyline, and amoxapine. The level of improvement was assessed by a global clinical impression in terms of the change of depressive state: significant improvement, moderate improvement, mild improvement, no change, and deterioration. Since this study was done by a retrospective design using a chart review method, standardized scales were not used to assess the change of mental state. Informed consent was obtained from all the subjects.
Results

After 4 weeks of antidepressant treatment, 13 patients showed some improvement; significant improvement in 5, moderate improvement in 5, mild improvement in 3 by a global clinical impression. Whereas all 10 of the patients aged less than 65 yr were responders, only 3 of the 10 patients over 65 yr were responders (p < 0.001, Fisher's Exact Test). Moreover, all of the male patients, but only half of the female patients, were responders (p < 0.05). With regards to the presence of a spouse, 13 of the 16 patients with a spouse, but none of 4 patients without, showed a response (p < 0.01). No significant correlation was found between the occurrence of each depressive symptom such as dysphoria, sleep disturbance, loss of appetite, loss of energy, loss of interest, poor concentration, suicidal idea, and outcome. Also, no significant correlation was found between the length of illness, the lateralization, or the level of disability and outcome.

Discussion

According to a recent review of post-stroke depression, a substantial portion of post-stroke patients suffer from depression.5 However, until recently, relatively little attention was paid to this patient group, not only because primary physicians who care for patients with stroke are liable to ignore psychological symptoms or to consider that the depression in such patients is understandable, but also because even psychiatrists may underestimate depression due to a lack of common diagnostic criteria that are specific for the medically ill.

Since it is implicated that depression associated with stroke may have an adverse effect on rehabilitation, it seems very important to assess and diagnose post-stroke depression properly and to provide sufficient treatment. To my knowledge, there have been only three reports concerning the effect of antidepressants in patients with post-stroke depression. Lipsey et al6 who conducted the first controlled study, found a significantly greater improvement of depression in 11 patients treated with nortriptyline than in a similar group of 15 placebo-treated patients. Reding et al7 reported the other double-blind trial, in which post-stroke depressive patients showed a consistent trend for greater improvement in activities of daily living during treatment with trazadone (N = 11) than with placebo (N = 6). In a study by Finklestein et al8 the hospital records of 60 patients evaluated for post-stroke depression were reviewed. Forty-two patients were treated with antidepressants, but 18 received no medication for depression. The former group showed greater improvement in terms of depression rating scale than the latter group, although the overall improvement did not differ between the two groups.

Thus, all these studies indicated that antidepressants were sufficiently effective for post-stroke depression, and this was confirmed by the present study.

In addition, we found three factors associated with good outcome; being male, young, and having adequate social support. In other words, being female, old, and lacking social support might be regarded as risk factors for a poor response to antidepressants, among which social support is the only factor that can be changeable. However, it is plausible that adequate social support and being young may lead to better outcome with antidepressants in depressive patients in general.

The present findings confirm the efficacy of antidepressant therapy for post-stroke depression, and underline the importance of social support as a form of psychosocial intervention.

Further study is needed in order to clarify psychosocial as well as biological variables to predict the outcome of antidepressant therapy in post-stroke depression.

References