



METHODOLOGICAL RECOMMENDATIONS FOR THE ELABORATION OF THE DISCUSSION OF THE CLINICAL CASE REPORT. REVIEW ARTICLE

RECOMENDACIONES METODOLÓGICAS PARA LA ELABORACIÓN DE LA DISCUSIÓN DE UN REPORTE DE CASO CLÍNICO. ARTÍCULO DE REVISIÓN

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ABSTRACT

Introduction: Case reports are a type of biomedical publication that allow us to share experiences regarding the etiology, diagnosis, therapeutics, and prognosis of anecdotal events that occur both in one and in several patients during clinical practice. **Objective:** to elaborate methodological recommendations for the elaboration of the discussion of a clinical case report. **Methods:** A narrative review of international guidelines and available evidence was carried out. **Results:** A total of 411,227 articles were located, finally selecting 10 narrative review articles. **Conclusion:** The discussion is the most relevant section of the case report despite being considered by some journals as an optional contribution. We recommend for the elaboration of the discussion, to follow the following four steps: a) finding and comparison with the current evidence, b) justification of the causality of the findings, c) limitations and strengths in the management of the exposed case and d) clinical implications and prospects for the future. **Conclusion:** It is recommended to follow the four sequential steps for the elaboration of the discussion and to evaluate its impact on the scientific production in undergraduate and postgraduate students.

Keywords: Review; Methods; Case Report. (Source: MESH-NLM)

RESUMEN

Introducción: Los reportes de caso son un tipo de publicación biomédica que nos permiten compartir experiencias tanto de la etiología, diagnóstico, terapéutica y pronóstico de eventos anecdóticos que ocurren tanto en uno como en varios pacientes durante la práctica clínica. **Objetivo:** elaborar recomendaciones metodológicas para la elaboración de la discusión de un reporte de caso clínico. **Métodos:** Se realizó una revisión narrativa de lineamientos internacionales y evidencia disponible. **Resultados:** Se ubicaron un total de 411 227 artículos, seleccionándose finalmente a 10 artículos de revisión narrativa. **Discusión:** La discusión es la sección más relevante del reporte de caso pese a considerarse por algunas revistas como un aporte opcional. Recomendamos para la elaboración de la discusión, seguir los siguientes cuatro pasos: a) hallazgo y comparación con la evidencia actual, b) fundamentación de la causalidad de los hallazgos, c) limitaciones y fortalezas en el manejo del caso expuesto e d) implicaciones clínicas y perspectivas para el futuro. **Conclusión:** Se recomienda seguir los cuatro pasos secuenciales para la elaboración de la discusión y evaluar su impacto en la producción científica en estudiantes de pregrado y postgrado.

Palabras clave: Revisión; Métodos; Informes de Casos. (Fuente: DeCS- BIREME)

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INTRODUCTION

Case reports are a type of biomedical publication that allow us to share experiences regarding the etiology, diagnosis, therapeutics, and prognosis of anecdotal events that occur in one or several patients during clinical practice⁽¹⁻³⁾. For its preparation, there are international recommendations such as the CARE declaration, which provides guidelines through a checklist to be able to write the manuscript in a uniform way and avoid the loss of relevant information and thus be able to improve the transparency, analysis and integrity of the case reports^(4,5). Within its organization, it has different sections (title, summary, introduction, case presentation, discussion, and bibliographical references), representing the most relevant discussion^(6,7).

We have observed in the medical school, the difficulty in the undergraduate and postgraduate students in the elaboration of the discussion of the case reports, this being the section that takes them the longest time to elaborate, as well as the one that contains the most errors. It has been described that this deficiency is possibly due to two factors: the lack of training in this area and inadequate tutoring⁽⁸⁾. Additionally, we propose that an additional factor would also be not having a sequential and detailed guide that would allow us a better understanding of the process by the students and less time in the preparation of the reports, because despite having several guides and specific instructions from journals on how to write clinical case reports, young doctors still find it difficult to write a case report⁽⁸⁾. For this reason, the aim of this review was to develop methodological recommendations for the preparation of the discussion of a clinical case report.

METHODS

A narrative review of international guidelines and available evidence was carried out.

Information sources

A systematic search was carried out in the EMBASE, SCOPUS, PUBMED and SCIELO databases. The last search date was 02/28/2023. It was not restricted by language or region. The following general search strategy was generated using both thesauri and free terms to optimize search sensitivity: - ('guideline' OR 'review' OR 'review' OR 'review article' OR 'narrative review' OR 'recommendations') AND ('case report' OR 'case report' OR 'case study' OR 'case series' OR 'large case series' OR 'clinical case').

Selection criteria

Systematic and narrative review articles were included, as well as national and international statements and guidelines covering the topics of case reports, and clinical, cohort, case-control, and cross-sectional trials were excluded.

RESULTS

A total of 411,227 articles were located, finally selecting 17 narrative review articles.

DISCUSSION

Synthesis

Preliminary organization for the elaboration of the discussion

The discussion is the most important section of the case report and allows us to summarize key aspects and compare it with the body of evidence and thus justify the unusualness of the findings, which will later be translated into conclusions that will impact clinical practice⁽⁶⁾. Nevertheless, it is considered by some reviews and magazines as an optional section^(9,10). Despite this, this is where the researcher convinces the reviewers and editors for the publication⁽¹⁾. We always recommend reporting the discussion as it helps to improve the doctor's critical capacity and, additionally, when starting the writing of the manuscript, the case presentation section be written first and once finished, continue with the discussion⁽¹¹⁾.

Prior to writing the discussion, it is important to list the most relevant findings from the case presentation that require discussion. Only choose the most important, since in the discussion we cannot extend beyond an approximate range of 400 to 900 words, due to the editorial requirements of the journals because the case presentation is the one that must be described in greater detail. Therefore, we recommend choosing a number no greater than 5 points to discuss. If there are more than five, we must prioritize the most relevant with the following questions: Is it directly related to the objective of presenting the case? Will it provide relevant hypotheses that need to be evaluated in subsequent studies? And how will it impact the clinical management of patients?

For example:

- Unusual adverse reaction of Remdesivir.
- Abnormal electrocardiogram tracing.
- Response to treatment with conventional drugs.
- Evolution of the clinical picture after the event.

Once the points to be discussed have been chosen, we propose to carry out the following four steps sequentially: a) findings and comparison with current evidence, b) justification of the causality of the findings, c) limitations and strengths in the management of the exposed case, and d) implications. clinics and prospects for the future. The first two steps apply to each key point to be discussed, the next two apply to all of them together. This would allow us to sequentially order the ideas at the time of writing the discussion and base our findings with causal hypotheses (physiopathologically).





REVIEW ARTICLE

Table 1. Resumen de las recomendaciones para la sección de discusión de los reportes de caso.

	Declaración CARE (2013)	Declaración CARE (2017)	Alsaywid et al (2019)	Anupam Das et al (2021)	Zhonghua Sun (2013)	Nuestro Aporte INICIB 2023
Recomendaciones para la redacción de la sección de discusiones de reportes de caso.	<ul style="list-style-type: none"> Puntos fuertes y limitaciones en el manejo de este caso. Discusión de la literatura médica pertinente. Justificación de las conclusiones. Principal lección que se puede extraer de este informe de caso 	<ul style="list-style-type: none"> Fortalezas y limitaciones en su enfoque de este caso Compare sus resultados con casos informados anteriormente (opcional) Especifique cómo este informe de caso informa la práctica o las pautas ¿Cómo sugiere este informe de caso una hipótesis comprobable? 	<ul style="list-style-type: none"> Se sopesa el caso con el conocimiento existente con una breve discusión de los diagnósticos diferenciales. Se proporciona la base científica para la gestión. Los autores plantean la hipótesis de un mecanismo detrás de los hallazgos. Se mencionan limitaciones Los autores sugieren vías para futuras investigaciones. 	<ul style="list-style-type: none"> Resumir las características esenciales y comparar el reporte de caso con la literatura. Explique el motivo por el que se denuncia el caso. Indique las lecciones/experiencias que se pueden aprender del informe del caso y cómo se pueden manejar las cosas de manera diferente en una situación/caso similar. 	<ul style="list-style-type: none"> Hallazgos y comparación con la evidencia actual Fundamentación de la causalidad de los hallazgos Limitaciones y fortalezas en el manejo del caso expuesto Implicaciones clínicas y perspectivas para el futuro. 	



Table 1 presents the different recommendations for preparing the discussion of the case reports and our proposal^(5,6,10,12). Remember that the discussion is not designed to provide a comprehensive review of the literature, and cite all available references; therefore, all cited references must be critically appraised⁽⁶⁾. The published literature obtained from the literature review should be summarized and also a detailed summary of some citations to be provided^(13,14).

a) Main findings and comparison with current evidence

It is essential, before starting this section, to have the 5 points to discuss, they must be adequately defined since the publication of our case report will largely depend on it. Therefore, these findings should be compared with references preferably not older than 5 years, unless they are very relevant articles that must be cited. Two types of references can be cited, those that directly or indirectly evaluate the finding to be discussed and these can be original articles, case reports, or series.

Above all, prefer references that directly evaluate the problem to be discussed, since indirectly related articles could have less statistical power in relation to the former, since by not being directly related to the objective of the investigation, the determination of the sample size has been calculated with different parameters.

For example, we are going to refer to a hypothetical case in relation to an unusual adverse reaction (of heart rhythm) to an antiviral such as remdesivir in a patient with COVID-19 in the Intensive Care Unit (ICU). In the present communication, the main finding would be the adverse reaction at the heart rate level, so we would

look for the two types of references, original articles that have directly or indirectly evaluated this outcome in patients who have received the medication and reports and series of cases that have presented the same or similar findings to our case. In this example, we could take studies that have reported adverse reactions to this drug, and have estimated the frequency, as well as studies that have evaluated the risk of developing them. Also reports and series of similar cases.

Once the articles are located, compare with the frequency of the original study findings, and after that, if they are treatments or risk or prognostic factors, present the estimates of the different effect sizes (Prevalence Ratio, Odds Ratio, Relative Risk, Hazard Ratio, Standardized Mean Differences, among others) with their respective 95% confidence interval. For diagnostic tests, describe the operational characteristics of the test (sensitivity, specificity, positive and negative predictive values, and likelihood ratios). For example, in the case presented above, we would describe the following:

- The patient presented with an altered heart rhythm on the third day of treatment. Similarly, Kelvin et al, report a sinus rhythm disturbance, however, on the tenth day of treatment. In a study conducted in China, this reaction was reported in approximately 10% of patients who received the drug in the ICU and with a mean of 10 ± 2 days after starting treatment. Likewise, it has been observed that the risk of developing this complication is three times higher (OR: 3.2; 95% CI: 2.6-4.1) in patients admitted to the ICU and that this probability increases when presenting concomitantly with other risk factors such as age over 60 years, severity of COVID-19 and presence of previous heart disease, which were also present in our patient.





There is no established order of how each sentence should be presented. However, we recommend that it be sequential (finding, results of a descriptive study or case report, result of an analytical study) and always integrating all the sentences and comparing the findings.

b) Justification of the causality of the findings (physiopathology)

Once our findings have been compared with the world literature, it is essential to base them pathophysiologically because we must provide the biological plausibility of the findings. With this, list the hypotheses of the successes or failures of the interventions⁽¹⁵⁾. In the example cited above, it is essential to be able to describe the biological events underlying this adverse reaction, what cell receptors are possibly linked, and what physiological mechanisms are involved in the body's response. Everything must be described for each of the points to be discussed. This will lead us to give a better foundation to our proposals and a way to find interventions in the future that can provide solutions to these problems.

For example, in the case presented above, we would describe the following:

-This reaction is possibly due to activating the calcium receptors induced by a coupling of the drug with plasmatic proteins, generating a molecular mimicry that acts as a signaling molecule and, when it comes into contact with the receptor, activating it and generating the events described above.

c) Limitations and strengths in handling the exposed case

Any deficiencies or limitations of the case must be indicated (16). Likewise, the importance of each limitation should be described (6). For example, one of the limitations would be the lack of some ancillary tests or some interventions, such as drugs that in particular cases are not available due to low budgets and the

impact that could have had on patient management. And if for this limitation or another reason, we use another type of intervention, justify it⁽¹⁴⁾. In the description of the strengths, we must mention the validity of our observations and the confidence in the diagnosis and treatment of patients.

Taking the previous example:

- Our main limitation was not having the antiarrhythmics of choice at the time of the event. Despite this, the response to conventional drugs and the rapid intervention of the on-call team was favorable since the drugs would act on receptors similar to those of choice.

d) Clinical implications and prospects for the future

Authors should indicate the direction of future research or the diagnosis or management of similar cases⁽¹⁶⁾. For this reason, all the findings must provide causal hypotheses since they will have an impact on the management of patients and on the performance of new investigations.

For example:

- Pharmacovigilance studies should be carried out, and the safety of the drug evaluated through prospective or retrospective cohorts and determine the frequency and negative impact of this event in patients in order to make future recommendations. In similar cases, similar antiarrhythmics could be chosen, always with caution and prior discussion of the case.

Likewise, we must consider what perspectives we have with the findings, such as conducting new studies, whether observational or interventional and providing recommendations for the management of patients in similar cases until sufficient evidence is added to support it.

At the end of writing the manuscript, it is advisable to apply the "rule of Cs": Clear, concise, coherent, and must convey a clear message (Clear, Concise, Coherent, and must Convey a Crisp message)⁽¹⁷⁾. In order to evaluate the clarity and consistency of the message to be transmitted.

Limitations and strengths of the review

There was no systematic method for the selection of the documentation. However, we carried out an advanced search in three databases and included and excluded articles that would not contribute something additional to the review. The compilation of recommendations from narrative review articles and international guidelines was our main strength.

CONCLUSION

When writing the discussion section of the case report,

it is recommended to follow the following four steps: a) finding and comparison with current evidence, b) justification of the causality of the findings, c) limitations and strengths in management. of the exposed case d) clinical implications and prospects for the future. This would allow us to organize the writer sequentially and avoid the loss of relevant information.

The present methodology must continue to be evaluated, and its impact measured in future publications in our faculty.

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