

Brief communications

The accuracy of references of three allergy journals

Robert Siebers, MIBiol, FNZIMLS Wellington, New Zealand

Key words: References, accuracy, medline

Most medical sciences journals require authors to conform to the "Vancouver" style when submitting manuscripts. One of the requirements is that authors must verify cited references against the original document.¹ Thus the accuracy of cited references is the prime responsibility of authors.

Over the years various studies have shown a high rate of reference errors in articles published in general medical journals² and in journals of medical specialties.³⁻⁵ No study has reviewed the allergy literature for reference accuracy. The aim of this study was to determine the accuracy of references in three specialist allergy biomedical journals.

Methods

The April 1999 issues of the *Journal of Allergy and Clinical Immunology*, *Clinical and Experimental Allergy*, and *Allergy* were selected for the study. References cited in original articles, brief communications, editorials, review articles, and correspondence were checked for accuracy with Medline (National Library of Medicine). Excluded from the study were cited references from non-Medline-listed journals, journals before 1964, books, some conference proceedings, and theses or dissertations.

If a reference did not agree with the Medline listing, it was cross-checked with other electronic databases (Web of Science Citation Database and Cumulative Index of Nursing and Allied Health Literature) or against the original article. Reference errors were categorized as belonging to the following elements of a reference: (1) author(s), (2) title, (3) journal, (4) year, (5) volume, and (6) page numbers.

The percentage of references containing one or more errors was calculated, and the frequency of errors in each of the six reference elements was recorded.

TABLE I. Reference error rates and frequency of errors in each reference element

	J Allergy Clin Immunol	Clin Exp Allergy	Allergy
References checked (No.)	788	589	410
References with any error (No.)	174	232	115
Reference error rate (%)	22.1	30.4	28.0
Total errors detected (No.)	262	239	153
Author errors (No.)	152	109	95
Title errors (No.)	43	51	23
Journal errors (No.)	24	33	6
Volume errors (No.)	8	8	9
Year errors (No.)	5	11	7
Page errors (No.)	30	27	13

RESULTS

A high number of references in the three allergy journals contained errors (Table I). Between 17.7% and 28.2% of references in the three journals contained multiple errors (2 to 5). Author errors were the most common, occurring in more than half of all the erroneous references. Title errors were the second most common, followed by page errors, journal errors, volume errors, and year errors (Table I).

DISCUSSION

This study is the first to examine the accuracy of references in the allergy literature. A reference error rate of 22.1% to 30.4% was found in three leading allergy journals. Studies of the literature of biomedical journals have shown reference error rates ranging from an average of 24% in general medical journals² to as high as 67% in specialist journals.³⁻⁵

The majority of errors, which were spelling mistakes in the title and of authors' names, would not lead to major difficulty in finding the cited reference. However, if the cited reference contains errors in critical elements of a reference, such as the year, journal title, first author, or volume and first page numbers, this would place a burden on readers and librarians trying to retrieve cited references.

One reference in the study contained five errors. Not only was the first author's name misspelled, but the cited reference also had the wrong volume number, the wrong year of publication, the wrong first and last page numbers, and the wrong journal (should have been *Clinical and Experimental Allergy*, not the *Lancet*).

From the Wellington Asthma Research Group, Wellington School of Medicine, Wellington, New Zealand.

The Wellington Asthma Research Group is supported with a program grant from the Health Research Council of New Zealand.

Received for publication Oct 21, 1999; revised Dec 8, 1999; accepted for publication Dec 8, 1999.

Reprint requests: R. Siebers, MIBiol, FNZIMLS, Department of Medicine, Wellington School of Medicine, PO Box 7343, Wellington South, New Zealand.

J Allergy Clin Immunol 2000;105:837-8.

Copyright © 2000 by Mosby, Inc.

0091-6749/2000 \$12.00 + 0 1/54/104935

doi: 10.1067/mai.2000.104935

Most journals have a policy that the accuracy of references is the responsibility of authors. Various suggestions have been made to improve the accuracy of cited references in publications. They include the requirement of authors to provide photocopies of the first page of each quoted reference, that editors examine a proportion of references of accepted articles,⁴ that reviewers take some responsibility for checking the accuracy of references,² and the requirement of one biomedical journal that requires a written statement by authors that they have checked references cited in their articles against the original documents or Medline.⁵ With modern bibliographic aids, such as End Note, in which references can be downloaded directly from Medline, accurate reference lists should be possible.

In summary, an unacceptable rate of reference errors has been found in the *Journal of Allergy and Clinical*

Immunology, Clinical and Experimental Allergy, and Allergy. Greater emphasis and responsibility must be placed on authors to check the accuracy of cited references in submitted manuscripts.

REFERENCES

1. International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *N Engl J Med* 1997;336:309-15.
2. De Lacey G, Record C, Wade J. How accurate are quotations and references in medical journals? *BMJ* 1985;291:884-6.
3. Roach VJ, Lau TK, Kee WD. The quality of citations in major international obstetrics and gynecology journals. *Am J Obstet Gynecol* 1997;177:973-5.
4. Ngan Kee WD, Roach VJ, Lau TK. How accurate are references in the *Australian and New Zealand Journal of Surgery*? *Aust N Z J Surg* 1997;67:417-9.
5. Siebers R. Accuracy of references in the *New Zealand Journal of Medical Laboratory Science*. *N Z J Med Lab Science* 1999;53:46-8.