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OPEN PEER REVIEW

# Assessment of Sperm Characteristics After Laparoscopic Varicocelectomy in Infertile Patients with Recurrent Varicocele: A Quasi-experimental Study

Dinyar Khazaeli, Javad Moavi, Alireza Kheradmand, Sadegh Jafari, Alireza Alishushtari, Sirous Rafiei Asl

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## About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

More about open peer review: brieflands.com/knowledgebase/opr

## Contents

1 **Original submission** Referee 1, Referee 2, Referee 3, Associate Editor, Editor-in-Chief ..... 2
2 **Revision 1** Referee 2, Referee 4, Associate Editor, Editor-in-Chief ..... 4
Authors' reply to reviewers ..... 5
Reviewer and editor comments ..... 8
3 **Revision 2** Editor-in-Chief ..... 9
Authors' reply to reviewers ..... 10
Reviewer and editor comments ..... 11

## 1 Original submission

5 comments · 7 Jun 2025 – 23 Jul 2025

### Referee 1 Reviewer

REJECT 7 Jun 2025

In this study, the authors investigate sperm characteristics after laparoscopic varicocelectomy in infertile patients with recurrent varicocele in a quasi-experimental study. The research has good data accumulation and an interesting research topic, but it seems to need major revisions, especially in Methods and Results (the type of study and the coherence of the content need major revision, especially in Method and Results). I reject the manuscript. I think this text can be reviewed in the Brief Report format.

Major comments
1. Were the inclusion criteria for your study "all patients who had a history of varicocele surgery" and a need for re-surgery?
2. You need to write the type of your study.
3. Since you did not use controls in your study, you should include the phrase "A quasi-experimental study" in your title.
4. Are the values in tables 1 and 2 from the second measurements or the first? Explain.
5. Write the P-values for normality of the variables used in Tables 4, 5, and 6.

Minor comments
1. Write the P-values in the results section of the Abstract.
2. In the introduction section, you have written the phrase "many studies" many times, but only one reference is listed.
3. Write a reference for "WHO 2010."
4. There are some typing errors in the text; for example, in the first paragraph of the Results section, you should write "the mean ±SD age" and so on…
5. Adjust the titles of the tables.
6. Write the statistical tests under the tables.

### Referee 2 Reviewer

MAJOR REVISION 17 Jul 2025

In the introduction, there is insufficient emphasis on the novelty of the current study.
The definition of success for laparoscopic varicocelectomy is not clearly stated in the introduction itself. It is later described in the Methods but should be introduced here, clarifying whether it is based on semen parameters, recurrence rates, pregnancy rates, or a combination.
The introduction lacks discussion of potential confounding factors influencing varicocelectomy outcomes, such as age, baseline semen quality, duration of infertility, and concurrent female factors.
Several prevalence statistics lack recent references.
The design is not explicitly named.
The only exclusion criterion is lack of cooperation during follow-up, and other important factors are not included.
Regarding semen analysis methods, details on quality control measures, staff blinding, or sample handling protocols are missing.
There is no statement about IRCT/ethics committee approval.
There is no mention of the number of patients initially enrolled, how many completed the study, or how many were lost to follow-up.

For sperm count, 1.57 ± 22.21, the SD exceeds the mean.
Statistical tests used for each comparison are not identified in the tables.
Statements of no significant difference must be accompanied by p-values.
The terms low backflow and moderate backflow are used, but operational definitions or scoring criteria are missing in both methods and results.
Outcomes regarding pregnancy rates and time-to-pregnancy improve study quality.
The discussion lacks limitations.
The conclusion is just a restatement of statistical findings.

**Referee 3** Reviewer

MAJOR REVISION 22 Jul 2025

1- Given that the impact of laparoscopic varicocelectomy on seminal fluid parameters has already been investigated in numerous studies, such as "Laparoscopic varicocelectomy in male infertility" and “Potential role of imaging in assessing harmful effects on spermatogenesis in adult testes with varicocele”, the novelty of the current study is unclear. The authors should clearly state what distinguishes their research from prior work.
2- The manuscript contains multiple grammatical errors and unclear sentences throughout, which require careful revision for improved readability and coherence.
3- The stated aim of the study—"this study aimed to identify the factors that predict the success of laparoscopic surgery for recurrent varicocele"—does not align with the title of the article and should be revised for consistency.
4- It seems unreasonable that only a single reference is cited after several lengthy paragraphs, particularly given the abundance of literature available on this subject. A more comprehensive and up-to-date review of the relevant literature is recommended.

**Associate Editor**

MAJOR REVISION 23 Jul 2025

Dear EIC
I believe substantial changes and revisions have been made correctly in the manuscript.

**Editor-in-Chief**

MAJOR REVISION 23 Jul 2025

Dear Authors
According to the reviewers' and associate editor’s comments, your article needs major revision. When revising your manuscript, please consider all issues mentioned in the reviewers' comments carefully: please outline every change made in response to their comments and submit the required files.

2

# Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear editor

We reviewed the article point by point and made the following changes in order.

Reviewers' Comments:

Reviewer 0:

In introduction, there is insufficient emphasis on the novelty for the current study.

The definition of success for laparoscopic varicocelectomy is not clearly stated in the introduction itself. It is later.

described in the Methods but should be introduced here, clarifying whether it is based on semen parameters, recurrence rates, pregnancy rates, or a combination.

the introduction lacks potential confounding factors influencing varicocelectomy outcomes like age, baseline semen quality, duration of infertility, concurrent female factors.

Several prevalence statistics lack recent references. The introduction was completely revised and newer references were substituted for those cited by reviewer.

The design design is not explicitly named.

The only exclusion criterion is lack of cooperation during follow-up, and does not other importa, nt factors.

In case of semen analysis methods, details on quality control measures, staff blinding, or sample handling protocols are missing.

There is no statement about IRCT/ethics committee approval.

There is no mention of the number of patients initially enrolled, how many completed the study, or how many were lost to follow-up. The methods was completely revised.

For sperm count, 1.57 ± 22.21, SD exceeds the mean.

Statistical tests used for each comparison are not identified in the tables.

Stating no significant difference must be mentioned with p-values.

The terms low backflow, moderate backflow, are used, but operational definitions or scoring criteria are missing in both methods and results.

Outcomes regarding pregnancy rates, time-to-pregnancy improves study quality. Corrections made.

The discussion lacks limitations. Corrections made.

he conclusion is just a restatement of statistical findings Corrections made.

Reviewer 1:

In this study, the authors investigate sperm characteristics after laparoscopic varicocelectomy in infertile patients with recurrent varicocele with a quasi-experimental study. The research has good data accumulation and interesting research topic, But, it seems to needs major revisions especially in Methods and Results ( type of study, Coherence  of the content needs major revision especially in Method and Results.). I reject the manuscript. I think this text can be reviewed in the Brief Report format.

Major comments

1. The inclusion criteria for your study were "all patients who had a history of varicocele surgery" and required resurgery? The study inclusion and exclusion criteria were revised.

2. You need to write the type of your study. Study type added.

3. Since you did not use controls in your study, you should include the phrase "A quasi-experimental study" in your title. Title was corrected.

4. The values in tables 1 and 2 are from the second measurements or the first, Explain. Baseline demographic, clinical, and hormonal characteristics were recorded before laparoscopic varicocelectomy (Tables 1 and 2).

5. Write the P-values for normality of the variables used in Tables 4, 5, and 6. Table were corrected.

Minor comments

1. Write the P-values in the results section of Abstract. P-values in the results section of Abstract were written.

2. In the introduction section, you have written the phrase "many studies" many times, but only one reference is listed. The entire introduction has been rewritten.

3. Write a reference for "WHO 2010." Reference was added.

4. There are some typing errors in the text for example in the first paragraph of the Results section you should write "the mean ±SD age" and so on… The results have been completely rewritten.

5. Adjust the title of tables. Titles of tables were corrected.

6. Write the statistical tests under tables. the statistical tests under tables were written.

Reviewer 2:

1- Given that the impact of laparoscopic varicocelectomy on seminal fluid parameters has already been investigated in numerous studies, such as "Laparoscopic varicocelectomy in male infertility" and “Potential role of imaging in assessing harmful effects on spermatogenesis in adult testes with varicocele”, the

novelty of the current study is unclear. The authors should clearly state what distinguishes their research from prior work. The introduction has been rewritten and we have pointed out the novelty of the study.

2- The manuscript contains multiple grammatical errors and unclear sentences throughout, which require careful revision for improved readability and coherence. The text of the article has been rewritten.

3- The stated aim of the study—"this study aimed to identify the factors that predict the success of laparoscopic surgery for recurrent varicocele"—does not align with the title of the article and should be revised for consistency. Corrections made.

4- It seems unreasonable that only a single reference is cited after several lengthy paragraphs, particularly given the abundance of literature available on this subject. A more comprehensive and up-to-date review of the relevant literature is recommended. Corrections made.

## 2 Revision 1

4 comments · 10 Aug 2025 – 16 Aug 2025

### Referee 2 Reviewer

ACCEPT 10 Aug 2025

1- The outcomes of the study (testicular volume) and their measurement methods should be defined in the methodology section.
2- Grading of venous backflow (low, moderate...) must be defined.
3- Provide the full forms of the abbreviations in table 2.
4- Manorvalsalva in table 6 should be corrected.

### Referee 4 Reviewer

ACCEPT 11 Aug 2025

Dear Associate-Editor

I have reviewed the current revised version of the manuscript, and it can be published in the journal.

Best regards.

### Associate Editor

ACCEPT 13 Aug 2025

Dear EIC
According to the reviewer's report, the manuscript is ready for publishing.

### Editor-in-Chief

MINOR REVISION 16 Aug 2025

Dear Authors
Thank you for improving the quality of the article. However, some grammatical problems remain in the manuscript. Please edit it and resubmit.

3

# Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear editor

We reviewed the article point by point and made the following changes in order.

We conducted a thorough review of publications in the Middle East Journal of Rehabilitation and Health Studies. No studies addressing varicocele or post-varicocelectomy semen parameter changes have been published in this journal to date. Thus, our study appears to be the first of its kind within this journal's scope, underscoring both its novelty and relevance.

Reviewers' Comments:

Reviewer 2:

Comment 1: The outcomes of the study (testicular volume) and their measurement methods should be defined in the methodology section.

Response: Thank you for your valuable comment. We have revised the Methods section to include a clear description of testicular volume measurement. Testicular volume was assessed using color Doppler ultrasonography, performed by a single experienced sonographer, ensuring accuracy and consistency.

Comment 2: Grading of venous backflow (low, moderate...) must be defined.

Response: We appreciate this suggestion. In the revised manuscript, we have defined the grading of venous backflow in the Results section as follows: low (<1 second), moderate (1–2 seconds), and high (>2 seconds), based on Doppler ultrasonography findings during and without the Valsalva maneuver.

Comment 3: Have the complete form of abbreviations in table 2.

Response: Thank you for pointing this out. We have now corrected Table 2 by providing the complete forms of all abbreviations as footnotes:

FSH = Follicle-Stimulating Hormone

LH = Luteinizing Hormone

PRL = Prolactin

Comment 4: Manorvalsalva in table 6 be corrected.

Response: We apologize for the typographical error. In Table 6, "Manorvalsalva" has been corrected to "Valsalva maneuver."

## 3 Revision 2

1 comment · 19 Aug 2025

### Editor-in-Chief

ACCEPT 19 Aug 2025

Dear Authors
We are pleased to inform you that your article is accepted for publication in the MEJRHS. We hope to receive other suitable articles from your group.