

# Case reports: Brief overview of reporting and submission to biomedical journal

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**ABSTRACT**

A case report is a specific type of research design that reports on an aspect of the management of patients. Case reports have significantly influenced the evolution of medicine. In general, case reports should be short and focussed and should contain abstract, introduction, description of the case, discussion and conclusion. The aim of this article is to provide useful details and tips to the young anaesthesiologists in the writing of a case report and then to publish it.

**Key words:** Brief communications, case report, confidentiality, manuscript

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**INTRODUCTION**

The case report is defined as a specific type of research design that reports on an aspect of the management of one or two patients.<sup>[1]</sup> Case reports remain one of the few quick ways to bring new conditions or new aetiologies effectively to the knowledge of medical fraternity and to upgrade their knowledge.<sup>[2,3]</sup> Case reports, which are published, provide essential sources of information for better care of patients, as they can describe important scientific observations that are missed or are not detected in clinical trials, provide useful information that expands our knowledge and spans new research and also provide information that moves away from the classical textbook case and leads to a better and safer patient care.<sup>[4]</sup>

**THE IMPORTANCE OF WRITING A CASE REPORT**

Case reports have significantly influenced the evolution of medicine, as can be seen in literature in several examples of how they have contributed substantially to the advancement of science.<sup>[5]</sup> They serve three primary functions: generate new ideas for verification in subsequent observational studies and clinical trials, documenting rare or unusual

experiences where obtaining further evidence is not feasible and providing clinical materials that help medical people remember important lessons.<sup>[6]</sup> The educational importance of well-written case reports is also underappreciated. Our brain is remarkably good at learning and also remembering through examples and stories, and case reports can offer valuable examples of how a disease might present or how to prevent certain complications when doing new procedures.<sup>[6-8]</sup> The new era of evidence-based health care has placed the randomised clinical trial (RCT) at the top of the hierarchy for reliable health information which can be used in a health-care decision. RCTs are superseded by systematic reviews and meta-analyses, followed by prospective experimental trials, then observational studies and case reports are at the bottom, existing as descriptive reports and opinions of respected authorities.<sup>[1,9]</sup>

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## TYPES OF CASES WHICH NEED REPORTING

Reporting previously unreported observations of a known disease, using unique diagnostic procedure to diagnose a disease or describing previously unreported complications of a procedure are examples of things which are worthy of a case report. The case write up should contribute new knowledge to the understanding, diagnosis or management of a known disease and must give a clear message to learn, for the reader. Ideally, it should provide insight that can lead to further research on the topic.<sup>[3]</sup>

## LIMITATIONS OF CASE REPORTS

Although case reports are a valuable contribution to literature, they have certain limitations.

First, the management of patients in outpatient settings occurs basically in an uncontrolled environment. There is little the clinician can do to prevent patients from introducing many confounding factors into their lives that may affect the patient's response to care; clinical results may not be actually due to the treatment rendered.<sup>[1,9]</sup> Since the care rendered to one patient may not produce a similar change in another patient, case reports should not be generalised but for the patient reported.<sup>[10]</sup> Hence, we cannot conclude, based on the observations of a single patient, that any particular method of management will be effective for other patients with the similar condition. Authors of case reports should be encouraged to know that more minutely tested experimental trials may be based on the very case reports that they write.<sup>[1,11]</sup>

## JOURNALS PUBLISHING MEDICAL CASE REPORTS

Many journals are reluctant to publish medical case reports. However, there are several online journals which focus specifically on clinical case reporting. Some of the examples are given below:

- A and A Case Reports - Anesthesia and Analgesia Case Reports - <http://journals.lww.com/aacr/Pages/informationforauthors.aspx>
- BMJ Case Reports – [www.casereports.bmj.com](http://www.casereports.bmj.com)
- Journal of Medical Case Reports – [www.jmedicalcasereports.com](http://www.jmedicalcasereports.com)
- Radiology Case Reports - [www.radiology.casereports.net/index](http://www.radiology.casereports.net/index)

- Journal of Dermatological Case Reports – [www.jdcr.eu/index](http://www.jdcr.eu/index).

## COMPONENTS OF A CASE REPORT

Case reports should have the following sections: a title, an abstract, keywords, an introduction and objective with a literature review, details of the case report, a discussion that should include explanation of the literature reviewed and a conclusion. Supplementary parts such as tables, figures, graphs and illustrations provide essential data and will enhance the article's flow and clarity. In general, the data contained in supplementary parts should not be duplicated in the text.<sup>[4,12,13]</sup> In this regard, an author can also go through the 13 item checklist of CAsE REport (CARE) guidelines.<sup>[14]</sup>

## METHOD OF WRITING THE TITLE

The title is the first section of a case report that will be read by the readers. Therefore, it should be concise, informative, relevant to the subject and perhaps catchy. The ideal title should attract the reader's attention and try to focus on a definitive issue and not be too artificial or cumbersome.<sup>[15,16]</sup> It is better to select the title after the whole text has been written because the authors then can select the title based on the predominant issue discussed in the manuscript. Many variations exist in writing the title of the case report. A few use the term "case report" and others the diagnosis and epidemiology characteristics or salient manifestations of the case in the title. There are examples, wherein authors choose a title that will attract the curiosity of the readers. As far as possible redundant words such as "case report" or "review of" should not be used in title.<sup>[3]</sup>

## ABSTRACT SECTION

The abstract offers the reader an organised, brief presentation of the paper, relating the most important highlights of the case. The information in the abstract and the title can be entered into computer databases and indexing systems and are essential for those doing literature searches.<sup>[1,4,17]</sup> It should be unstructured, pose the clinical question or diagnostic problem and help researchers determine their levels of interest in the case report.<sup>[15,18]</sup> It also should be "short and sweet." Abstract should not contain references; expansions of abbreviations are to be used the first time they are used in abstract.

## INFORMATION TO BE PROVIDED IN THE INTRODUCTION

The introduction should be brief and able to attract the attention and interest of the reader. It should provide information regarding its worth for reading and publishing and should provide an explanation of the focus of the case report. Merit of the case report needs to be explained in light of the previous literature; thus, a focussed comprehensive literature review is required to confirm the author's claim in this section. The author should bear in mind that a more detailed literature review actually belongs to the discussion although critical evaluation of the literature is still required.<sup>[15,18]</sup>

## WRITING THE CASE REPORT SECTION

This section describes the details of the patient, presentation of the case, outcome measures, assessment protocols and treatment, as applicable.<sup>[1,19]</sup> The description of the patient case is one of the most integral sections of the case report. The case should be described in a chronological order and in enough detail for the reader to form his own conclusions regarding the case's validity. The author should give information that pertains to the case and refrain from providing confusing and superfluous data. He should indicate the effect of treatment, effects unanticipated, the patient's final outcome, any further proposed treatments and the patient's present status at the time of the report. Author should also provide sufficient information regarding the assessment of the patient and the diagnostic procedures done with their results.<sup>[4]</sup> Furthermore, if future research is based on this case report, researchers will need to have accurate descriptions from which to work. Photographs of diagnostic procedures, radiographs or treatment procedures can be helpful in providing a clear message to readers and should be used when appropriate.<sup>[1,4]</sup> Like tables, figures should be self-contained and fully interpretable on their own accord with captions for each figure used in the manuscript provided.<sup>[1,20]</sup>

## REQUIREMENT OF PATIENT'S PERMISSION

It is better to seek patient's permission to publish the report even if the concerned journal does not insist on it. Many journals do provide standard consent form for recording patient consent. If the patient does not give the consent for the case to be published, the authors are obliged to respect the patient's wishes.<sup>[19]</sup>

The informed consent from patient or parent/guardian (if the patient is minor), and the next-of-kin (if patient has died/not in a position to comprehend) should be obtained in writing with permission to publish the case report and accompanying images.<sup>[3]</sup>

## MAINTENANCE OF THE PATIENT'S CONFIDENTIALITY

Enough care should be taken to maintain patient's confidentiality. The patient should not be identifiable from any information present in the case report. In the accompanying images, any features which can identify the patient should be concealed or removed, taking special care to conceal the eyes.<sup>[3]</sup> Similarly, when images such as X-ray, computed tomography/magnetic resonance imaging/ultrasonography are used, care should be taken to delete patient name and hospital number.

## PRESENTATION OF THE DISCUSSION PART

The discussion section is probably the most important section of the case report. It should evaluate the patient case for validity, accuracy and uniqueness; compare and contrast the case report with the published literature and be able to derive new knowledge and applicability to practice. The value the case may add to the current knowledge should be highlighted and if there are any limitations that should be stated.<sup>[3,4]</sup> If the report feels that a particular phenomenon merits further study, the rationale for why the same warrants attention should be made.<sup>[6]</sup> If a previously published method for management was used to see if it would have an effect on the patient, this alone may be adequate. However, if there are other reasons for selecting one procedure over another and if it is considered controversial, the rationale should be presented.<sup>[1,21]</sup> The published literature obtained from the literature review should be summarised and also a detailed summary of a few citations to be provided. The author should next summarise the most important features of the case report, justify why this case is unique and draw recommendations and conclusions.<sup>[4]</sup>

## CONCLUDING THE CASE REPORT

After reviewing all the evidence in the discussion section, the author must provide a justified conclusion. The conclusion should not be a summary of the entire case but should be concise and summarise the primary point of the case report without exceeding one

paragraph. It should be able to focus on what can be learnt from the case report and should be related to the purpose of the paper. It should not offer far reaching, unsupported or general statements.<sup>[4,21,22]</sup>

### CHOOSING THE REFERENCES FOR THE ARTICLE

The references should be listed at the end of the case report and should be chosen as per their relevance to the case report.<sup>[15]</sup> They should be taken basically from peer-reviewed journal articles. As far as possible most recent references should be used. The number of references should be within the purview of the maximum allowed and should be based on quality and relevance.<sup>[1,12]</sup>

### LENGTH OF THE CASE REPORT

Before sending the case report for publication to any journal, the author should go through the instructions given to the author of that particular journal regarding the length of the case report.

An author can go through the International Committee of Medical Journal Editors (ICMJE) guidelines “Uniform Requirements for Manuscripts Submitted to Medical Journals” which can be found on the Internet at <http://www.icmje.org/index.html> for preparing the manuscript. The Indian Journal of Anaesthesia states that the abstract and the case report should not exceed 150 and 1500 words, respectively, and maximum of two tables, graphs or figures and a maximum of 15 references can be included.<sup>[23]</sup>

### BRIEF COMMUNICATIONS AND LETTER TO THE EDITOR

These are concise reports of work of unusual interest or importance with limited but definitive data.<sup>[24]</sup> The manuscript should have the following headings: Introduction, case report or case series, discussion, conclusion, references, tables and legends in that order. As per the Indian Journal of Anaesthesia, the number of images/figures/tables/graphs is to be limited to two only. Please note that brief communications do not need an abstract. The total number of words should not exceed 1000, and maximum ten references can be included.<sup>[23]</sup> Sometimes, the editorial board of the concerned journal may request the author to submit the case report/brief communications as “Letter to the Editor” if the editor/reviewer feels that the information is important but is sufficient to be conveyed in lesser

words as letter to editor. These types of articles deserve recognition as what is conveyed can potentially herald more significant research in future in the field. They also provide a window for younger researchers to apply their knowledge of research and publications as per the guidelines and develop the habit of submitting the research outcomes for publication.

### SUMMARY

Case reports though are the essential source of new and unusual information have less impact on the clinical practice compared to the RCTs. However, well-written case reports of novelty with meticulous attention to the very minute details will sure have an impact on the medical literature and practice.

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### Conflicts of interest

There are no conflicts of interest.

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