

Writing and Revising Case Reports and Case Series Reports



Pamela Derish
Scientific Publications Manager
Department of Surgery, UCSF

Topics Covered:

- 1) Organizing and writing the case report
- 2) Organizing and writing the case series report
- 3) Revising the report
- 4) Resources/how to get editorial help

Case Reports

“The documentation in the scientific literature of a single clinical observation.”

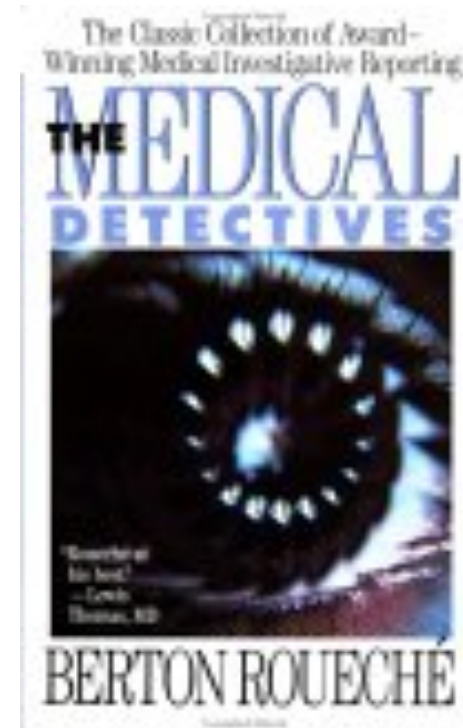
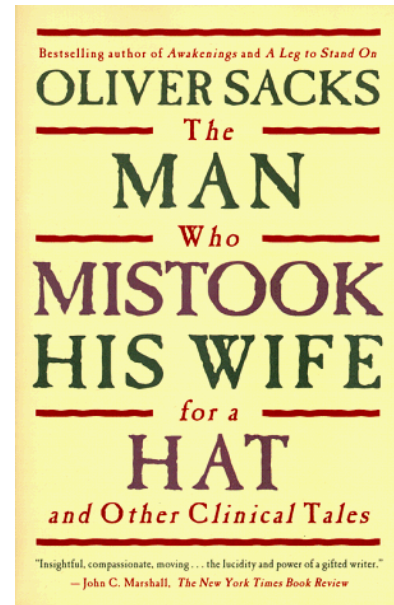
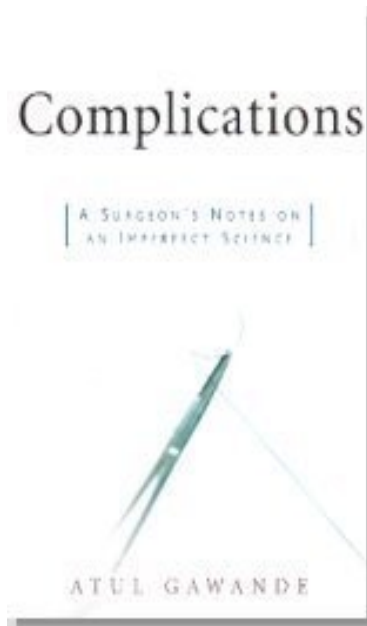




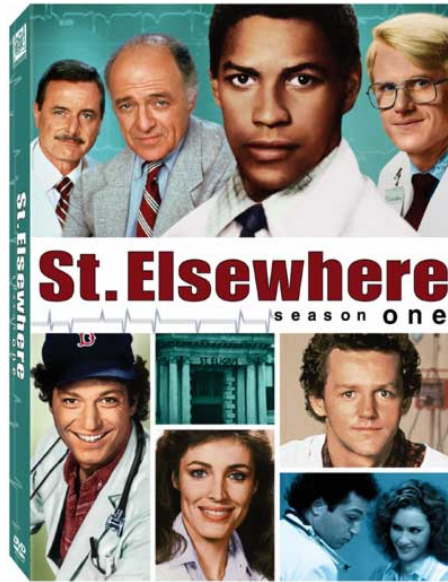
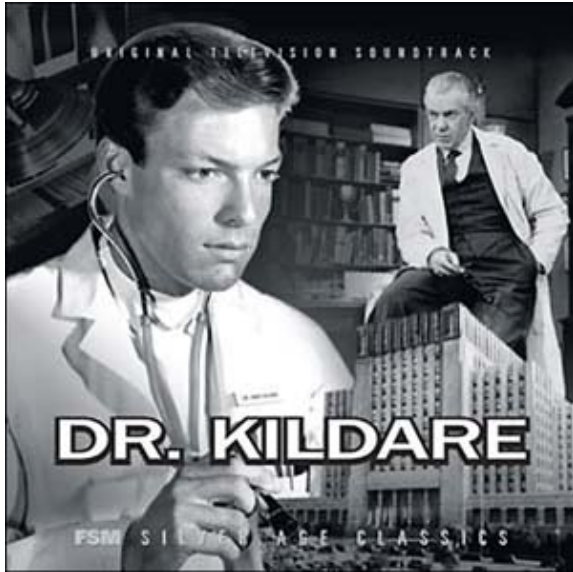
As early as 1605, Sir Francis Bacon pointed out the loss to medicine of the failure to report a new case.



Sir William Osler described case reports as “*scientific observations that have been carefully recorded to produce a valuable education and research resource.*”

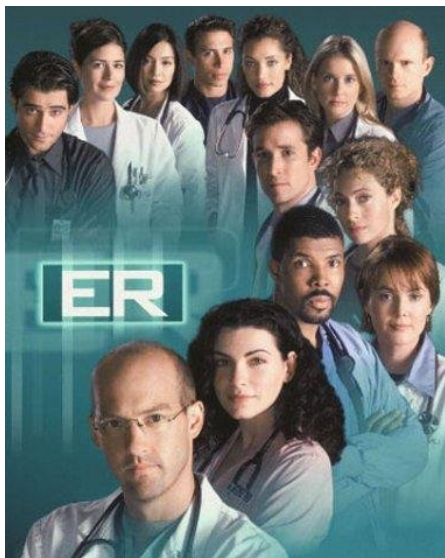


Although case reports are ideal for the novice clinician writer, more experienced clinician writers have raised the humble case report to literary status.



The case report has long been a staple of TV drama.

Why?



Because case reports tell interesting *stories*.

But many journals aren't interested in publishing these stories, though some still are.

TABLE I. Selected Journals Classified by Publication Status of Case Reports, 2006

Publish case reports	Publish/modified format	Do not publish
<i>Annals of Plastic Surgery</i>	<i>Annals of Thoracic Surgery</i>	<i>American Journal of Human Genetics</i>
<i>Archives of Ophthalmology</i>	<i>American Journal of Obstetrics and Gynecology</i>	<i>Annals of Surgery</i>
<i>Birth Defects Research</i>	<i>American Journal of Ophthalmology</i>	<i>Archives of Otolaryngology</i>
<i>Clinical Genetics</i>	<i>Chest</i>	<i>Archives of Pediatric & Adolescent Medicine</i>
<i>Cleft Palate/Craniofacial Journal</i>	<i>Journal of Medical Genetics</i>	<i>British Journal of Surgery</i>
<i>Journal of Pediatrics</i>	<i>Lancet</i>	<i>Circulation</i>
<i>Neurology</i>	<i>New England Journal of Medicine</i>	<i>Journal of the American Medical Association</i>
<i>Pediatrics</i>	<i>Obstetrics and Gynecology</i>	<i>Laryngoscope</i>
	<i>Plastic and Reconstructive Surgery</i>	

Carey JC. Significance of case reports in the advancement of medical knowledge.
Am J Med Genet 2006

Some journals publish *only* case reports. For surgeons, these journals will likely have lower impact factors than “regular” journals, but are still viable options if you need them.



Journals don't always call them case reports...

Short report

Selected Report

Brief Report

Brief Communication

Image of the Month

Experience & Reason

Clinical/Scientific Note

Critical & Laboratory

Clinical Report

Observations

Journals need a good reason to publish a case.

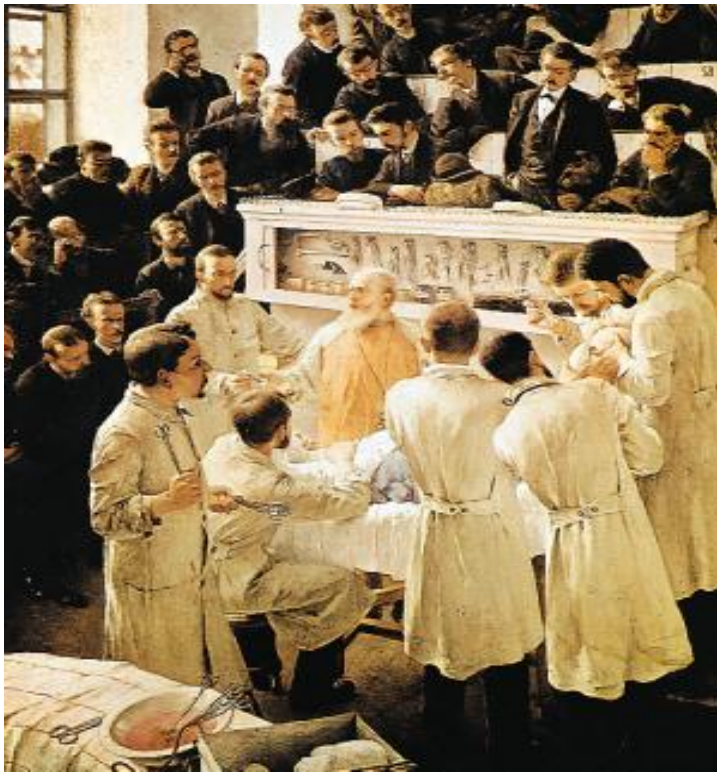
Among 38 surgery journals that publish case reports...

18 (47%) wanted the case to be unusual/rare

16 (42%) wanted the case to be instructive

10 (26%) wanted the case to be innovative

The most important rule for writing a good case report:



Be very clear about the single message (= *why are you telling this particular story*) that you want to bring to your readers.... ask yourself ...

Why, exactly, is this particular observation important?

What does it teach us?

To have a clear idea of the message of your case report, and the intended audience for your message, follow some steps:

1. Identify the Category Your Case Falls Into

Totally original condition or new disease?

Rare, previously sparsely reported condition?

New and unique treatment?

Rare or novel adverse event

Unexpected complication of a procedure?

2. Determine the Educational Message of Your Case

Raise awareness so that diagnosis may be made more readily in future?

Shed new light on possible etiology/pathogenesis of a condition or complication?

Illustrate a new principle, or support or refute current theory?

Elucidate a previously misunderstood clinical condition or response to a treatment?

Inform on how a problem can be anticipated and avoided in the future?

3. Identify the Target Audience and Journal

General interest?

Subspecialists in a particular field of surgery?

4. Scrutinize the Journal's Instructions for Authors

Word and reference limits

Number of illustrations

Abstract included (or not)

Many journals expect compliance with this structure:

Title

Abstract

Introduction

Case Description

Discussion & Comments

Conclusions & Recommendations

Title:

Should facilitate retrieval with electronic searching

May need to include study design – “X Presenting with Y in Z : Case Report”

Examples:

Treatment of an ear laceration with adjunctive leech therapy: a case report

Off-pump repair of a post-infarct ventricular septal defect: the 'Hamburger procedure'

Hepatitis E associated with surgical training on pigs

Group A streptococcal necrotising fasciitis masquerading as mastitis

Some titles are catchy but aren't searchable:

A Silent Sponge Speaks



Abstract (if the journal wants one)

Clinical question or problem

State why this case is noteworthy = What is the Educational Message?

Check Journal's instructions to authors for word limit

Structured with or without separate sections with headings:

Background / Case Presentation / Conclusions

Background/ Case Report / Discussion

Introduction

Why is this case report important? Why is it being reported?

Put clinical case in context

State whether case:

- is a reminder of useful findings

- supports another ‘unique/unexpected’ case report

- disagrees/contests another report, etc.

For a “unique” case, especially, but for any case where you also do a literature review, describe the search criteria and strategy used in establishing that the case is unique.

Description of the Literature Search

Include details of the complete analytic literature review, with its search strategy, using it to justify the merit of the case report.

Search strategy should include enough elements for the reader to easily replicate the search:

Database(s) searched: *MEDLINE & EMBASE (and Clin-Alert) for a case report of an adverse drug event or medication error*

Languages covered

Search terms used

Case Description

patient demographics, avoiding patient identifiers

patient's clinical picture – present illness, medical etc history

patient's admission, pertinent findings on physical examination and laboratory values that support the case

diagnostic procedures that are pertinent and support the case

Case Description *cont'd*

Photographs of clinical findings, histopathology, x rays, etc., as they relate to the case, avoiding patient identifiers

Patient's events in chronological order

Description of the patient's medical and surgical treatments, with eventual side effects and complications

Statement of achievement of written consent from the patient for publishing the case report. (journal rules may vary)

Case Description *cont'd*

With rare exceptions...

should not sound like you are presenting the patient at rounds

should not sound like a dictated “op report” or the patient’s chart

This is a formal piece of writing.
Avoid jargon and unnecessary abbreviations.



Case Description *cont'd*

Should relate the sequence of events clearly, in chronological order, including diagnoses made and treatment given at other institutions . In this example, note how explicit the time relationships are.

Example

A 26-year-old man underwent bilateral sequential lung transplantation requiring cardiopulmonary bypass in June 1996 at our institution. He did well post-transplant, attaining a peak post-transplant forced expiratory volume in 1 second (FEV₁) of 2.8 liters (91% of predicted). By 2000, he had developed bronchiolitis obliterans syndrome with significant airflow obstruction. In March 2002, with an FEV₁ of 0.39 liters (10%), he was intubated for hypercapneic respiratory failure, underwent a tracheostomy, and was placed on home mechanical ventilation with pulmonary rehabilitation until September 2002 when he received a right single-lung re-transplant. The patient was discharged from the hospital after a few weeks and proceeded to live an active, full life.

Akindipe OA, Fernandez-Bussy S, Staples E, Baz MA, 2007

Discussion/Comments

“This case is striking because...”

Explain how the findings in the case relate to what is already known.

Compare case report with published literature, describing similarities and differences between them.

Emphasize contentious points. Explain and clarify them.

Synthesis, not who found what, when, so avoid sentences that create a litany of author names and dates.

Discussion/Comments

Example of synthesis rather than litany of names (and also relates what has been found before to what the author is reporting):

The management of CAV in this 5-year-old child is very difficult because of the location of the lesion and the small patient size. The natural history of such a lesion is largely unknown. Extrapolation from the adult population with more than 70% atherosclerotic LMCA stenosis confers a survival rate of 72% at 1 year and 41% at 3 years (5). Although the pathophysiology of coronary lesions is different in CAV, the prognosis of severe LMCA CAV stenosis is likely to be at least comparable to that of atherosclerotic disease. As a matter of fact, discrete CAV lesions of 40% or worse stenosis in the proximal or middle segment of the major coronary vessels other than the LMCA have been associated with a 3-year mortality rate exceeding 50% if left untreated (6).

Discussion/Comments

Specific types of cases require specific information:

[a] case of a new or unusual disease... *needs evidence to support its rarity, should compare it with other reported cases, should discuss implications for dx/rx/outcome.*

[b] case of an unusual association of 2 diseases... *should discuss features common to both diseases, give evidence supporting an underlying cause, discuss implications for pathogenesis, dx, rx, etc.*

[c] case of previously unrecognized therapeutic events...*should attempt to show relationship between dose-response, between withdrawal of rx and rechallenge, supportive evidence from previous reports, etc.*

Discussion/Comments

Specific types of cases require specific information:

[d] case that suggests an inherited genetic defect...*should add a section describing results of studies of the patient's family, which may or may not suggest a pattern of inheritance.*

[e] case that required sophisticated/extensive laboratory tests...*should describe these in a Methods section and include a Results section, should emphasize lesson to be learned, list opportunities for research, and indicate any evidence-based recommendations and justified conclusion.*

Discussion/Comments

Elaborate on the educational message of your case:

What lessons can be learned from your experience?

Implications for diagnosis, treatment, prognosis?

Could be ...*best practice to emulate, pitfalls to avoid, implications for diagnosis, treatment, prognosis, and outcome...*

... but be cautious about generalizing on the basis of one case.

Conclusions/Summary/Recommendations

End with the “take home message” ... What was learned?

Recommendations for patient management?

Interesting research direction to pursue?

Conclusions/Summary/Recommendations

Example (underlining shows contributions of *this* case):

Because of their rarity, it is unclear if hepatic abscesses caused by *Staphylococcus aureus* (or MRSA) follow a different natural history than those caused by enteric flora. However, the aggressive nature of this patient's abscess suggests that MRSA abscesses can, on occasion, have an extremely virulent clinical course, supporting recent reports of MRSA causing severe invasive illnesses and several unusual clinical syndromes. This case also raises the possibility of aggressive hepatic abscesses occurring secondary to skin and soft tissue infections, underscoring the importance of recognizing and appropriately treating community-acquired MRSA lesions. Finally, MRSA must be considered as a possible source of hepatic abscess in patients without obvious gastrointestinal sources.

Protect the Patient's Privacy and Dignity

Journals take the issue of privacy seriously:

Always refer to patients by an assigned number—never by initials (unless you are Oliver Sacks).

Exclude:

information that entails no risk factors

data that could compromise the patient's right to privacy

information not critical to the clinical purpose of the report (e.g., occupation, race, or religion unless these factors bear directly on the case).

Include:

Age and sex, because these factors may turn out to have some bearing on the condition as more cases accrue.



Patient Consent

Some journals ask that the acknowledgments section include a statement that informed consent was obtained:

"Written consent was obtained from the patient or their relative for publication of the study."

You can see how this could affect your choice of journal!

Patient Consent

A journal may require consent to publish a case report but UCSF's Committee on Human Research may not!

CHR does not require review (and therefore a consent document) for:

Report about up to three clinical experiences or observations identified in the course of clinical care, provided that FDA regulations requiring IRB approval do not apply such as use of: articles (e.g., drugs, devices, biologics) that have not been approved for use in humans; articles requiring exemption from FDA oversight; articles under an IND/IDE.

<http://www.research.ucsf.edu/chr/Apply/RefGuide.asp>

Protecting the Patient's Privacy and Dignity

Dignity:

Write about patients as people, not as a case, a symptom, a disease, or an outcome.

No: The astrocytoma case was responsive after recovery from the anesthetic...

Yes: The patient was responsive after recovery from the anesthetic.

Avoid blaming the patient.

No: The patient failed therapy.

Yes: The therapy was not successful.
The therapy failed.

Case Series Reports



A Case Series is...

A group of patients with similar diagnoses or undergoing the same procedure followed over time.

The case series may be used in several settings:

- Initial reports of a new diagnosis or innovative treatment

- Single physician or hospital reports of outcomes

- Multi-institutional registry

Case series may serve as valuable background for future work:

All of these started as case reports or series:

Burkitt's report on jaw tumors in African children

Blalock and colleagues' initial efforts in cardiac surgery

Starzl and colleagues' observations of donor leukocyte chimerism

CDC's first cases of pneumocystic carinii pneumonia reported in the Morbidity and Mortality Weekly Report

Case Series

May obviate the need for a randomized controlled trial or other more sophisticated study design

Describe the natural history of a condition or the recovery and complication rates after a treatment or procedure

“Benchmark” so that other practices can compare their own complication rates (or length of stay, cost, *etc.*) with published results

BUT, often there is a bias towards reporting only series with the best outcomes and there is often no control group.

3 Types of Case Series:

- 1) Resembles the individual case report but reports > 1 case
- 2) A personal or institutional series of patients is reviewed and analyzed retrospectively
- 3) Seeks answers to specific questions from an analysis of a personal or institutional series and may include cases from the literature as well

Formats vary according to the rationale for the study.

Writing the Case Series Report

1) Resembles the individual case report except > 1 case is reported

Presents evidence of:

- a new disease or clinical finding
- an unusual association of diseases or clinical findings
- previously unrecognized therapeutic events

1) Resembles the individual case report except > 1 case is reported

- IF series includes > 2-3 cases, **do not** provide detailed case histories.
- Instead, summarize the findings of your analysis in one or more tables.
- Illustrate the most important features of the series by selecting only two or three representative cases to describe in detail.

Organization:

Introduction – Patients – Representative Case(s) –
Case Analysis and Findings – Conclusion

Writing the Case Series Report

2) Personal or institutional series of patients reviewed retrospectively

- Introduction states the reason the review was undertaken. There may be no specific hypothesis, but there must be a well-thought-out rationale.
- Describe the criteria for case selection.
- Precisely define the groups and subgroups.
- Review only data that are directly relevant to the reason for the review; acknowledge and outline deficiencies in the data.
- Statistical analysis usually descriptive only

2) Personal or institutional series of patients reviewed retrospectively

Organization:

Introduction – Case Selection – Methods – Results - Discussion

Writing the Case Series Report

3) Seeks answers to specific questions from an analysis of a personal or institutional series

- Introduction poses specific hypotheses or questions

Example:

The purpose of this study was to evaluate our experience with 55 consecutive completion pneumonectomies performed in cancer patients, with the aim of identifying factors that influence morbidity, immediate results and long-term survival.

3) Seeks answers to specific questions from an analysis of a personal or institutional series

- Methods precisely defines groups and subgroups, if any, and includes the definitions and criteria used to select the cases.

Example:

Tumor histology was classified according to the 2000 version of the World Health Organization histologic typing of lung tumors. All lung cancers were staged with the 1997 UICC/AJCC TNM classification system.

Recurrent lung cancer and second primary lung cancer were discriminated using the following criteria: a second primary tumor was of different histology or if histology was the same, the disease-free interval between cancers was at least 2 years or the second cancer was in the different lobe but with no cancer in common lymphatic or extrapulmonary metastasis at the time of diagnosis.

3) Seeks answers to specific questions from an analysis of a personal or institutional series

- The data may be pooled and summarized, usually in tables, and may be tested statistically.

Example:

In Methods: The Kaplan–Meier method was used to calculate the expected survival rates after completion pneumonectomy and the data included operative mortality. Statistical significance was calculated with the log-rank test and a P -value of the 0.05 or less was considered significant. Survival analysis was performed for the entire group of patients, for second primary cancer, metachronous cancer, metastasis and recurrence, for stage, and for interval from first resection to completion pneumonectomy for completely resected patients.

In Results: Three- and 5-year survival for patients with stage I lung cancer was 78.8 and 67.5%, 33.3% in stage II, 60% in stage IIIA, 51.9 and 34.6% in stage IIIB, and 0% in stage IV ($P=0.1$).

Revising the Case or Case Series Report



In the past, patients had operations, done by surgeons, who then put them on antibiotics.

Today patients undergo surgical procedures, performed, undertaken, or carried out by surgeons, who then initiate antibiotic medication.



Put the paper aside for a few weeks...
because familiarity breeds contempt.

Then, read the draft critically a couple
of times...

for logical organization and
coherent development

for clarity, conciseness, and
grammatical correctness

1. Problems with how sentences begin: (“It...that” clauses)

It is apparent that

It seems reasonable to state that

It is noteworthy that

We wish to call attention to the fact that

Just eliminate this “introductory deadwood” that adds words without adding meaning.

Skip the “it...that” clause and start the sentence with the next word!

1. Problems with how sentences begin: empty phrase

There was pain in the abdomen.

Instead:

The abdomen was painful.

The patient's abdomen was painful.

1. Problems with how sentences begin: abstract noun

Resection of the aneurysm was accomplished.

Instead, put the action into the verb:

The aneurysm was resected.

We resected the aneurysm.

2. Redundancies

The patient was premedicated with acetaminophen 30 minutes before the operation.

Physical examination revealed an acutely ill woman in great distress.

Careful examination revealed...

Malignant in character

Cramping in nature/ general consensus/ new and novel/
small in size/ *etc*

3. “Shorthand” inappropriate for professional writing:

Urinalysis was negative

The results of urinalysis were negative.

The patient spiked a fever.

The patient's temperature rose sharply.

4. Wordy Phrases

decreased number of.....fewer

be present in association with.....accompany

due to the fact that.....because

give rise to.....cause

in the majority of cases.....usually

experienced emesis.....vomited

4. Wordy Phrases:

etiologic factor.....cause

at no time..... never

at the present time.....now

in close proximity.....near

in the absence of.....without

major emphasis.....stress

with the exception of.....except

5. Noun Clusters:

Clusters like the ones below save words but create confusion, whereas the phrases on previous slides show how many words truly aren't necessary. Cut out *the words you don't need* (see earlier slides) and include the ones you do!

a seventh intercostal space anterior lateral thoractomy incision

health maintenance network systems

physician sex education

Insert the prepositions! Education of physicians? Education by physicians?

6. Pile-ups before the noun in a sentence:

iron containing globules

hyaluronidase treated area

a methylene blue stained preparation

adenosine triphosphate activated actomyosin contraction

Avoid placing a complex adjectival phrase before the noun and omitting the prepositions!

Globules that contained iron / an area treated with hyaluronidase

Would you like help on your clinical paper?

Editorial review is available for Department of Surgery faculty, postdoctoral fellows, and residents.



"I like it—it's wonderfully editable."

Contact:

Pamela Derish, Scientific
Publications Manager

415.885-7686

pamela.derish@ucsfmedctr.org

Sources:

Ansaloni L et al. WJES and case reports/case series. World J Emerg Surg, 2007.

Carey JC. Significance of case reports in the advancement of medical knowledge. Am J Med Genet Part A, 2006.

Chelvarajah R, Bycroft J. Writing and publishing case reports: the road to success. Acta Neurochir (Wien), 2004.

DeBakey L., DeBakey S. The case report. I. Guidelines for preparation. II. Style and form. Intern J Cardiol, 1983, 1984.

Eastwood S, Derish PA, Berger MS. Biomedical publication for neurosurgery residents: a program and guide. Neurosurgery, 2000.

Sorinola et al. Instructions to authors for case reporting are limited: a review of a core journal list. BMC Medical Education, 2004.