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Research report

Coping strategies for antidepressant side effects: An Internet survey

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ABSTRACT

Background: Patients' coping methods to palliate side effects of antidepressants have not been reported in the literature.
Methods: Through an Internet survey, 856 participants who were diagnosed with depression and receiving antidepressants were recruited to report on the methods of coping with side effects. They were asked which side effect(s) they experienced and to write freely about the way they tried to counteract these effects. We classified active coping methods into the following sub-types: adjustment of prescriptions, additional medication, complementary therapy, consultation with physicians, and daily relief.
Results: The prevalence of active coping differed across side effects (from 26.7%, sexual dysfunction, to 89.5%, dry mouth). Events with a lower percentage of active coping were more likely to be managed with "adjustment of prescriptions": (sexual dysfunction, 41.9%; fatigue, 36.8%; sweating, 20.0%; tremor, 42.5%; and somnolence, 31.8%). Further, a strong negative correlation was found between the percentage of participants reporting an adjustment of prescription and that reporting an active coping ($r=-0.907$, $p<0.001$). The "daily relief" sub-type contained a variety of strategies, including negative methods such as vomiting for nausea and weight gain and drinking alcohol for insomnia.
Limitations: Sampling of subjects were biased due to an Internet survey and diagnosis of depression and experience of side effects were self-reported.
Conclusion: Patients with depression use various ways in alleviating antidepressants side effects. Some effects such as sexual dysfunction and fatigue may not be amenable to subjective coping efforts and others are sometimes managed inappropriately, which warrants a prudent attention.

1. Introduction

Although antidepressants play a well-established part in the treatment for patients with major depressive disorders, especially those who exhibit severe symptoms (Fournier et al., 2010), their main therapeutic effects for improvement of depression should be balanced with unpleasant side effects. In fact, side effects often bother patients so seriously that they discontinue taking their prescriptions, which incurs a risk of relapse or recurrence of their depressive symptoms. Previous research has shown that the inadequacy of drug compliance (Bambauer et al., 2006; Olfson et al., 2006; Sawada et al., 2009) and side effects were regarded as a chief cause of non-adherence (Goethe et al., 2007). Therefore, pharmacological interventions aimed at relieving side effects as well as strategies to enhance drug adherence have been studied; examples to counteract side effects of antidepressants include sildenafil for sexual dysfunction (Rudkin et al., 2004), hypnotics or sedative antidepressants for insomnia (Nierenberg et al., 1994), or mirtazapine for nausea (Caldis and Gair, 2004).

However, while these studies on the pharmacological management of side effects have been reported by physicians, very few articles have considered patients' subjective methods of coping to palliate side effects (McElroy et al., 1995; Meehan et al., 2011). McElroy et al. (1995) presented coping strategies to minimize antidepressants side effects that patients could not counteract although they were based on physicians' experiences. Meehan et al. reported patients' subjective methods to palliate side effects (Meehan et al., 2011); however, they were not for antidepressants but for antipsychotics; the information was collected by group discussion with both consumers and medical staff. Furthermore, the sample size was relatively small ($N=238$). In light of the lack

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of data, examining which countermeasures are employed by patients who are receiving antidepressant drugs could provide useful and practical information for other patients with similar adverse reactions as well as for clinicians. Furthermore, identifying side effects that are resistant to any active coping measures will have both patients and clinicians aware of these troublesome events and prompt them to seek more appropriate measures as needed.

Therefore, we evaluated subjective coping strategies against antidepressant side effects and their context as well as appropriateness. For that purpose, we conducted a large-scale Internet survey to obtain patients' methods of coping with antidepressants' adverse effects through an open-ended questionnaire.

2. Methods

2.1. Data sampling

The participants were recruited through a 2008 web-survey in which the primary objective was to collect patients' attitudes about side effects of antidepressants, especially whether patients reported side effects to their physicians if they had them and how they dealt with the effects. Details of this survey, including the recruitment process, have been reported in another article that focused on gender differences in attitudes toward side effects (Kikuchi et al., 2011b). Briefly, this Internet-based survey was conducted from February 7 to 11, 2008 in Tokyo, Japan, and a total of 856 participants were selected through the following steps (Supplementary materials 1).

First, people who had agreed to participate in health-related surveys with the Internet website monitoring system (the Yahoo! Japan research monitor, http://research.yahoo.co.jp) and registered as having medical/psychiatric disease(s) were identified.

Second, people who met the following criteria were extracted: residents of Japan, 20 years of age or older, currently taking or having taken any antidepressant drug within the past two years, currently attending or having attended a psychiatric clinic, psychiatric hospital, or psychiatric department in a general or university hospital within the last two years, and having been diagnosed with a major depressive disorder by a physician within the past year. Through this second screening step, targeted participants were sent an e-mail including the details of the survey, and if they agreed to participate and provided informed consent by clicking a corresponding button, a screening survey started.

Third, 1305 of the screened people were randomly chosen and asked to complete a more detailed questionnaire. Here, information on age, gender, diagnosis, and treatment setting was collected. Next, they were shown a list of all available antidepressants in Japan at the time of this survey and asked to choose all the names of antidepressants they had taken within the past year. The list included the following antidepressants: milnacipran, fluvoxamine, paroxetine, sertlarine, amitriptyline, amoxapine, clomipramine, dosulepin, imipramine, nortriptyline, trimipramine, lithium carbonate, maprotiline, mianserin, setiptiline, sulpiride, and trazodone.

Participants were then asked whether they had experienced any side effects from antidepressants. If they had, they were further asked to choose all the side effects which were experienced from a list of common antidepressant side effects. The list was a priori prepared based on the results from recent clinical antidepressant trials and contained 16 items as follows: headache, nausea, somnolence, vertigo/dizziness, dry mouth, constipation, diarrhea, appetite loss, insomnia, tremor, sweating, anxiety, common cold, fatigue, sexual dysfunction, weight gain, and others (Dreher et al., 1999). Participants were also asked to freely write how they coped with those effects in each input box.

2.2. Definition of coping-method category

We classified coping that participants employed as "active coping" when they voluntarily took that action to counteract side effects. This active coping did not include any passive measures (e.g., no coping methods, be patient, rest, lie down, sleep, nap, wait to become accustomed to the antidepressant, do not care about the side effect, and give up).

We also classified active coping into five groups: (1) "Adjustment of prescription" that included switching, discontinuation, dose adjustment, or change of drug administration schedule of the prescribed antidepressants. (2) "Additional medication" that included self- or clinician-provided prescriptions against side effects such as poultice or intravenous drip and over-the-counter drugs. (3) "Complementary therapy" that included yoga, acupuncture, relaxation, supplements, and Chinese herbal medicine. 94) "Consult physician" that included consultation with psychiatrist, pharmacist, or other physicians only when it was clearly written. (5) "Daily relief" that embraced a broad range of possible coping strategies used by patients in everyday life.

2.3. Data analysis

Statistical analyses were performed using SPSS 16.0 for Windows (SPSS Inc, Chicago, IL). Differences between groups were tested using a *t*-test for parametric data or chi-square test for categorical variables. Logistic regression analysis was used for multivariable analysis, and Pearson correlation coefficients were analyzed to find correlations among continuous variables. A p-value of <0.05 was considered statistically significant (two-tailed).

2.4. Ethics

This study was approved by the Institutional Review Board of the Zama Mental Clinic, and all subjects provided informed consent online after a complete description of the study. This study complied with the Code of Ethics of the World Medical Association, Declaration of Helsinki.

3. Results

A total of 856 participants answered the survey and described the way they coped with side effects. Table 1 shows demographics of the participants in our study. The study sample was mainly composed of participants who were being treated and whose duration of therapy was approximately four years. Slightly less than 90% of those participants used any active coping strategies towards one or more side effects. A statistical difference between the two groups with or without coping was found for the factors of sex and current treatment status through a logistic regression analysis ($p=0.026$, $p=0.044$, respectively), but the regression model did not fit well (adjusted $R^2=0.007$, $p=0.018$).

The percentage of participants who endorsed some active coping strategies differed considerably across adverse effects as shown in Table 2. It ranged from 26.7% for sexual dysfunction to 89.5% for dry mouth and sub-categories of active coping were also dissimilar for each. It was noteworthy that events with a lower percentage of active coping were more likely to be managed with "adjustment of prescription" (sexual dysfunction, 41.9%; fatigue, 36.8%; sweating, 20.0%; tremor, 42.5%; somnolence, 31.8%), in contrast to effects with higher percentages of active coping