How Articles Are Reviewed — Made Easy

A Beginner's Guide to Peer Review and Critical Appraisal for Medical and Dental Authors and Reviewers

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Preface

Every article in a respected medical journal has been read, questioned and judged by experts before it was published. This process is called peer review. Understanding it helps you in two ways: as an **author**, you can write papers that pass review; as a **reviewer**, you can judge others' work fairly and confidently.

Most doctors are asked to review a paper without ever being taught how. This book gives a simple, step-by-step method that anyone can follow, with checklists, examples and a sample review report.

Who this book is for

- Postgraduate trainees and young faculty submitting their first papers
- Doctors invited to review for a journal for the first time
- Students learning to read and appraise research critically (journal club)

How to use it

1. Chapters 1–3 explain what happens to a paper after submission.
2. Chapters 4–9 teach you how to review a paper, section by section.
3. Chapter 10 is for authors receiving reviewers' comments.
4. Chapter 11 covers ethics and pitfalls.
5. The final section gives a ready-to-use checklist and a sample report you can copy.

This is the third book in the series, after *Research Methodology Made Easy* and *Biostatistics Made Easy*. Those books explain how studies are planned and analysed; this one explains how they are judged.

One running example. We will review an imaginary manuscript: *"Laser haemorrhoidoplasty versus Milligan-Morgan haemorrhoidectomy for grade III haemorrhoids: a randomised controlled trial of 80 patients."*

Chapter 1: What Is Peer Review?

Peer review is the evaluation of a research paper by independent experts ("peers") in the same field before it is published. It is the quality-control system of science.

Why it matters

- Filters out flawed, unethical or unoriginal work
- Improves good papers through constructive suggestions
- Helps editors decide what to publish
- Gives readers some confidence that the paper has been checked

What peer review cannot do. Reviewers do not repeat the experiment or see the raw data. They cannot reliably detect deliberate fraud. A peer-reviewed paper can still be wrong; readers must still appraise it critically.

Who is involved

Person	Role
Author	Writes and submits the manuscript; responds to comments
Editor-in-chief	Responsible for the journal's content; makes the final decision
Handling (associate) editor	Manages one manuscript, chooses reviewers, recommends a decision
Reviewer (referee)	Reads the paper and advises the editor; does not make the decision
Statistical reviewer	Some journals add an expert to check methods and analysis

Types of peer review

Type	Who knows whom	Advantage	Disadvantage
Single-blind	Reviewer knows the author; author does not know reviewer	Most common; reviewer can be frank	Possible bias toward famous authors or institutions
Double-blind	Neither knows the other	Reduces bias	Authors can sometimes be guessed

Type	Who knows whom	Advantage	Disadvantage
Open	Both know each other; reports may be published	Transparent, courteous reviews	Reviewers may hold back criticism
Post-publication	Readers comment after publication	Continuous checking	Less formal control

Most Pakistani medical journals, and many international surgical journals, use single- or double-blind review.

> **Remember:** The reviewer advises; the editor decides.

Chapter 2: The Journey of a Manuscript

A manuscript passes through a fixed series of steps. Knowing them removes much of the anxiety of waiting.

1. **Submission** — the author uploads the manuscript, cover letter, ethics approval, conflict-of-interest and authorship forms through the journal's online system.
2. **Technical check** — the editorial office checks format, word count, missing files and the plagiarism (similarity) report.
3. **Desk review by the editor** — the editor decides whether the paper suits the journal and is worth sending for review (Chapter 3). Many papers are rejected here.
4. **Reviewer invitation** — usually two or three reviewers are invited. Finding willing reviewers often causes the longest delay.
5. **Peer review** — reviewers usually get 2–4 weeks to read and send a report.
6. **Editor's decision** — the editor reads the reports and makes a decision.
7. **Revision** — the author revises and replies to each comment; the paper may go back to the reviewers.
8. **Acceptance** — the paper is accepted.
9. **Production** — copy-editing, typesetting, and galley proofs sent to the author for checking.
10. **Publication** — online first, then in a printed issue; a DOI (permanent link) is assigned.

The possible decisions

Decision	Meaning	What the author does
Accept as is	Rare at first submission	Celebrate; check proofs

Decision	Meaning	What the author does
Minor revision	Small changes: wording, a table, a few references	Revise quickly; usually accepted
Major revision	Important problems that can be fixed: missing analysis, unclear methods	Revise carefully; may be reviewed again
Reject and resubmit	Serious problems, but the journal is willing to see a substantially new version	Rewrite thoroughly; treated as new submission
Reject	Fatal flaw, out of scope, or not a priority	Improve and submit to another journal

How long does it take? Very variable. Several weeks to a few months for a first decision is common; the whole process to publication can take several months or longer. Each journal's website usually states its average times.

> **Remember:** "Major revision" is good news — the editor wants the paper if you fix it.

Chapter 3: What Editors Check First (Desk Review)

Busy editors decide in minutes whether a paper goes to reviewers. They usually read the title, abstract, cover letter and a quick look at the methods and tables. A large share of submissions to busy journals is rejected at this stage.

The editor's quick questions

Question	Common reason for desk rejection
Does it fit the journal's scope and readers?	A dental materials study sent to a general surgery journal
Is it new or useful?	Repeats well-known findings with nothing added
Is the design adequate for the question?	Claiming "A is better than B" from a small case series with no comparison group
Is it ethical?	No ethics approval or consent mentioned
Is it original?	High similarity (plagiarism) report; duplicate publication

Question	Common reason for desk rejection
Does it follow the instructions to authors?	Wrong format, word count far over the limit, missing reporting checklist
Is the English understandable?	Language so poor that the science cannot be judged

How authors can pass the desk review

1. Choose a journal whose recent issues contain papers like yours.
2. Write a clear title and structured abstract; many editors decide from these alone.
3. Write a short cover letter: what you found, why it matters to *this* journal's readers, and that it is not under consideration elsewhere.
4. Mention ethics approval, consent and trial registration (for RCTs) clearly in the methods.
5. Attach the correct reporting checklist (CONSORT, STROBE, PRISMA, CARE).
6. Follow the journal's format exactly, including reference style.

Running example. Our laser vs Milligan-Morgan trial would pass the desk review of a surgical or coloproctology journal if it shows ethics approval, trial registration, a CONSORT checklist and a clear primary outcome (e.g. postoperative pain).

> **Remember:** The title, abstract and cover letter are your first and sometimes only chance to impress the editor.

Chapter 4: The Easy Reviewing Method — Three Readings

Do not try to judge everything in one reading. Read the paper three times, each with a different purpose. A complete review of an ordinary clinical paper usually takes a few hours.

Before you start: should I accept the invitation?

- Is the topic within my expertise?
- Can I finish by the deadline?
- Do I have a conflict of interest (a colleague's paper, a competing study, a commercial link)?

If any answer is unfavourable, decline promptly and, if possible, suggest another reviewer.

Reading 1 — the big picture (about 20 minutes)

Read the title, abstract, introduction's last paragraph, figures and tables, and conclusion. Then write one sentence each:

1. What question does the study ask?
2. What did they do?
3. What did they find?
4. Is it important and new?
5. My first impression: sound, fixable, or fatally flawed?

Reading 2 — the detailed check (1–2 hours)

Read every section carefully with a pen or the comment tool. Use the questions in Chapters 5–8. Mark problems as you go and separate them into:

- **Major issues:** affect the validity of the conclusions (wrong design, no control group, wrong statistical test, conclusions not supported by data).
- **Minor issues:** improve clarity but do not change the conclusion (unclear sentence, missing unit, table formatting, typing errors).

Reading 3 — the final judgement (30 minutes)

Re-read your notes. Ask: do the methods and results truly support the conclusion? Are my comments fair, specific and helpful? Remove any comment that is only personal preference. Then write the report (Chapter 9).

The three golden questions of appraisal

Question	Meaning
Are the results **valid**?	Was the study designed and conducted to minimise bias?
What are the **results**?	How big is the effect and how precise (CI)?
Are they **useful**?	Do they apply to real patients and change practice?

> **Remember:** Reading 1 = understand. Reading 2 = examine. Reading 3 = judge fairly.

Chapter 5: Reviewing Title, Abstract, Introduction and Methods

The methods section is the heart of the review. If the methods are weak, nothing in the results can rescue the paper.

Title

- Is it accurate, specific and not exaggerated?
- Does it state the design (e.g. "a randomised controlled trial")?
- Weak: *"Laser is the best treatment for piles."* Better: *"Laser haemorrhoidoplasty versus Milligan-Morgan haemorrhoidectomy for grade III haemorrhoids: a randomised controlled trial."*

Abstract

- Is it structured (objective, methods, results, conclusion)?
- Do numbers in the abstract match those in the results and tables? Mismatches are very common.
- Does the conclusion follow from the results, without overstatement?

Introduction

- Does it explain what is known, what is unknown (the gap) and why this study is needed?
- Are references recent and relevant?
- Does it end with a clear objective or hypothesis?
- Is it short? Long textbook-style introductions should be trimmed.

Methods — the reviewer's checklist

Item	Question to ask	Example problem
Design	Is the design right for the question?	Comparing two treatments without a control group
Setting and dates	Where and when was it done?	Study period not mentioned
Ethics	Ethics approval number and informed consent?	Not stated
Registration	Was an RCT registered before starting?	No trial registration
Participants	Clear inclusion and exclusion criteria?	"Patients with piles" — which grade?
Sample size	Was it calculated, with values and reference?	"80 patients were included" with no justification
Randomisation	How was the sequence generated and concealed?	"Patients were randomly divided" — no method

Item	Question to ask	Example problem
Blinding	Who was blinded? Was outcome assessment blinded?	Surgeon also assessed pain scores
Intervention	Described in enough detail to repeat?	Laser wavelength, power and energy not given
Outcomes	Primary outcome defined in advance, with timing and measuring tool?	"Pain was assessed" — with what scale, on which day?
Follow-up	How long, and how were patients followed?	Two-week follow-up for recurrence
Statistics	Are tests correct for the data type? Software named?	t-test used on skewed pain scores

Running example — what a reviewer notices in the methods

- Sample size of 80: was it calculated for the primary outcome (pain on day 1)? Ask for the calculation.
- Randomisation "by alternate patients" is not true randomisation; it allows selection bias.
- Recurrence was measured at 6 weeks; this is too short for haemorrhoids. Ask for longer follow-up or remove recurrence claims.

> **Remember:** Ask of every method: could another surgeon repeat this study exactly from this description?

Chapter 6: Reviewing Results, Statistics, Tables and Figures

The results should answer the question asked in the methods — no more, no less. A reviewer's job here is mainly to check that the numbers are complete, consistent and correctly analysed.

Results — questions to ask

1. **Patient flow:** how many were screened, enrolled, randomised, lost and analysed? For RCTs, is there a CONSORT flow diagram?
2. **Baseline table (Table 1):** were the groups similar at the start (age, sex, grade of disease)? If not, could this explain the result?
3. **Primary outcome first:** is the main outcome reported clearly, with effect size and 95% CI, not only a p-value?

4. **Missing data:** were dropouts explained? Was analysis by intention-to-treat in an RCT?
5. **Consistency:** do the numbers in the text, tables, figures and abstract agree? Do percentages add up correctly?
6. **Selective reporting:** are all outcomes promised in the methods reported, including negative ones?
7. **Interpretation:** the results section should state findings, not discuss them.

Quick arithmetic checks a reviewer can do

- Recalculate a few percentages: 12 of 40 patients = 30%, not 35%.
- Check that group totals equal the total sample.
- A mean with an SD larger than the mean for a measure that cannot be negative (e.g. hospital stay 3 ± 5 days) suggests skewed data; the median (IQR) should be reported instead.

Common statistical problems

Problem	Why it matters	What to ask
Wrong test for data type	p-value may be invalid	"Pain scores are ordinal; please use Mann-Whitney U and report medians (IQR)."
Only p-values, no effect size	Readers cannot judge clinical importance	"Please give the difference between groups with 95% CI."
Many comparisons, no correction	False positives likely	"Please state the primary outcome and adjust for multiple comparisons."
"No difference" from a small study	Study may be underpowered	"Please report the power or CI and discuss the risk of type II error."
Confounders ignored in observational studies	Results may be biased	"Please adjust for age and diabetes in a multivariate analysis."
Per-protocol analysis only in an RCT	Exaggerates benefit	"Please report intention-to-treat analysis."
"p = 0.000"	Incorrect reporting	"Please report as p < 0.001."

If you are not confident about the statistics, say so honestly in your confidential comments and suggest a statistical review. This is professional, not a weakness.

Tables and figures

- Does each have a clear title and stand alone without the text?
- Are units given? Are abbreviations explained in footnotes?
- Do tables and figures duplicate each other? (The same data should appear only once.)
- Are graphs honest — axes starting at zero where appropriate, no 3-D effects, error bars defined (SD or CI)?
- Are clinical photographs anonymised, with consent for publication?

> **Remember:** Check that the primary outcome, analysed by the correct test, is reported with its effect size and 95% CI.

Chapter 7: Reviewing the Discussion, Conclusion and References

The discussion is where authors most often go beyond their data. The reviewer's task is to keep their claims honest.

A good discussion has five parts

1. The main finding, stated in one or two sentences
2. Comparison with previous studies — agreement and disagreement, with possible reasons
3. Possible explanation (mechanism) of the findings
4. Strengths and **limitations**, honestly stated
5. Implications for practice and future research

Questions to ask

- Does the discussion repeat the results at length? (It should interpret, not repeat.)
- Are important contradictory studies ignored?
- Are limitations real and complete, or only token? (Small sample, single centre, short follow-up, lack of blinding.)
- Do the authors confuse association with causation in an observational study?
- Is "no significant difference" wrongly presented as "equal" or "equally effective"? Equivalence needs a specially designed study.
- Are the findings generalised beyond the patients studied?

Conclusion

- Does it answer the objective directly?
- Is it supported by the primary outcome, not by a secondary or subgroup finding?

- Is the language measured? Words like "proves", "definitely" and "gold standard" are rarely justified by one study.

Running example. Suppose the authors conclude: *"Laser haemorrhoidoplasty is the treatment of choice for all haemorrhoids."* The reviewer notes:

- Only grade III haemorrhoids were studied, so "all haemorrhoids" is an over-generalisation.
- With 6-week follow-up, nothing can be said about long-term recurrence.
- A fairer conclusion: *"In this single-centre trial, laser haemorrhoidoplasty for grade III haemorrhoids produced less pain in the first postoperative week than Milligan-Morgan haemorrhoidectomy. Longer follow-up is needed to compare recurrence."*

References

- Are they relevant, accurate and reasonably recent?
- Do they follow the journal's style (usually Vancouver)?
- Are key studies on the topic missing?
- Is there excessive self-citation, or citation of the reviewer's or editor's own work without reason?
- Spot-check two or three references: do they really say what the authors claim?

> **Remember:** The conclusion must not claim more than the primary outcome, in the patients studied, over the follow-up period.

Chapter 8: Appraising by Study Type

Each study design has its own weak points. Knowing them tells you exactly where to look. Use the matching reporting guideline as your checklist: if the paper follows it, much of your work is done.

Reporting guidelines and appraisal tools

Design	Reporting guideline (for authors)	Risk-of-bias / appraisal tool (for reviewers)
Randomised controlled trial	CONSORT	Cochrane RoB 2; CASP RCT checklist
Cohort / case-control / cross-sectional	STROBE	Newcastle-Ottawa Scale; CASP checklists
Diagnostic accuracy study	STARD	QUADAS-2

Design	Reporting guideline (for authors)	Risk-of-bias / appraisal tool (for reviewers)
Systematic review / meta-analysis	PRISMA	AMSTAR 2
Case report	CARE	CARE checklist
Qualitative study	COREQ / SRQR	CASP qualitative checklist

All of these are free online; the EQUATOR Network website collects the reporting guidelines in one place.

1. Randomised controlled trial — key questions

- Was allocation truly random, and concealed until the patient was enrolled?
- Were groups similar at baseline?
- Were patients, surgeons and outcome assessors blinded where possible?
- Were all randomised patients analysed in their original groups (intention-to-treat)?
- Was follow-up long and complete enough (loss under about 20%)?
- Was the trial registered before starting, and does the primary outcome match the registration?

2. Cohort study

- Were exposed and unexposed groups drawn from the same population?
- Was exposure measured reliably, and the outcome absent at the start?
- Were important confounders measured and adjusted for?
- Was follow-up long enough for the outcome to occur, and complete?

3. Case-control study

- Were cases clearly defined and controls from the same source population?
- Was exposure measured the same way in cases and controls (to avoid recall bias)?
- Were controls matched or confounders adjusted?
- Are results reported as odds ratios with 95% CI?

4. Cross-sectional study

- Was the sample representative of the target population?
- Was the response rate adequate?
- Was a validated questionnaire or tool used?
- Do the authors avoid causal claims? (A snapshot cannot show which came first.)

5. Case series and case reports

- Is the case genuinely new or educational?
- Is there patient consent for publication, and are images anonymised?
- Do authors avoid recommending treatment changes from a single case or an uncontrolled series?

6. Diagnostic accuracy study

- Was the test compared with an appropriate gold standard in all patients?
- Were the index test and gold standard read independently (blinded)?
- Did the patients resemble those in whom the test will be used in practice?
- Are sensitivity, specificity and predictive values reported with 95% CI?

7. Systematic review and meta-analysis

- Was the protocol registered (e.g. PROSPERO)?
- Was the search comprehensive (several databases, no unjustified language limits)?
- Did two reviewers independently select studies and extract data?
- Was the risk of bias of included studies assessed?
- Was heterogeneity (I^2) considered before pooling results?
- Was publication bias assessed (e.g. funnel plot)?

> **Remember:** Match the design to its checklist. RCT → CONSORT/RoB 2; observational → STROBE/Newcastle-Ottawa; diagnostic → STARD/QUADAS-2; review → PRISMA/AMSTAR 2.

Chapter 9: Writing the Review Report

A good report is specific, polite, organised and useful to both the editor and the author. Most journals ask for two parts: comments to the author, and confidential comments to the editor.

Structure of the comments to the author

1. **Summary (3–4 sentences):** what the study did and found, in your own words. This shows the author you understood the paper.
2. **Overall impression (2–3 sentences):** main strengths and the most important weakness.
3. **Major comments (numbered):** problems that affect validity or conclusions, each with a suggested solution.
4. **Minor comments (numbered):** clarity, language, tables, references — with page and line numbers.

Confidential comments to the editor

Give your recommendation and a brief reason. Mention any concerns you do not wish to put to the author: suspected plagiarism, duplicate publication, ethical concerns, or that you could not assess the statistics. Do not state your recommendation (accept/reject) in the comments to the author unless the journal asks you to.

How to write a useful comment

Weak comment	Useful comment
"The methods are poor."	"Randomisation is described as 'alternate allocation'. This is not random and allows selection bias. Please explain, and discuss this as a limitation."
"Statistics are wrong."	"Pain scores (VAS 0–10) are ordinal. Please compare groups with the Mann-Whitney U test and report medians (IQR)."
"Bad English."	"The manuscript would benefit from language editing; for example, page 4, lines 12–15 are difficult to follow."
"Add more references."	"Please consider discussing recent randomised trials comparing laser and conventional haemorrhoidectomy, as these address the same question."

Rules of tone

- Criticise the work, never the authors.
- Be constructive: every problem should come with a suggestion where possible.
- Separate essential changes from optional suggestions ("The authors may wish to consider…").
- Do not ask authors to cite your own papers unless truly essential.
- Do not rewrite the paper for them; point the way.
- Write as you would want to be reviewed.

Choosing a recommendation

Recommendation	When
Accept	Sound and clear, no meaningful changes needed

Recommendation	When
Minor revision	Sound; small clarifications only
Major revision	Valuable question, but important fixable problems
Reject	Fatal flaw (wrong design for the question, serious ethical issue, conclusions unsupported) or not new

> **Remember:** Summary → strengths → major comments → minor comments. Be specific, give page and line numbers, and always suggest a fix.

Chapter 10: For Authors — Responding to Reviewers

A revision request is an invitation to improve your paper and get it published. Most accepted papers went through at least one revision.

When the decision arrives

1. Read the comments once, then put them aside for a day. Strong criticism feels personal at first; it rarely is.
2. Re-read calmly and list every comment in a table.
3. Decide for each: agree and change, partly agree, or politely disagree with evidence.
4. Discuss difficult points with co-authors or a statistician.
5. Note the revision deadline and ask for an extension early if you need one.

The response letter

Start with a short thank-you to the editor and reviewers. Then reply **point by point**: copy each comment, write your response below it, and say exactly where the manuscript was changed (page and line). Highlight changes in the revised manuscript or use track changes, as the journal requests.

Example response

> **Reviewer 1, Comment 3:** "Pain scores are ordinal; the t-test is not appropriate."
>
> **Response:** We thank the reviewer for this important point. We have re-analysed pain scores using the Mann-Whitney U test and now report medians (IQR). The difference remains significant (p = 0.002). Changes are in the Methods (page 6, lines 14–16), Results (page 8, lines 3–9) and Table 2.

When you disagree

Disagreement is acceptable if it is polite and supported by evidence.

> **Response:** We appreciate the reviewer's suggestion to extend follow-up to two years. Unfortunately this is not possible within the present study. We have instead removed claims about recurrence from the Abstract and Conclusion, and added short follow-up as a limitation (page 11, lines 5–8).

Do and don't

Do	Don't
Answer every comment, even small ones	Ignore comments you dislike
Be polite and thankful	Argue, complain or be sarcastic
Show exactly where changes were made	Write "done" without details
Support disagreement with references or data	Say "the reviewer is wrong"
Keep the response and manuscript consistent	Change things not asked for without mentioning them

After rejection

Rejection is common, even for good papers. Use the reviewers' comments to improve the manuscript, then submit it to another suitable journal, formatted to its instructions. Do not submit to two journals at the same time. If you believe the decision was based on a clear factual error, a polite appeal to the editor is possible, but use this rarely.

> **Remember:** Thank, respond point by point, show where you changed it, and disagree only with evidence.

Chapter 11: Ethics of Peer Review, Predatory Journals and Common Pitfalls

Peer review depends on trust. Authors trust reviewers with unpublished work; editors trust reviewers to be fair. The Committee on Publication Ethics (**COPE**) and the International Committee of Medical Journal Editors (**ICMJE**) publish guidance that most journals follow.

A reviewer's ethical duties

- **Confidentiality:** the manuscript is a private document. Do not share, discuss or keep copies after the review. Do not upload it to public AI tools or websites; many journals explicitly forbid this.
- **No misuse of ideas:** never use the authors' data or ideas for your own work before publication.
- **Declare conflicts of interest:** a close colleague, a rival group, a commercial link, or strong personal views. When in doubt, tell the editor.
- **Timeliness:** meet the deadline or inform the editor early.
- **Fairness:** judge the science, not the authors' country, institution, gender or seniority.
- **Do not contact the authors directly** about the manuscript.
- **Report concerns** — suspected plagiarism, fabricated data, duplicate publication, missing ethics approval — confidentially to the editor, without accusing anyone.

Predatory journals

These journals charge publication fees but provide little or no genuine peer review. Publishing in them can harm your reputation and may not be recognised by HEC, PMDC or CPSP.

Warning signs:

- Unsolicited emails flattering you and inviting submission, often outside your field
- Promise of review and publication within days
- Very broad scope ("medicine, engineering and social sciences")
- Fees not stated clearly until after acceptance
- Fake or unverifiable impact factors and indexing claims
- Editorial board members who cannot be verified
- Poor website, spelling errors, no clear address

Check the journal: is it indexed in PubMed/MEDLINE, Scopus or Web of Science? Is it recognised by HEC/PMDC? Is it a member of COPE or listed in the Directory of Open Access Journals (DOAJ)? The "Think. Check. Submit." website has a simple checklist.

Common pitfalls of new reviewers

Pitfall	Better approach
Focusing only on English and typing errors	Put the science first; mention language once in minor comments
Asking for a different study	Judge the study the authors did, not the one you would have done

Pitfall	Better approach
Rejecting because the result is "negative"	A well-done study with no difference is valuable
Vague or harsh comments	Specific, polite, with a suggested fix
Reviewing outside your expertise without saying so	Tell the editor which parts you could not assess
Very long reports repeating the paper	Short summary, then focused numbered comments
Missing the deadline	Accept only what you can finish

> **Remember:** Keep it confidential, declare conflicts, be fair and kind, and never publish in a journal you have not checked.

Ready-to-Use Reviewer's Checklist

- [ ] Topic within my expertise; no conflict of interest; deadline achievable
- [ ] Clear question and objective; study is new or useful
- [ ] Design suits the question
- [ ] Ethics approval, consent and (for RCTs) registration stated
- [ ] Inclusion and exclusion criteria clear
- [ ] Sample size justified
- [ ] Randomisation, concealment and blinding described (RCTs)
- [ ] Intervention described in enough detail to repeat
- [ ] Primary outcome defined in advance, with tool and timing
- [ ] Follow-up long enough and losses explained
- [ ] Correct statistical tests for the data types
- [ ] Effect sizes with 95% CI, not only p-values
- [ ] Numbers consistent across abstract, text, tables and figures
- [ ] Tables and figures clear, not duplicated; images anonymised
- [ ] Discussion compares with literature and states real limitations
- [ ] Conclusion supported by the primary outcome, no over-generalisation
- [ ] References relevant, recent and correctly formatted
- [ ] Correct reporting guideline followed (CONSORT, STROBE, STARD, PRISMA, CARE)
- [ ] No signs of plagiarism, duplicate publication or data concerns

Sample Review Report

Manuscript: "Laser haemorrhoidoplasty versus Milligan-Morgan haemorrhoidectomy for grade III haemorrhoids: a randomised controlled trial."

Comments to the authors

Summary. This single-centre study compares laser haemorrhoidoplasty with Milligan-Morgan haemorrhoidectomy in 80 patients with grade III haemorrhoids. The authors report less postoperative pain, earlier return to work and similar early complications with laser treatment, and conclude that laser is the treatment of choice.

Overall impression. The question is clinically relevant and the manuscript is clearly written. However, the method of randomisation, the statistical analysis of pain scores and the short follow-up limit the strength of the conclusions.

Major comments

1. *Randomisation (Methods, page 5, lines 8–10).* Allocation by alternate patients is not randomisation and allows selection bias. Please describe the allocation method exactly, discuss this as a limitation, and consider describing the study as a quasi-randomised trial.
2. *Sample size (page 5, line 15).* Please give the sample size calculation for the primary outcome, with the values used and their source.
3. *Analysis of pain (page 7, lines 3–6; Table 2).* VAS scores are ordinal and appear skewed. Please use the Mann-Whitney U test and report medians (IQR), with the difference between groups.
4. *Follow-up and recurrence (Results, page 9).* Six weeks is too short to assess recurrence. Please remove recurrence claims or provide longer follow-up.
5. *Conclusion (Abstract and page 12).* "Treatment of choice for all haemorrhoids" is not supported, since only grade III disease was studied. Please limit the conclusion to the population and outcomes studied.

Minor comments

1. Please give the laser wavelength, power and total energy delivered (page 6, line 2).
2. Table 1: please add the ASA grade and duration of symptoms for both groups.
3. Report "p = 0.000" as "p < 0.001" (Table 2).
4. Please add a CONSORT flow diagram.
5. Some recent trials comparing laser and conventional surgery should be discussed.

Confidential comments to the editor

Recommendation: **major revision.** The study addresses a useful question, but the quasi-random allocation is an important weakness that should be clearly acknowledged. I would be glad to see the revised version. I am comfortable assessing the clinical aspects; a statistical reviewer may wish to check the revised analysis.

Glossary

Term	Simple meaning
Allocation concealment	Hiding the next group assignment until the patient is enrolled
Conflict of interest	A link that could influence judgement
COPE	Committee on Publication Ethics
Desk rejection	Rejection by the editor without external review
DOI	Digital Object Identifier — permanent link to an article
Intention-to-treat	Analysing patients in the groups to which they were randomised
Peer review	Evaluation of a manuscript by independent experts
Predatory journal	Fee-charging journal without genuine peer review
Reporting guideline	Checklist of what a paper of a given design must report
Risk of bias	Likelihood that design flaws distort the results

Practice Questions

Choose the single best answer.

1. Who makes the final decision to accept or reject a manuscript? A. The first reviewer B. All reviewers by vote C. The editor D. The statistician E. The corresponding author
2. In which type of peer review do neither authors nor reviewers know each other's identity? A. Single-blind B. Double-blind C. Open D. Post-publication E. Editorial
3. A trial allocates patients to treatment by alternate admission. The main problem is: A. Recall bias B. Selection bias C. Publication bias D. Measurement error E. Type II error
4. The appropriate reporting guideline for a cohort study is: A. CONSORT B. PRISMA C. STROBE D. STARD E. CARE

5. While reviewing, you notice that two paragraphs are identical to a published paper by other authors. You should: A. Reject publicly in the comments to authors B. Email the authors C. Inform the editor confidentially D. Ignore it E. Post it online
6. The best response to a reviewer's comment you disagree with is to: A. Ignore it B. Complain to the editor C. Reply politely with evidence D. Withdraw the paper E. Accept it without thought
7. A sign of a predatory journal is: A. Indexed in MEDLINE B. Member of COPE C. Promise of publication within 3 days D. Clear fee policy E. Verifiable editorial board
8. A study finds "no significant difference" with 30 patients. The reviewer should mainly ask about: A. Plagiarism B. Power and confidence intervals C. Title length D. Reference style E. Font size

Answers

Q	Answer	Why
1	C	Reviewers advise; the editor decides
2	B	Double-blind hides both identities
3	B	Alternate allocation is predictable, so selection can be influenced
4	C	STROBE covers observational studies
5	C	Concerns go confidentially to the editor
6	C	Polite, evidence-based disagreement is acceptable
7	C	Genuine review takes weeks, not days
8	B	Small studies risk type II error; ask for power and CI

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