

Are Case Reports Redundant in the Scientific Arena?

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The case report occupies one of the lowest rungs in the hierarchy of evidence-based medicine. However, it is important to contemplate whether practice-based evidence, the benchmark of case reports, has any relevance in today's scientific pursuits. Advanced methodologies for research have led to more reliance on well-controlled randomized studies when it comes to citation and adoption of therapeutic strategies. Editors of journals also prefer these research articles and investigative reviews to upgrade the impact factor and are less eager to publish case reports, and some categorically do not do so.

Having said that, the charm of a narrative depiction of an interesting medical observation should always be documented for posterity. As William Osler had famously observed in 1920, "Always note and record the unusual ... Publish it. Save it on a permanent record as a short, concise note. Such communications are always of value."

It must be remembered that knowledge about the dangerous effects of thalidomide, or the occurrence of HIV infection with various infections or cancers, or the beginning of drug trials with infliximab in psoriasis began with the humble case report.

It is not true, contrary to popular belief, that one has to report a rare disease to be published in a journal. What is important is the educational value of the case. A case report may describe an unusual manifestation of a well-known disease, a diagnostic or ethical dilemma, or an outcome of a novel treatment. At times, a peculiar complication of a disease, adverse or beneficial effects of drugs may be highlighted.

With a view to improving the transparency and accuracy of documenting a personal experience, the CARE Guidelines were instituted in September 2013, which provide a meticulous checklist for authors to pen down a case report while providing medical journals the means to critically evaluate and choose informative and publishable material. Thus, case reports have come to be accepted as an academic form of publication with the ability to spread knowledge quickly to a wide medical professional audience.

The main function of a case report is to help in pattern recognition. It is an excellent tool for problem-based learning that will help the reader to recognize similar signs and symptoms when one faces a similar case in one's daily practice. It can also sensitize the reader to novel therapies, pharmacovigilance, or ethical domains of clinical practice.

New hypotheses may be contemplated and could then be tested with advanced research methods that are designed to refute or confirm the hypotheses, i.e., comparative (observational and experimental) studies.

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At times, ethical constraints may hinder experimental research. In such cases, isolated case reports are the only source of scientific information helping in clinicians' analytical reasoning, management, and follow-up.

Another advantage of the case report is the cost, being negligible in comparison with planned, formal studies. Most often, the necessary work is performed in the clinical setting without specific funding.

The time span from observation to publication can be much shorter than for other kinds of studies. This is advantageous to alert the medical community about some deleterious effects of drugs or newer complications of some diseases. This is also encouraging for beginners who have embarked tentatively on the path of scientific documentation. Writing case reports is a great way to practice paper preparation and gives initial exposure to the steps of publication.

Despite all these advantages, the case report has certain drawbacks that have led to the diminution of its strength as high-grade evidence.

The observer's personal experience leads to subjectivity that might bias the interpretation of the observation (i.e., information bias). Moreover, there is no possibility to establish cause-effect relationship from an uncontrolled observation.

The retrospective design may increase the chances of missing out on relevant data. Recall bias, a common occurrence, might prevent one from getting the necessary information from the patient or relatives.

All said and done, a case report provides a combination of scientific wisdom coupled with a logical analysis of a clinical problem. It also gives the reader the taste of creative narration, and it is of utmost importance that this genre of publication be nurtured and uplifted in literature.

This September–December issue of ours presents a bouquet of case reports for our readers to savor and internalize.