

# The Value of Publishing Case Reports in the Era of Evidence-Based Medicine

*El valor de publicar casos clínicos en la era de la medicina basada en la evidencia*

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Most medical journals no longer publish isolated case reports, and the associations of editors do not recommend publishing case reports in scientific publications. This position is justified not only because case reports do not have significant validity in evidence-based medical practice but also because they are cited less often than other kinds of medical research articles; (1) in addition, case reports do not count at the moment of determining the impact factor of a journal. (2) The extensive list of limitations attributed to case reports include the following statements: case reports emphasize extremely rare findings or situations; (3) there is likelihood of a positive-outcome bias; (4) they do not have epidemiologic value; thus, causal inferences cannot be drawn and the results cannot be generalized; (5) case reports may over-interpret or tend to generalize from a particular case; (6) all the reports are necessarily retrospective; therefore, the medical record might not contain all relevant data; the experience cannot be repeated and, consequently, the scientific principle rejection, which is tested by repeating an experiment, cannot be applied; (7) and because case reports deal with individual patients, the principle of confidentiality may be abandoned as the patient may be easily recognized. (8) However, some recent publications have emphasized the merits and the educational value case reports can have. (7, 9-10) Case reports are useful to communicate rare disorders that could not be investigated by controlled clinical trials due to their low incidence. (11) In particular, in drug safety surveillance case reports are the best method to know the adverse effects of new drugs in order the take measures without delay. (12) Case reports are “natural experiments” that could not be intentionally performed due to ethical limitations; for example, to learn the effects of extravasation of a cytotoxic drug during cancer therapy (13) or the consequences of an accidental intra-arterial injection of a certain agent or the results of accidental exposure to a source of radia-

tion. (14) In many of these circumstances, case reports represent situations linked to medical errors and may thus contribute to preserve the quality of medical care. (15) Other advantages of case reports are their ability to generate hypothesis from novel observations, their flexible structure, the fact that they represent lower cost compared with formal studies, and the short time between the observation and the eventual publication. But, the most solid defense in favor of case reports could be their educational value, especially to teach young doctors the principles of medical publications and to help them develop their abilities in academic writing. (10) In a recent publication, Packer et al. (9) remarked the educational benefits of writing case reports for medical students. Selecting and writing a case report can sharpen critical and observational skills, improve medical writing, strengthen the ability to generate and defend a hypothesis, and increase understanding of patient-centered care, bearing in mind that case reports are stories of human suffering and transcendence. These authors observed that case reporting gave students valuable experience with the editorial process and motivated them to take a scholarly view of their clinical work.

Over the past years, several articles have been published that may serve as a guide to write and publish case reports. (16-18) In addition, several journals are dedicated to the publication of case reports: BMJ Case Reports, Journal of Medical Case Reports, Journal of Surgical Case Reports and Surgical Case Reports, among many others.

One important topic to consider before writing a case report is the message or lesson that the authors wish to convey. A well-constructed case report should provide a clear pattern for the reader to identify similar cases in his or her own clinical practice. (16) Topics such as the identification of a novel disease or an innovative treatment, an unusual or complex case, the unusual presentation of a common problem, medical

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errors or the adverse effects of treatments may produce case reports of scientific interest and medical educational value.

### Conflicts of interest

None declared. (See authors' conflicts of interest forms in the website/Supplementary material).

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