# **How to Write a Case Report?**

#### **Abstract:**

Case report is regarded as one of the first line of evidence in medical science. There have been numerous circumstances, where the initial dissemination (and breakthrough) of scientific knowledge had been done, with the help of case reports. Case report is a particular variety of manuscript that showcases the unusual features and management of a patient. The words of William Osler (Father of modern medicine) "Always note and record the unusual...publish it. Place it on permanent record as a short, concise note. Such communications are always of value," still hold relevance in today's era. In this article, we shall discuss the keys to draft a case report worthy of publication.

**Keywords:** Case reports, tips, tricks

Case report is a distinct way of conveying a piece of information.<sup>[1]</sup> In addition, writing a case report provides a good opportunity to young physicians to get acquainted with the nitty gritties of writing a scientific article.<sup>[2]</sup> Case reports have more chances of acceptance if they provide a message which has the ability to alter clinical practice. They are also accepted if they add to the existing literature and/or raise a novel research question, which has the potential of generating a large-scale research.<sup>[3,4]</sup>

A case report is expected to be authentic and thought provoking. The use of propranolol for the management of infantile hemangiomas is an example; which came into limelight with the publication of case reports; and thereafter, large-scale experimental studies were designed. [5-7] Therefore, case reports aid in designing tenable protocol for performing good quality scientific research. [8] The CARE (CAse REport) guidelines for writing a case report are universally followed. [9]

Brevity and clarity, are the two pre-requisites for any case report. [9] The various components of a case report and the preferable formatting of the same have been summarized below:

1. **Title:** Authors should attempt to provide a short and crisp title, and ensure that the title attracts the reviewers, editors,

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- and the readers, to go through the entire article. The title should be well-thought of and comprehensive. It should always give a fair idea of what lies within the article, and should not be vague and non-specific. The new message of the article should preferably be reflected in the title. Most importantly, the title should be scientifically sound. Abbreviations in the first place should be avoided, and authors should avoid the use of "superfluous words".
- 2. Abstract: The abstract must clearly state the new information and the key takeaway messages.[10] There should be adequate patient data in terms of relevant history, clinical findings, tests, and interventions. Both physician and patient assessed outcomes should be mentioned.[11] Abstract is one of the most crucial components of an article, because, the reviewers and the editors would be having a fair perception of the entire manuscript after reading the abstract, and many times, the articles get rejected due to a poorly written abstract (lack of flow and message). Abstract should be revised every time the manuscript is revised or changed.
- 3. **Keywords:** Choosing a proper keyword is very important, while writing a case report. Keywords aid the indexers and search engines find relevant papers. Keywords should represent the content of the manuscript, and should be specific to the entity in question

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- 4. Introduction: Introduction of a case report must initially address the magnitude and importance of the disease in question. Authors should highlight as to what is unknown about the entity and why they are reporting the case.
- 5. Case report: This section should describe all the necessary details of the patient including de-identified patient-specific information, concerns, and symptoms, relevant history (medical, surgical, and family), significant clinical examination findings positive and negative), diagnostic tests, differentials, provisional diagnosis, and prognosis. Authors should always mention how they ruled out the clinical and histpathological differentials (preferably in a tabular format) and how they arrived at the final diagnosis. If applicable, authors should also describe the details of therapeutic intervention (pharmacological name of drug, dose, frequency and duration). The response to treatment (objective and subjective parameters) must be mentioned clearly, without any ambiguity. When the authors are reporting a drug reaction, it is advisable to mention the details of Naranjo's adverse drug reaction probability scale, Hartwig's severity assessment scale and modified Schumock and Thornton scale. Besides, it is prudent to register the drug reaction under Pharmacovigilance Program of India (PvPI) and mention the necessary details about the same, in the case report.
- 6. **Discussion:** The discussion should include the relevant medical literature and the rationale for the conclusion. It is always advisable to add the perspective of the patients, whenever possible.[12] A thorough literature search must be done and the relevant references must be cited. Some widely used reference management and formatting software applications are BibTeX, Papers, Zotero, EndNote, RefWords, ReadCube, and Mendeley. Authors should always avoid the claims the first publication, because this is not possible to be verified by the reviewers and editors, and such claims are not desirable while publishing any article. Authors should summarize the key findings and unique points about their case, highlighting the need for publishing the case report (as to how this will add to the literature). The primary take-away messages of the case report should be given at the end of the article, in the form of a one-line conclusion.
- 7. Images and figures: The requirements are always mentioned in the website of the journal. Some of the vital considerations include a non-identifiable patient, high-quality JPEG or TIFF-centered clear and sharply focused images, and not exceeding 3-4 MB. Authors should never crop the original image, and ensure that the background is clean. If the figure has been published before, authors should acknowledge the original source and submit written permission from the copyright holder to reproduce the material.

A credit line should appear in the legend for such figures. Low-resolution images, grainy images due to high ISO and pixelated images should never be submitted. The photographs must be clicked in a manner that makes it clear to the readers, as to which region is involved. If the authors are describing a case whose uniqueness lies in the unilateral distribution of lesions on the lower limb, the photograph must be clicked in a fashion which displays both the lower limbs. When it comes to therapeutic interventions, the pre-treatment and post-treatment photographs should have the same resolution, exposure, brightness and background. The figure legends must precisely mention about the stain and magnification for dermatopathology images; and the type of dermoscope used (and the magnification).[13]

Apart from the aforementioned things, some of the important issues which need to be taken care of, include informed consent by the patient, potential conflicts of interest, de-identification of patient-related data, and ethics committee approval, if obtained or necessary.[14,15] We propose the format as shown in Apppendix 1 for case report. This worksheet can streamline the process of writing, by providing a structure. Once completed, it can be quickly formatted into a manuscript for submission. We believe that this worksheet will serve as a handy tool for penning down case reports. The greatest barrier is paucity of time, and a certain anxiety about the process of publication. Following a structured standard approach to organizing and presenting clinical observations, may remove these barriers for busy physicians who are genuinely interested in writing case reports.

Most authors, reviewers and editors are of the opinion, that authors should strictly follow the instructions pertaining to preparation of manuscript so as to increase the probability of acceptance of manuscript. Authors may either follow the instructions which are available on the specific website of the journal, or they can also follow the guidelines which are uniformly followed by all biomedical journals (http://www.icmje.org/index.html). Manuscripts are often rejected outright by the journals, when the instructions are not followed properly.<sup>[10]</sup>

An accurate, thoroughly worked-up and well-written case report strengthens the medical literature. Therefore, authors must strictly follow the instructions while preparing the draft of the case report – comprehensive, crisp, and apt, and most importantly, the ability to add to clinical practice.

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# Conflicts of interest

There are no conflicts of interest.

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### Appendix 1: Case report check sheet

# Authorship:

ICMJE (International Committee of Medical Journal Editors) criteria

Names should be listed in the sequence of their contribution to the manuscript

#### Patient Privacy:

Identifying information should be deleted

Informed consent from the patient to publish the case

Written approval from the Institutional Review Board/privacy officer has been obtained

#### Title:

Crisp description of the case in discussion

#### Abstract:

<250 words

Written in a properly organized design

Clearly stated objective

Details of management discussed in the case report subsection

Discussion summarizes the contribution of the case to the literature

Indexing terms from Pub Med are provided

#### Introduction:

Clearly stated purpose

Significance of the entity (in discussion) is mentioned

Definitions of the relevant terminologies are mentioned

It is mentioned as to how the case adds to the existing literature

#### Case Report:

The case is outlined in a comprehensive style

The course of events is presented chronologically

Patient characteristics are described accurately

Positive and noteworthy negative results are mentioned

Newer investigational procedures are described properly, with properly cited references

All unusual terms are defined precisely

A diagnosis is provided, with a clear presentation of the treatment

#### Discussion:

The case is weighed up against the existing knowledge, with a brief discussion of differential diagnoses

Scientific basis for the management is provided

The authors hypothesize a mechanism behind the findings

Limitations are mentioned

Authors suggest avenues for future research

#### Conclusion:

The conclusion is relatable to the reason behind reporting the case.

New information is well-summarized

#### Acknowledgements:

Those who have contributed to the case, but they have not been included as authors in the manuscript, should be acknowledged

#### References

The authors provide relevant and suitable references

References must be strictly written in accordance with the journal instructions

Figures and Clinical Images:

Figures conform to the specifications of the journal (mentioned in the instructions to authors)

Authors must obtain permission from the publisher, if the figures have been published elsewhere