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OPEN PEER REVIEW

Diagnostic Accuracy of Transvaginal Sonography for Deeply Infiltrating Endometriosis and Pouch of Douglas Obliteration in the Presence or Absence of Ovarian Endometrioma

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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.

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1 Original submission

1 comment · 24 Apr 2022

Editor-in-Chief

MINOR REVISION 24 Apr 2022

Dear authors,
Before starting the review process for your article, it is necessary to clarify the following items:
Given the importance of clarifying “conflict of interest,” the corresponding author should fill out the “ICMJE form” and upload it during the submission process. (The form is available in the “conflict of interest” section of the site: https://brief.land/iranjradiol/knowledgebase/category/tree.html#conflicts_of_interest.html).

References 1, 5, 6, 7, 10, 11, 16, 19, 20, 43 and 44 are old. Please replace them with newer references.

As some authors are faculty members of Tehran University of Medical Sciences or editorial members of IJR, this should be mentioned as a conflict of interest.

For example:
Conflict of Interests: Nahid Sadighi, Behnaz Moradi, Masoumeh Gity, Behnaz Boroujerdirad, Fateme Davaritanha and Reza Daneshvar are faculty members of Tehran University of Medical Sciences.

Regards

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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 in Chief,

As per your recommendations, Old references where removed/replaced. Conflict of Interests section (both in cover letter and in related box in submission webpage) were corrected and COI form was filled out accordingly.

Regards,

Javid Azadbakht, M.D.

2 Revision 1

3 comments · 21 Jun 2022 – 30 Aug 2022

Referee 1 Reviewer

MINOR REVISION 21 Jun 2022

In general, the submitted manuscript lacks sufficient novelty. The statistics are good; however, the tables and the discussion section need revision. The manuscript is accepted with some minor revisions.

Referee 2 Reviewer

MINOR REVISION 20 Aug 2022

Dear Author :
The diagnostic accuracy of TVS has not been evaluated in all degrees of DIE.
Not only did cases with milder forms of DIE undergo laparoscopy, but, as in our tertiary center, some asymptomatic cases also show incidental findings of DIE without ovarian endometrioma on TVS, which could easily be missed even with large plate-like DIE. So it seems that the diagnostic accuracy of TVS was not evaluated in cases similar to those mentioned above in this study.

Editor-in-Chief

MINOR REVISION 30 Aug 2022

Dear authors,
Your article needs Minor Revision.
Regards

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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,

Thanks a lot for reviewing our manuscript entitled, '**The Diagnostic Accuracy of TVS for Deeply Infiltrating Endometriosis and Pouch of Douglas Obliteration in the Presence or Absence of Ovarian Endometrioma**'. We found the points, raised by the reviewers quite helpful and incorporated them in the revised draft (highlighted in yellow). In reply to the invaluable comments, the mentioned points and their corresponding point-by-point descriptions are listed as follows:

Regards,

ASSOCIATE EDITOR:

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1. The idiom of "Prospective Study" must be deleted.

Thank you for your insightful comment. This has been corrected as per your recommendation.

2. Objective: Each acronym such as TVS must be written in full form, firstly.

Thank you for your constructive commentary. This has been corrected accordingly.

3. Method: Prospective must be replaced by cross-sectional.

Thank you very much. It has been corrected.

4. Method: Moreover Kappa must be written diagnostic test assessment measures such as sensitivity, specificity, predictive values, and likelihood ratios in last sentence.

Thank you for your remark. Theses stats were added to the corresponding section of the text.

5. Study population: "Observational" must be deleted.

Thank you. It has been corrected.

6. add some ultrasound and laparaxcopic figures,for article.

Thank you for your accurate comment. We have added some ultrasound pictures of DIE in various pelvic regions.

7. In lines 129-131, it must be specified that these values related to nosography or laparoscopy.

Thank you for your insightful observations. It has been disambiguated, mentioning that these numbers belong to percentages of finding those features in both TVS and laparoscopy.

8. Table 2: The method of presenting the results is vague and not easily understood. Only the agreed numbers and percentages should be written in the parentheses.

Thank you for your righteous concern raised. As all the data show significant ($p< 0.006$) agreement with Kappa coefficient of >0.577 for all sites of involvement in both anterior and posterior compartment, we couldn't remove any figure in the table.

9. Table 3. 95% confidence intervals (CIs) must be reported. Moreover, Kappa must be written in full terms.

Thank you for your righteous observations. As numbers are overkilled in table 2, and table 3 already contain many numbers, for sake of simplicity we did not include the CI

95% ranges, and thus, we did not calculated CI 95% at the first place (with multiple variables investigated, we tried to present compact data in smallest tables possible not to distract the readers from main results).

REVIEWER #1:

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1. In general, the submitted manuscript lacks sufficient novelty. The statistic is good, however, tables and the discussion part need revision.

Dear Reviewer, thank you very much for your kind and informative remark. Considerable and structural changes were made in table2 and some ultrasound pictures were added. Main manuscript body was edited in different sections according to the recommendations from your side and from other reviewers and the associate editor. Kindly consider assessing our manuscript to see if it meets your standards. Thank you very much for your accurate criticism.

2. Line 173 and 174: It seems “APC” and “PPC” have been written reversely.
Line 176: Again, according to the table 3, it seems that “APC” and “PPC” have been written reversely. Line 174-176: It seems that these lines need revision. The comparison of sensitivity, PPV, and specificity should be revised. According to the table 3, NPV of APC is higher than PCC. It has been written reversely in the discussion section. Please rewrite this part.

Respected Reviewer, we profoundly apologize for this mistake and appreciate your helpful remark on that. They were corrected.

3. To sum up, discussion should be written again with more elaboration and more clinical tips.

Dear Reviewer, main manuscript body was edited in different sections according to the recommendations from your side and from other reviewers and the associate editor. Kindly consider assessing our manuscript to see if it meets your standards. Thank you very much for your accurate criticism.

4. Two radiologists have done ultrasound examination. Have their opinions been standardized using Kappa test?

We want to convey our words of appreciation to the reviewer for the constructive commentary been made. We added the following statement to the "Procedures" subsection, under "Methods" for clarification: Discrepancies in results were resolved at consensus.

5. The exact location of the values of KCO and P.Value in lines are not clear. Please replace each number in the correct location in each line.

Dear reviewer, all of the numbers under P-value or Kappa co. in each box belong to the whole set of corresponding data in that box. For instance, in first box, P-value of 0.0001> /n/ 0.0001> shows that p-value for TVS and laparoscopy consistency was 0.0001> for those with OE, not applicable for those without OE, and 0.0001> for all of the cases (with or without OE); likewise, agreement between these two modalities was 0.708/n/0.711, meaning 0.708 for those with OE, not applicable for those without OE,

and 0.711 for all of the cases (with or without OE). As the table is compact a long thread of figures has been broken into 3 lines in each case. For clarification, vertical bars were drawn between p-values and Kappa co along all rows.

REVIEWER #2:

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1. The manuscript is a well disigned article and is accepted but as a radiology journal please ask the authors to send some ultrasound and laparaxcopic figures,for article.

Thank you for your accurate comment. We have added some ultrasound pictures of DIE in various pelvic regions for your consideration. Thank you very much for your accurate criticism.

REVIEWER #3:

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1. The idiom of "Prospective Study" must be deleted.

Thank you for your insightful comment. This has been corrected as per your recommendation.

2. Objective: Each acronym such as TVS must be written in full form, firstly.

Thank you for your constructive commentary. This has been corrected accordingly.

3. Method: Prospective must be replaced by cross-sectional.

Thank you very much. It has been corrected.

4. Method: Moreover Kappa must be written diagnostic test assessment measures such as sensitivity, specificity, predictive values, and likelihood ratios in last sentence.

Thank you for your remark. Theses stats were added to the corresponding section of the text.

5. Study population: "Observational" must be deleted.

Thank you. It has been corrected.

6. In lines 129-131, it must be specified that these values related to nosography or laparoscopy.

Thank you for your insightful observations. It has been disambiguated, mentioning that these numbers belong to percentages of finding those features in both TVS and laparoscopy.

7. Table 2: The method of presenting the results is vague and not easily understood. Only the agreed numbers and percentages should be written in the parentheses.

Considerable and structural changes were made in table 2. Kindly consider assessing our manuscript after these amendments have been made. Thank you very much for your accurate criticism.

8. Table 3. 95% confidence intervals (CIs) must be reported. Moreover, Kappa must be written in full terms.

Thank you for your righteous observations. As numbers are overkilled in table 2, and table 3 already contain many numbers, for sake of simplicity we did not include the CI 95% ranges, and thus, we did not calculated CI 95% at the first place (with multiple variables investigated, we tried to present compact data in smallest tables possible not to distract the readers from main results).

REVIEWER #4:

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1. The diagnostic accuracy of TVS has not evaluated in all degree of DIE .

Not only milder form of DIE underwent laparoscopy , but also as in our tertiary center , some asymptomatic cases shows incidentally findings of DIE without ovarian endometrioma in TVS which could be easily missed even large plate like DIE . So it seems that diagnostic accuracy of TVS were not included in above mentioned similar cases in this study.

Thank you for your insightful observations. Authors agree with the reviewer on this righteous point. As asymptomatic cases of DIE are not going under laparoscopy for this indication, one may collect relevant data from women undergoing exploring laparoscopy or laparoscopy for any other indication, keeping an eye on common sites of DIE plaques deposition. This study did not include asymptomatic cases of DIE and cannot be generalized to those patients. This statement has been added to the study limitation section at the end of the Discussion.

REVIEWER #5:

1.The article is long due to repetitions specially in discussion section. It would be better to be summarized if possible.

Main manuscript body was edited in different sections according to the recommendations from other reviewers and the associate editor. Kindly consider assessing our manuscript after revisions that have been made. Thank you very much for your accurate criticism.

2.It seems that the APC has been replaced by PPC in lines 173 and 174

Thank you for your righteous and accurate commentary. It was corrected accordingly.

3 Revision 2

4 comments · 21 Sep 2022 – 7 Nov 2022

Referee 3 Reviewer — ACCEPT 21 Sep 2022

Currently, this manuscript has been appropriately revised, and it is acceptable in terms of methodology.

Referee 2 Reviewer — ACCEPT 5 Oct 2022

Thank you for adding my comment as one of the limitations of your study in the discussion section.

maryam niknejadi Reviewer — ACCEPT 11 Oct 2022

The manuscript is approved for publication.
Status: Accepted.

Editor-in-Chief — MINOR REVISION 7 Nov 2022

Dear authors,
Your article needs Minor Revision.
Regards

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Revision 3

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.

REVISION NOTE (SECOND SET OF REVISIONS)

Dear Editor,

Thanks a lot for accepting the first round of amendments made to our manuscript entitled, '**The Diagnostic Accuracy of TVS for Deeply Infiltrating Endometriosis and Pouch of Douglas Obliteration in the Presence or Absence of Ovarian Endometrioma**', according to the reviewers' and associate editor's comments. New concerns raised by the associate editor are addressed accordingly and are highlighted in yellow (as well as highlighted revised points in first round).

Regards,

ASSOCIATE EDITOR (2nd Set of Revisions Requested):

1-it is better the authors don't use abbreviation in title [TVS]. Full term is better

We want to convey our words of appreciation to the reviewer for the constructive commentary been made. This has been corrected as per your recommendation.

2-it is better the authors add full term of abbreviations in abstract and paper separately.

Thank you for your comment. Full term of abbreviations were added to the first mention of the abbreviation in both abstract and manuscript body.

3-please correct title: Patients and Methods

Thank you for your accurate commentary. This has been corrected.

4-please correct: homogenous to homogeneous.

Thank you for your accurate comment. This has been corrected as per your recommendation.

5- bowel's seems to be bowels.

Thank you very much. This has been corrected.

6-i think SPSS 22 manufacturer data is IBM not SPSS inc. please search the manufacturer data in IBM site and correct.

Thank you for your righteous observations. Manufacturer's data were added according to the software catalogue in IBM site.

7-in line 17, please change likelihood ratio to likelihood ratios.

Dear Reviewer, thank you very much for your kind and informative remarks. Plural 's' was added to the end of the word.

8- please correct all instances of P<.0.0001 [P<0.0001]

Respected associate editor, we profoundly apologize for this mistake and appreciate your helpful remark on that. They were corrected.

9-please correct: uni- or bilateral

Thank you for your insightful comment. This has been corrected.

10-in table 1, “1<” should be written as “>1”

Thank you for your accurate comment. It has been rectified.

11-in table 1, the part related to Laterality has one P-value. It is questionable for which comparison; this p value has been calculated? We can compare the frequency of OE in left vs. right side in Sono, frequency of OE in left vs. right side in laparoscopy, frequency of OE in right side in sono vs. laparoscopy and frequency of OE in left side in sono vs. laparoscopy [or a mix of all of these comparisons]. Other parts [such as Number] represent comparison between sono and laparoscopy. Please complete and clarify.

Thank you for your constructive commentary. Mentioned p-value indicates the significance of the difference of the laterality (right versus left) reported either in TVS or laparoscopy. The relevant data has been disambiguated accordingly, adding this sentence to the corresponding footnote of the table 1: “***This figure represents significance of the different laterality reported in either TVS or laparoscopy.”*

12-Percents should be mentioned at the right side of numbers in tables. [for example: 37 (33.6)]

Thank you very much. It has been corrected.

13-please add in table 1 that the data has been mentioned as No. (%).

Thank you for your remark. This has been corrected in corresponding footnote.

14-please follow journal format in references. For example, journal names should be abbreviated.

Thank you for your comment. References have been prepared by Endnote software and in accordance to the Endnote style format version put on the IJR website in instruction for authors under Briefland reference style heading. (https://services.brieflands.com/cdn/serve/315da/a3837c57652466f9f909e0a5e46c1a6cd91e3583/Vancouver-BRIEFLAND-2018.zip).

15-table 1 legend seems wrong. First, we don't have any data of size in this table. Second, it seems, better version for the legend is better as: "Comparison of OE Presence, Number and Location and Other Associated Findings in Sonography and Laparoscopy" or something like this./

Thank you. It has been corrected according to your remark.

16-table 2 legend is wrong too. It demonstrates agreement of TVS and laparoscopy in detection of DIE in different subgroups of patients determining based on involved location and compartment, size of OE, presence of OE and …… So denote this point in legend.

Thank you. This has been corrected.

17-please correct P-Values in table 2. For example 0.0001> should be <0.0001.

Thank you for your righteous observations. This has been corrected as per your suggestion.

18-these terms are wrong: 48 ≥ mm and 48< mm. [≤48 mm and >48 mm]

Thank you for your insightful observations. This has been corrected as per your recommendation.

19-this part is unclear: “Considering the prevalence of DIE and the burden it places on patients and health care systems, ….” [May be, better version is: “Regarding the prevalence of DIE and its considerable problems leading to a great burden imposed on patients and health care systems, ….” Or “Regarding the prevalence of DIE and its considerable problems, it imposes a great burden on patients and health care systems. So it has been ….”]

Thank you for your righteous and accurate commentary. This has been corrected accordingly.

4 Revision 3

1 comment · 27 Nov 2022

Editor-in-Chief

ACCEPT 27 Nov 2022

Dear authors,
Your article is acceptable for publication in IJR.
Regards