The case history report

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Acknowledgment

- Rison RA. A guide to writing case reports for the Journal of Medical Case Reports and BioMed Central Research Notes. Journal of Medical Case Reports 2013, 7:239

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Why Case Reports?

- Patients – Reviewing and comparing therapeutic options.
- Clinicians – Engaging peer-to-peer communication and education.
- Researchers – Developing testable hypotheses from clinical settings.
- Educators – Reports from “real-world” clinical practice support case-based learning.
- Professionals – Creates evidence.
- Authors – CARE guidelines provide tools to inform and simplify the process of writing accurate and transparent case reports.

13 steps in writing a paper

1. Find a case
2. Read a recent review paper
3. Formulate a temporary thesis & outline
4. Search the literature
5. Take notes from relevant sources
6. Revise thesis & outline
7. Build the reference list
8. Use CARE guidelines to write up the case
9. Write 1st draft
10. Revise text, write intro & conclusion
11. Fill in references
12. Put paper in final form
13. Get a friend to review paper

https://www.care-statement.org
https://www.care-statement.org/checklist
3 parts

• Intro, review & thesis statement
• Case
• Discussion & conclusion

The Case Report: Part 1

• Intro
• Brief review of literature
  • Definitions
  • Epidemiology
  • The problem(s)
• The thesis statement

The Case Report: Part 2

• Use the
  CARE
  case report guidelines
  https://www.care-statement.org
  https://www.care-statement.org/checklist
The Case Report: Part 3

• Discussion
  • What you found (briefly)
  • Pros and cons of your argument
  • Limitations of the literature
  • Limitations of your argument

• Conclusion

Find a case

• You need not be familiar with the topic
• You should have an interest in it
• Good for building “scope of practice”
• Interesting / unusual cases are a good start
  • Diagnosis
  • Management
  • Diagnosis & Management

• You need PROMs
  • Baseline & regular intervals thru management

Find a case

• What not to choose
  • Cases that are too trivial, merely factual or obviously routine

• What to consider
  • Cases that are:
    • Unique presentation
    • Describe UNCONVENTIONAL successful management
    • Describes conventional UNSUCCESSFUL management
    • A specific population
      • Sport, Neurorehab, Paeds, Welbeing etc.
Do I need Human Ethics (IRB) Approval?

- Do I always need to obtain written informed consent from the patient?
  - Yes
- Do case reports require ethics / IRB approval?
  - Yes
  - Ethical review is required if you are unable to obtain consent for whatever reason,
  - or if the case report contains sensitive information,
  - or if there is a potential risk to patient privacy.
- Journal editors require
  - A signed consent form, before agreeing to publish case reports.
  - A clear justification usually needed to be provided if a case report is submitted for publication without formal and specific written consent from the patient or guardian or in the cases of a death, then the next of kin

Reference:

De-identify all content incl. photos
Use consent


Consent

- Required for ALL cases

PROMs: Patient related Outcome Measures

- Patient reported outcome measures
  - Objective
  - Repeatable
  - Relevant

- Need to document outcomes at
  - Baseline and at regular intervals
  - 0, 1, 2, 3, 6, 12 months

Use outcome measures

- PROMs
  - Patient reported outcome measures
  - Questionnaires
  - Pain
  - Disability
  - Psychosocial
  - Functional
  - Health/wellbeing
  - Pictures
    - ROM, Swelling, bruising, scars
  - Videos

Pain Scales
Pain diagram

What's this?

Neck disability index
Orebro Musculoskeletal Pain Questionnaire

- The ÖMPQ score is used as a predictor of risk of long-term disability and failed return to work.
- A higher score indicates higher risk.
- It is a predictor only and there is some potential for false positive or negative results.

- ≤105 = low risk
- 105-130 = moderate risk
- ≥130 = high risk

Psychometric Assessment Tools - DRAM

- Distress and Risk Assessment Method DRAM
- Modified Somatic Perception Questionnaire (MSPQ)
  - Modified Zung Depression Index
    - (Feuerstein 1987)

GAD-7

- General depression questionnaire
General Health

EQ-5D
Short-Form-36 Health Survey

General Health status: EQ-5D

Red Flag Questionnaire

- “Red Flags” should be sought early.
- Patient management focuses on de-medicalizing the problem by:
  - Reassuring the patient that there is nothing seriously wrong
  - That “hurt” does not necessarily equal “harm”
  - Increasing activities as soon as possible.
**Red Flags of Back Pain**

*History*
- Malignancy
- Unexplained weight loss or loss of appetite
- Recent history of illness or infection
- Immunodeficiency
- Pain at rest or during the night
- Trauma
- Recent onset of bowel or bladder dysfunction

*Physical Exam*
- Progressive neurologic deficit in the lower extremity
- Saddle anesthesia
- Ankle spastic weakness
- Fever

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**Red flag questions**

Please complete the following: Do you have:

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Changes in weight in the last six months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Difficulty walking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Numbness in the hands or fingers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sharp or burning pain in the lower back</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Changes in bowel movements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Problemas with bladder control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Changes in control of bladder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Pain in the chest that gets worse as the day moves forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Pain at night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Pain when bending forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Any changes in your bowel or bladder control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Weakness in your legs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Changes in control of your bladder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Pain in your hips</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Pain on getting up from a chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Pain when you sneeze or cough</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Pain when you turn or twist your body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Pain when you bend forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Pain when you lift your leg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Pain when you move your leg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Pain when you lift your arm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**PROMs**

Electronic versions of PROMs

Email me!

hpollard@optushome.com.au
**Questionnaires**

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
<th>Region</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBP</td>
<td>NDI</td>
<td>Neck pain</td>
<td>NDI</td>
</tr>
<tr>
<td></td>
<td>ODQ</td>
<td>Shoulder</td>
<td>SPADI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elbow</td>
<td>MOOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Knee</td>
<td>KOOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Foot &amp; ankle</td>
<td>FAOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shin</td>
<td>FAOS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Upper limb function</td>
<td>UEFI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lower limb function</td>
<td>LLET</td>
</tr>
</tbody>
</table>

**Electronic Outcome Measures: Calculators**

- [https://orthotoolkit.com](https://orthotoolkit.com) (FREE)
- [http://www.orthopaedicscores.com](http://www.orthopaedicscores.com) (FREE)
- [https://www.mdapp.co](https://www.mdapp.co) (Medical conditions) (FREE)
- [https://erepsonline.com/support/category/outcome-measures/](https://erepsonline.com/support/category/outcome-measures/)

**Read a review paper**

- A recent review paper will:
  - Determine if the topic is too broad or too narrow
  - Orientate your thinking
  - Familiarise yourself with the literature & its direction
  - Indicate where to delineate your topic
  - Suggest possible theses for your case presentation

- **Thesis**
  - “A proposition stated or put forward for consideration, especially one to be discussed and proved or to be maintained against objections”
Read a review paper

- The key words
- Use different concepts within the text
- Use them for a subsequent search
- The reference list
- Go to other review papers cited
- Then go to key papers on relevant concepts
- Search those with abstracts
- Search their key words & topics
- Search by: author, topic, condition, treatment, type of study
- MeSH & non-MeSH key words
- First goal: familiarise & expand it search

Example: Headache

An unusual postural headache: a case report


Example

- Key words
  - Spontaneous Intracranial Hypotension (SIH)
  - Postural Headache
  - Chiropractic
  - Diagnosis
  - Telemedicine
  - Adverse Event
Key words

- MeSH (Medical Subject Headings)
- Non MeSH
- Synonyms
- Lay terms
- ICF terms
- Diagnosis / injury / disease,
- Lifestyle factors,
- Contextual factors

ICF domains


This presentation is a resource only.
The introduction

- Catch the attention of your reader
- Provide relevant context for your topic
- Convey the structure of your argument
- Conclude with a thesis statement
  - a statement of your position.

Example

- Intense headaches are relatively uncommon and potentially dangerous diagnostic challenges.

Purpose statement

- A purpose statement announces the purpose, scope, and direction of the paper.
- It tells the reader what to expect in a paper and what the specific focus will be.
- A purpose statement makes a promise to the reader about the development of the argument but does not preview the particular conclusions that the writer has drawn.
- A purpose statement is generally located near the end of the introduction.
This paper presents an example of an intense headache that was both new and intense. Importantly, it presented with a key additional feature that it was aggravated and relieved by a change in posture. Specifically, this case highlights an example of Spontaneous Intracranial Hypotension (SIH) causing an intense headache in a young active male of tall stature who presented remotely to a chiropractor and was referred to the emergency room initially for management with caffeine and later with autologous blood injection into the epidural space.

**Example**

- This paper presents a case of an evolving unusual thunderclap headache that presented to a chiropractor.

**What is a “thesis statement”?**

- A thesis statement:
  - makes an assertion about a topic and predicts how the topic will be developed.
  - It does not simply announce a topic: it says something about the topic.
  - makes a promise to the reader about the scope, purpose, & direction of the paper.
  - It summarizes the conclusions that the writer has reached about the topic.
  - Is generally located near the end of the introduction.

- A thesis statement is focused and specific enough to be proven within the boundaries of the paper.
Formulate the thesis statement

• A successful working thesis has 3 characteristics:
  • It should be interesting to your audience.
  • The language should be as specific as possible.
  • It must limit and focus a topic enough to make it manageable.

Example

• Inadequate working thesis:
  • The “biomechanical model” of low back pain is being debated around the globe.

• Adequate working thesis:
  • Scientists from several countries have challenged the “biomechanical model” of low back pain and claimed that it is more dated science and philosophy than current evidence based practice.

Argumentative thesis statement

• An arguable statement should have 3 characteristics:
  • It should attempt to convince readers of something, change their mind of something, or urge them to do something.
  • It should address a problem for which no easy solution exists or ask a question to which no absolute answer(s) exists.
  • It should present a position that readers could disagree with realistically.
Example

- Examples of argumentative propositions:
  - Van Gogh's paintings are the work of a madman.
  - The Blues Brothers was the best movie of the 1980's.
  - Bed rest has no place in the management of low back pain.

Thesis statement

- A thesis statement is an assertion, not a statement of fact or an observation.
  - Fact or observation:
    - People use many lawn chemicals.
  - Thesis:
    - People are poisoning the environment with chemicals merely to keep their lawns clean.

Thesis statement

- A thesis takes a stand rather than announces a subject.
  - Announcement:
    - The thesis of this paper is the difficulty of defining the subluxation.
  - Thesis:
    - Creating a well accepted definition of "the manipulable lesion" is more difficult than many chiropractors and osteopaths believe.
Thesis statement

- A thesis is the main idea, not the title. It must be a complete sentence that explains in some detail what you expect to write about.

  - Title: The Pension and Old Age.
  - Thesis: Continuing changes in the Pension System makes it almost impossible to plan intelligently for one's retirement.

Thesis statement

- A thesis statement is narrow, rather than broad. If the thesis statement is sufficiently narrow, it can be fully supported.

  - Broad: The Australian steel industry has many problems.
  - Narrow: The primary problem of the Australian steel industry is the lack of funds to renovate outdated plant and equipment.

Examples

- It is important to take a thorough history and examination and how if not recognised and subsequently treated with manual therapy, a spontaneous dural tear could be attributed to the treatment of the chiropractor.

- Discussion is provided of the implications of a missed diagnosis and possible subsequent chiropractic management with the evolving SIH being attributed to the chiropractic intervention rather than its true "spontaneous" nature.
Thesis Statement Exercise

• Write out the main idea from your paper in 25 or fewer words (the point you want the reader to get)
• Print and use this later!

• Now answer these questions:
  • What question is my paper / review asking?
  • How can I answer that question AND focus on a small area of investigation?

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Authoring

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Thesis Statement Exercise

• Can I sum up the main idea of my paper in a sentence?
  • Can reduce what you just wrote into a sentence or two

• What "code words" (such as "setting the disc" or "subluxation") does the draft of my thesis statement contain?
  • Are these words adequately explained?

• As I read my paper: have I supported the thesis, or digressed? Where? How?
  • Do I need to change the thesis?
The Temporary Outline

• After determining the thesis outline you should construct an outline of your paper.

• Ask the questions that will help you (and the reader) answer the questions posed by the thesis statement.

• These points must be logically answered to help the reader conclude that the temporary thesis can be stated as a valid conclusion and become your final thesis.

The Temporary Outline

• By setting up the thesis statement and the outline you can:
  • Provide steps which will allow you to logically reach the thesis statement
  • Reach this point with a minimum of wasted time
  • Choose references and information which will help you achieve the desired conclusion

The Temporary Outline

• Is a deductive process
  • You temporarily set up a general statement
  • You investigate the evidence for the statement
  • Then either accept the statement or modify it to reflect the evidence
  • Therefore, the thesis statement & intro is meaningless unless supported by the facts

  • Quality of evidence (references) is important!
Finding quality references

- 1° versus 2° references
- Opinion or fact
- Prospective or retrospective
- Review or experimental data
- Randomised, placebo controlled?
- Recent

Levels of evidence for COVID-19 data

- Meta analyses
- Randomized Trials
- Cohort Studies
- Case control studies

Not this!
The Reference list
- Ensures adequate info on the topic without bias
- Allow time to get publications
  - Library searches (self or other)
    - Abstracts, full text
  - Paper ordering services
  - Connect with a student
- Familiarise yourself with the type of research on your topic
  - Will help with the broadening or narrowing of the thesis statement & outline

Preparing the reference list
- Where to find references:
  - Library catalogues
  - Periodical indexes
  - Databases
    - INTERNET (search engines)
    - Medline (PubMed)
    - CINAHL, OVID, EBSCO
    - Index to chiropractic literature
    - Sports Discus

The reference list
- Provides clues:
  - Titles, subjects & authors.
- Critically evaluate source of information:
  - Peer-reviewed source?
  - Date of publication
  - Where is it published?
    - Is author an authority?
    - Are the author’s references in OTHER publications?
    - Impact factor
    - Published in last 2 yrs
How to start your search

- Goto: PubMed
- PubMed User guide
- How do I find full text articles
  - When full text is available in PubMed Central (PMC), the "Free in PMC" icon will appear

Vancouver style

- How do I put a journal citation together?
  - https://libguides.murdoch.edu.au/Vancouver/sample

Vancouver referencing style

The sources that you refer to in your text should be numbered in the text and then listed in number order.

Red flags in the headache history are of concern and should be screened. Red flags include: (1) systemic symptoms including fever; (2) neoplasm history; (3) neurologic deficit (including decreased consciousness); (4) sudden or abrupt onset; (5) older age (onset after 65 years); (6) pattern change or recent onset of new headache; (7) positional headache; (8) precipitated by sneezing, coughing, or exercise; (9) papilledema; (10) progressive headache and atypical presentations; (11) subsequent positive neurologic or systemic examination; (12) altered neurologic examination; (13) change in headache quality; (14) change in headache location; and (15) painkiller overuse or new drug at onset of headache [2].

Let's do a search

User Guide


Headache
Search “Headache”

Boolean Operators

- Headache AND Neck
- Headache AND Neck AND Diagnosis
- Headache NOT Surgery

 Filters

https://utas.libguides.com/SystematicReviews/Boolean
Search: Key words
- Postural Headache
- Spontaneous Intracranial Hypotension
- Diagnosis
- Chiropractic
- Telemedicine
- Adverse Event

Search: Synonyms
- Headache
- "Thunderclap" headache
- Migraine-like
- "Postural" Headache
- Spontaneous intracranial pressure (SIH)
- "Worst" headache

Structure of a Case Report
- Title page
  - Present a description of what the article reports followed by "……: a case report"
- Abstract
  - Not exceed 250 words.
  - Must include the following separate sections:
    - Background: why the case should be reported and its novelty
    - Case presentation: a brief description of the patient's clinical and demographic details, the diagnosis, any interventions and the outcomes
    - Conclusions: a brief summary of the clinical impact or potential implications of the case report
Example: Abstract

**Abstract Background:** This paper presents a case of an evolving, unusual thunderclap headache that presented to a chiropractor.

**Case Presentation:** The term “thunderclap” headache was applied to a case of a patient with a perimembranous herniation of the cerebellar tonsils diagnosed as a spontaneous intracranial hypotension (SIH) associated with a spontaneous tear of the dura. It was referred to a local hospital for management with a neurosurgical team.

**Conclusions:** The significance of key features of the headache and examination and how fMRI recognized and confirmed these with a hippocampal lesion. The clinical presentation and the management of the patient’s condition, including a discussion on the importance of a multidisciplinary approach, are presented.

Keywords: Spontaneous intracranial hypotension (SIH), Chiropractic, Focal headache, Tolled medicine, Diagnosis, Atlanto-axial event

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**Structure of a Case Report**

1. **Keywords**
   - Three to ten keywords

2. **Background**
   - Should explain the background to the case report, its aims, a summary of the existing literature.

3. **Case presentation**
   - This section should include a description of the patient’s relevant demographic details, medical history, symptoms and signs, treatment or intervention, outcomes and any other significant details.
   - Follow CARE guidelines

4. **Discussion and Conclusions**
   - This should discuss the relevant existing literature and should state clearly the main conclusions, including an exploration of their relevance or importance to the field.
The CARE guidelines help increase the completeness, accuracy, and transparency of published case reports.

CJA Instructions for authors

Preparing supporting information

- Author information
- Cover letter
- Suggested peer reviewers
- Excluding peer reviewers
- Consent forms
Cover letter

1. An explanation of why your manuscript should be published
2. An explanation of any issues relating to journal policies
3. A declaration of any potential competing interests
4. Confirmation that all authors have approved the manuscript for submission
5. Confirmation that the content of the manuscript has not been published, or submitted for publication elsewhere
6. If you are submitting a manuscript to a particular special issue, please refer to its specific name in your covering letter

Chiropractic Journal of Australia

Thank you!

Cronulla, NSW, Australia