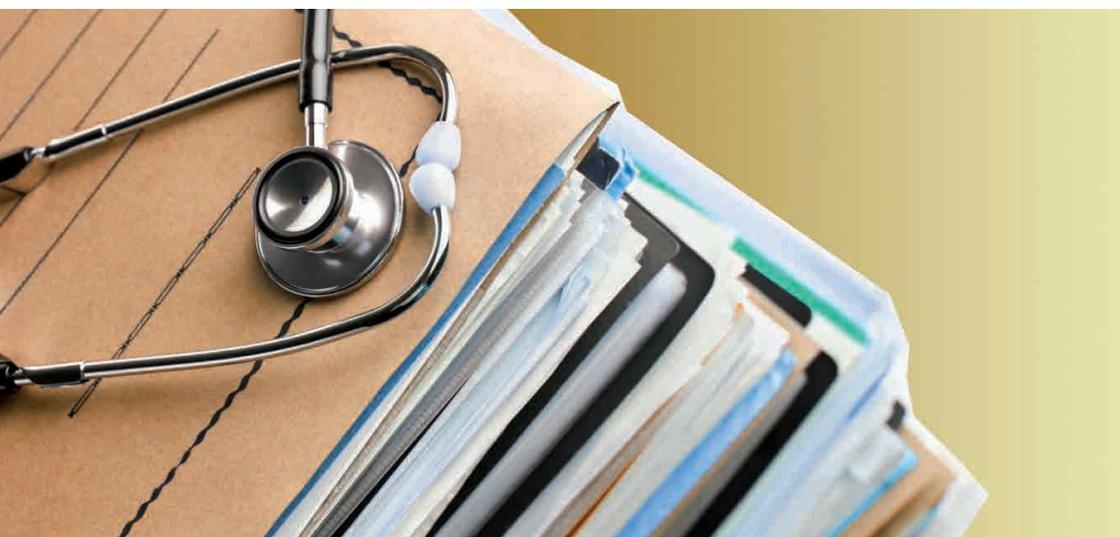


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HOW TO WRITE MEDICAL CASE REPORTS FOR PUBLICATION

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This booklet offers some practical guidelines on how to compose one of the basic written genres in medicine – the medical case report. The text draws on corpus-based genre research into clinical case reporting carried out by the author during his doctoral studies in the field of English linguistics. The aim of the booklet is to provide help to novice medical students in writing medical case reports and getting them published. To achieve this aim, the overall structure of the case report is presented, together with the rhetorical functions and lexico-grammatical features typical for each section of the report.



1. WHAT IS A MEDICAL CASE REPORT?

A medical case report can be defined as a detailed description of specific steps that have been taken by a clinician to treat a single patient. The aim of the report is to describe unusual and interesting medical aspects in the patient's pathology or trauma, its diagnosis, treatment or adverse reaction to the treatment.

2. WHAT TOPICS CAN BE INCLUDED IN MEDICAL CASE REPORTS?

The Journal of Medical Case Reports, for example, accepts case reports that are original and interesting and that expand medical knowledge. The possible topics are:

- unreported or unusual side effects or adverse interactions involving medications
 - unexpected or unusual presentations of a disease
 - new associations or variations in disease processes
 - presentations, diagnoses, or management of new and emerging diseases
 - an unexpected association between diseases and symptoms
 - an unexpected event in the course of observing or treating a patient
 - findings that shed light on the possible pathogenesis of a disease or an adverse event
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3. WHERE CAN MEDICAL CASE REPORTS BE PUBLISHED?

Although many journals are reluctant to accept medical case reports for publication (since the results cannot be generalized to all patients), there are several online journals which focus specifically on clinical case reporting. These are:

- [BMJ Case Reports](http://www.casereports.bmj.com) - www.casereports.bmj.com
- [Journal of Medical Case Reports](http://www.jmedicalcasereports.com) - www.jmedicalcasereports.com
- [Radiology Case Reports](http://www.jdcr.eu/index.php?journal=jdcr) - www.jdcr.eu/index.php?journal=jdcr
- [Journal of Dermatological Case Reports](http://www.radiology.casereports.net/index.php/rcr) - www.radiology.casereports.net/index.php/rcr

BMJ Case Reports



JOURNAL OF MEDICAL
CASE REPORTS



4. WHY ARE MEDICAL CASE REPORTS IMPORTANT?

The publication of some case reports has led to groundbreaking discoveries concerning previously unknown conditions, rare complications of a known disease, or negative interactions of drugs. However, every medical case is a significant piece of clinical information. As Smith (2008) argues: “Health care is in some ways nothing more than an accumulation of case reports just as a population is a collection of people. And just as every person is important and different so is every case – even when ‘it’s just another sore throat”.

5. WHY WRITE A MEDICAL CASE REPORT?

Medical case reports offer an excellent opportunity for medical students and junior doctors to develop their writing skills. These reports are unique in their pedagogic qualities in that they tend to be written similarly to the inductive form of reasoning which is employed by doctors when treating patients. Such reasoning proceeds from particular facts (signs and symptoms) to a general conclusion (diagnosis and treatment).

6. WHAT IS THE STRUCTURE OF MEDICAL CASE REPORTS?

The formal structure of the medical case reports consists of the following sections:

- title
 - introduction
 - case presentation
 - discussion
 - conclusion (optional).
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7. HOW SHOULD THE TITLE BE WRITTEN?

The recommended pattern for titles of case reports tends to be the following:

A PRESENTING WITH B IN C: A CASE REPORT/A CASE SERIES

“Methadone adverse reaction presenting with large increase in plasma methadone binding: a case series”.

Frequently, authors indicate rarity or importance of the case, using words such as unusual, rare, severe, etc.: “Rare association of thymoma, myasthenia gravis and sarcoidosis: a case report”.

Occasionally, authors may use mystifying titles, in which only an indirect indication of what the report describes is stated: “Looks Like Snow” (the title alludes to cocaine and reports on a drug addict who developed health complications due to drug abuse).

8. HOW SHOULD THE INTRODUCTION SECTION BE WRITTEN?

The following steps should be included in the introduction sections of medical case reports:

STEP 1 Establishing a territory	Providing background information by defining and describing relevant pathological conditions, traumas, or special (i.e., diagnostic, investigative, or operative) procedures. "Chronic idiopathic urticaria (CIU) is a common, benign condition for which patients are frequently referred to allergy or dermatology clinics."
STEP 2 Establishing a niche	Indicating a gap in clinical knowledge and the relevance of the report by invoking its uniqueness and/or a lack or absence of similar reports. "A recent literature search revealed no reported cases of injury to the tarsometatarsal (Lisfranc) joint associated with sledding."
STEP 3 Presenting the work	Announcing the report. "We present a case of accidental carbon monoxide poisoning without an early exposure history."

9. HOW SHOULD THE CASE PRESENTATION SECTION BE WRITTEN?

This section of the case report tends to be structured according to the problem-solution pattern with the following steps:

STEP 4 Presenting a problem	Providing a clinical identification of the patient by specifying the patient's demographic data and his/her (past medical, social, family, etc.) history. "A 24-year old Caucasian Irish male student sustained a laceration in his right shin from contact with a coral reef while swimming..."
STEP 5 Investigating the problem	Summarizing significant examination findings and/or results of investigative procedures and determining the diagnosis. "Her physical examination revealed jugular venous distention, a III/VI systolic murmur in the right second intercostal space..."
STEP 6 Addressing the problem	Describing actions taken to treat the patient by recapitulating any surgical or pharmaceutical interventions. "A laparoscopic anterior resection was performed under general anaesthetic."
STEP 7 Evaluating the outcome	Stating the success or failure of the patient's treatment having resulted either in the patient's survival and recovery or death. "Her postoperative course was complicated by a chest hematoma which was evacuated. Despite eventual clearance of her fungemia, the patient died from multi-organ failure in June 2005."

10. HOW SHOULD THE DISCUSSION SECTION BE WRITTEN?

The discussion section of the medical case report tends to contain three steps. However, their order can be quite variable.

STEP 8 Presenting background information	Describing (a specific aspect) of the case and citing clinical studies which aid in presenting this information. "The South Beach Diet is a popular diet plan which primarily relies on the restriction of dietary carbohydrates to achieve weight loss [1]."
STEP 9 Reviewing literature pertinent to the case	Contrasting and comparing present and previous reports of similar cases (or stating a lack or absence thereof). "Only a few reported cases show complete to partial reversal of conduction abnormalities [9] and heart failure [10] with correction of thyroid status during the course of treatment."
STEP 10 Drawing implications from the case	Invoking relevant features of the reported case and suggesting possible clinical, pedagogic, or research implications and recommendations. "The present case report demonstrates the importance of diagnosing esophageal cancer early, particularly in young patients..."

11. HOW SHOULD THE CONCLUSION SECTION BE WRITTEN?

The conclusion section of the case report is optional since it can be incorporated in the discussion section, frequently in step 10, where the main implications of the case are suggested.

STEP 11 Summarizing the reported case	Recapitulating the central features of the reported case. "We have reported a case of trapezium fracture associated with carpo-metacarpal dislocation, a rare injury that was successfully fixed using the relatively simple technique of closed reduction..."
STEP 12 Summarizing the implications	Discussing the most important implications and recommendations of the reported case. "This case highlights the need to be vigilant to other causes of hypoxaemia in chronic respiratory diseases..."

It is important to realize that the steps for writing the individual sections of the report can occur in a different order from the one suggested in this text. In addition, the individual steps may recur and some of them might even be left out. The steps and their order described here are to be interpreted as what could be included, not what is always included in the individual sections.

12. WHAT LANGUAGE IS USED IN THE CASE PRESENTATION SECTION?

In contrast to the other sections of the medical case report, the case presentation section tends to be highly conventional, containing a relatively high number of fixed, formulaic expressions. The following is a case presentation skeleton that can be used for the initial phase of the writing process, followed with the example of an invented case report:

A (AGE)-year-old (RACE) man/woman presented/was admitted with a (PERIOD)-month/year history of (PATHOLOGY/SIGN/SYMPTOM). His/her past medical history included (LIST OF DISEASES). He/she had a strong family history of (DISEASE). (EXAMINATION) was within normal limits. The patient denied/admitted to (UNHEALTHY HABIT). His/her medical history was positive/negative/significant for (PATHOLOGY/SIGN/SYMPTOM). He/she was treated with (DRUGS) and subsequently underwent (SPECIAL PROCEDURE). Upon discharge, he/she complained of (SYMPTOMS). His/her physical examination revealed (SIGNS). (SPECIAL PROCEDURE) confirmed (DISEASE). Therapy with (DRUG) was initiated.



A 28-year-old Caucasian woman presented with a 3-month history of increased sweating and palpitations with weight loss of 7 kg. Her past medical history included type 1 diabetes, hypertension, and osteoarthritis. She had a strong family history of breast carcinoma. Physical examination was within normal limits. The patient denied smoking or other illicit drug or alcohol use. Her medical history was negative for cardiac symptoms or metabolic diseases. She was treated with diuretics and hypertensives and subsequently underwent thrombolysis with heparin and urokinase. Upon discharge, she complained of a continuous bilateral tension headache. Her physical examination revealed her blood pressure to be 170/100. A chest X-ray confirmed inflammatory breast cancer. Therapy with capecitabine was initiated.

13. WHAT GRAMMATICAL CONSTRUCTIONS TEND TO BE USED IN THE REPORT?

- **introduction** sections contain background information, generally accepted as fact, concerning pathologies, traumas or procedures, hence the frequent use of the **present tense**: “Compression fractures are most commonly seen in elderly females secondary to osteoporosis.”
- **introduction** sections also include **modals**, especially “**may**” and “**can**”, which are used to ‘hedge’ or tone down/soften any claims made in the report: “Ankle movement may exacerbate the knee pain. Local recurrence after surgical treatment can be as high as 50%...”
- **case presentation** sections are written mainly in the **past tense (passive voice)** to describe what the author did to treat the patient: “The patient was taken to the operating room.... A magnetic resonance scan was performed...”
- **case presentation** sections also contain the results or findings of investigative procedures – these are always reported with the simple **past tense (active voice)**: “A routine ECG revealed/showed/confirmed/ demonstrated inferior infarct of recent onset.”
- in **discussion** and **conclusion** sections, authors state cautiously the significance of their reported case, using **modal verbs** or other **hedging devices**: “... this might have led to the ketoacidosis in our patient. This may suggest a hormonal predisposition to the condition.”



SOURCES

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