Evidence-Based Integrative Medicine

Reporting Characteristics of Case Reports of Acupuncture Therapy with CARE Guidelines

AN Guang-hui¹, TANG Xiao-ting², CHEN Yao-long³, and ZHAO Yi³

ABSTRACT Objective: To investigate the reporting characteristics of case reports of acupuncture therapy with Case Report (CARE) guidelines, and to explore the applicability of the guidelines for these case reports.

Methods: Case reports published from January 1, 2011 to December 31, 2013, were identified by searching PubMed and the China Biomedicine Database by using MeSH terms. Screening and data extraction of case reports were conducted by two independent researchers. Assessments based on CARE guidelines and data analysis were conducted by using Excel 2003 and RevMan 5.0. Results: A total of 61 case reports published in 19 journals were identified, which involved 16 major types of diseases. Fifteen (24.6%) case reports declared no conflict of interests, and 5 (8.2%) reported funding sources. None of these case reports met all items of CARE guidelines, and only 6 subordinate items were fully reported among 50% of the case reports. Subgroup analysis indicated that case reports published in English or those that did not have competing interests had higher reporting quality. Conclusions: The reporting quality of case reports of acupuncture therapy is rather low. The reason might be a lack of awareness among authors and the poor dissemination of information regarding CARE guidelines in China. More evaluation studies are needed to promote and improve adherence to CARE guidelines. Moreover, an extended version of CARE guidelines should be developed for cases reports of special interventions such as acupuncture or adverse events caused by interventions.

KEYWORDS case reports, acupuncture therapy, reporting guideline, CARE (CAse REports) guidelines

A case report is a common type of medical research article that details the symptoms, signs, diagnosis, treatment, and follow-up of one or more patients. Occasionally, it may provide the demographic profile of patients or a literature review of other reported cases, thus providing evidence for the discovery of new diseases, reporting exceptional cases of common diseases, and describing potential adverse effects of certain interventions. For example, the clinical symptoms of acquired immune deficiency syndrome around the world were first described in a case report. Moreover, the disastrous consequences of thalidomide, a drug that effectively relieved morning sickness but led to severe fetal malformations, were discovered by relevant case reports in different countries and regions. So far, more than 1.6 million case reports published in thousands of medical journals have been included in PubMed.

As an important intervention in complementary and alternative medicine, acupuncture is well received for its rapid and safe effects, simple and economical utilization, and wide therapeutic scope. One study reported a total of 405 articles on acupuncture published in Science Citation Index journals in 2010, including 234 (57.78%) primary studies and 43 (10.62%) reviews. Most primary studies were clinical trials and experiments on acupuncture effectiveness and its mechanisms. However, high quality randomized controlled trials with a large sample size were rarely conducted because of the difficulty in implementing control groups, blinding, and collecting sufficient samples. Therefore, case reports can be an important resource to provide evidence on
acupuncture to clinicians and researchers.

In evidence-based medicine (EBM), because the case is not controlled, the response may be due to other effects, such as a particularly strong therapeutic relationship or simply the passage of time. Usually, case reports have a somewhat ambiguous reputation and have been regarded as lower in the hierarchy of evidence.\(^{(9,10)}\) It should be noted that acupuncture is still in its formative stage in the West, and a careful and systematic description of the wide range of responses to acupuncture is lacking. In addition, acupuncture involves complex and various forms of treatment, and only by carefully recording treatment responses can the most promising acupuncture strategies be revealed. As such, case reports should be of high quality as much as possible in order to reach their full potential value for the reader and to improve the scientific credibility of the subject.\(^{(9)}\)

However, the quality of case reports varies considerably.\(^{(11,12)}\) One study evaluated 1,316 case reports published in four emergency medicine journals, and the result showed that most of the case reports fully reported patient information (gender, age, etc.),\(^{(13)}\) types of interventions, and outcomes (the reporting rates were 99%, 80%, and 90%, respectively), whereas 50% of the studies did not report the details of specific interventions. Moreover, 67% of the case reports did not mention adverse effects. In addition, only 45% of the studies reported the basic diseases of patients, 30% reported current medications, and 40% discussed patient outcomes. In addition, in this study, evaluation items were developed by referring to the literature and books on epidemiology and EBM\(^{(14-17)}\) but not to official report guidelines and appraisal tools.

Since CAse Report (CARE) guidelines were published in September 2013,\(^{(18)}\) 15 journals, such as BMJ Case Reports and Journal of Clinical Epidemiology, have adopted these guidelines to their instructions for authors.\(^{(19)}\) The report items have also been translated into Chinese, Spanish, Portuguese, and German. In addition, the CARE website (http://www.CARE-statement.org) has been set up and is in operation, providing all relevant information about CARE guidelines and posting the latest relevant news. A previous study also showed that CARE guidelines have been able to improve the integrity of current case reports after merely a year since its development.\(^{(20)}\)

We used case reports of acupuncture therapy identified from PubMed and the China Biomedicine Database (CBM) from January 1, 2011 to December 31, 2013 as a sample and conducted a cross-sectional study referring to the items of CARE guidelines to investigate their reporting characteristics and explore the applicability of CARE guidelines for case reports of acupuncture effectiveness.

**METHODS**

**Search Strategy**

Two researchers (An GH and Chen YL) independently searched PubMed and CBM by using MeSH terms ("Case reports", "Acupuncture", "Acupuncture Therapy", "Acupuncture, Ear", "binglibaogao" and "zhenci").

**Screening**

Two reviewers (An GH and Tang XT) screened the titles and abstracts of the identified studies and subsequently screened the full text articles of potentially included studies. Disagreement was resolved through discussion or consultation with a third reviewer (Zhao Y). We included case reports of acupuncture effectiveness published from January 1, 2011 to December 31, 2013 and excluded: (a) repeated literature, review, and methodological literature; (b) conference abstracts and letters to journal editors; and (c) case reports published in languages other than Chinese and English.

**Quality Assessment**

The checklist of CARE guideline contains 13 primary items (including 2 optional items) and 23 subordinate items (including 2 optional subordinate items). To obtain a clear idea on the reporting characteristics of every case report, we introduced the concept of minimum items and separated the 23 subordinate items of CARE guidelines into 38 minimum items for data extraction. For example, we separated item 1 ([The word “case report" (or "case study") should appear in the title along with phenomenon of greatest interest (e.g., symptom, diagnosis, test, or intervention)]) into two minimum items: (1) The word "case report" (or "case study") should appear in the title; and (2) the phenomenon of greatest interest (e.g., symptom, diagnosis, test, or intervention) should be reported in the title. We used "sufficient", "not sufficient", "not reported" and "not applicable" to indicate the reporting of