OPEN PEER REVIEW

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An "Open Peer Review" process is making the details of all review process (including reviewers, associate editors, and EICs comments) as "Public" as it is agreed by EIC, Authors, and reviewers.

Advantages of "Open Peer Review" process

- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
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- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://brieflands.com/briefland/knowledgebase/category/tree.html#opr.html

Health Scope
Article DOI: https://doi.org/10.5812/jhealthscope.120505
Published in: Health Scope: 11(1); e120505

Peer Review Report for "Hepatitis B Virus Infection in Vaccinated Children and Adolescents with HBsAg-positive Parents: Is Routine Vaccination Sufficient?"

Author(s): Alireza Bakhshipour, Manijeh Khalili, Raheleh Rafaiee

Review Timeline:

Submit Date: 18 Oct 2021
Revised Date: 13 Dec 2021
Accepted Date: 24 Dec 2021

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Hossein Ansari: Reviewer | **Revision** (0) — 4 Nov 2021

1-the title should be changed and revised. For example," the relationship between the occurrence of chronic Hepatitis B virus infection in parents and their vaccinated children"
2-If the exposure status is based on the infection in the parents, this study is a retrospective cohort study and the researchers conditioned on exposure and the outcome is the incidence of hepatitis B in vaccinated children. This study is not a Case-Control study not at all.
3- This study has been carried out on two groups. So the sample size calculation should be explained completely based on a study in two groups.
4-in table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval
5-the data for table 2 should be analyzed using logistic regression

Majid Sartipi: Reviewer | **Revision** (0) — 15 Nov 2021

Dear Author

- The study design is a Case-Control study, while the direction of the study is from exposure to the outcome (positive HBsAg test for children). This study is a historical cohort type, not Case- Control)
- Line 56: … an intermediate … instead of a intermediate …
- Line 70: Zahedan University of Medical Sciences
- In Tables 1 and 2, describe the stars (***) next to P Values.
- Line 146 and 149, HBcAb instead of HbcAb (use a unique terminology in the whole text)
- In case-control studies, the Odds Ratio (OR) is used to express the power of the relationship, which has not been calculated and reported in this article. Given that the type of study should be a historical cohort, the Risk Ratio (RR) or (OR) can also be used. (As a suggestion)

Sincerely yours

Seyedeh Fatemeh Mousaviemadi: Reviewer | **Revision** (0) 24 Nov 2021

This is good research that can help us to better management of a large problem in the world and Iran.
Some questions are profound for me.

1)Is it determined whose parents "mother or father" were hepatitis B carriers? Vertical transmission from mother during delivery may be the cause of the positive result.
2)Has injection of HBS Ab effect in the result of HbcAb positive in the case group?

Hossein Ansari: Associate Editor | **Revision** (0) 27 Nov 2021

Reviewer 1:
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Some questions are profound for me.
1)Is it determined whose parents "mother or father" were hepatitis B carriers? Vertical transmission from mother during delivery may be the cause of the positive result.
2)Has injection of HBS Ab effect in the result of HbcAb positive in the case group?
Reviewer 2:

1-the title should be changed and revised. For example," the relationship between the occurrence of chronic Hepatitis B virus infection in parents and their vaccinated children"
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3- This study has been carried out on two groups. So the sample size calculation should be explained completely based on a study in two groups.
4-in table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval
5-the data for table 2 should be analyzed using logistic regression
Reviewer 3:

- The study design is a Case-Control study, while the direction of the study is from exposure to the outcome (positive HBsAg test for children). This study is a historical cohort type, not Case- Control)
- Line 56: … an intermediate … instead of a intermediate …
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- In case-control studies, the Odds Ratio (OR) is used to express the power of the relationship, which has not been calculated and reported in this article. Given that the type of study should be a historical cohort, the Risk Ratio (RR) or (OR) can also be used. (As a suggestion)

Sincerely yours

Ramazan Mirzaei: EIC | **Revision (0)** 27 Nov 2021

Dear Author

According to reviewer comments, the manuscript needs “Major revision”.

Best Regards

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Dear EIC:

Thank you for your email enclosing the reviewers' comments. We have carefully reviewed the comments and have revised the manuscript accordingly. Our responses are given in a point-by-point manner below. Changes to the manuscript are shown in yellow. We hope the revised version is now suitable for publication and look forward to hearing from you in due course.
Sincerely,
Dr. Raheleh Rafaiee

Response to Reviewer:

Thank you for reading our manuscript and reviewing it, which will help us improve it to a better scientific level. Our response follows.

Comment 1. The data for table 2 should be analyzed using logistic regression.

Response: We should apologize for a mistake during this work. Due to the unavailable backup of data, we would ask your permission not to include the abovementioned analysis. The title of table 2 was revised.
The backup data of the student's thesis has been lost due to the student's predicament in the department with issues related to the increase in corona patients, and unfortunately, there is no access to it at the moment. The result of the statistical analysis is preserved in the tables that were prepared in his thesis. Therefore, I request the respected editor to allow the regression not to be added. In the title of the table, instead of "relationship", the word "abundance" was written

Comment 2. The sample size calculation should be explained completely based on a study in two groups.

Response: Thank you for pointing this out. The information about the method used to calculate sample size was added to the method section (Please see page 3). According to previous studies, the prevalence of HBsAg positivity in the Iranian population was about 3.5% (18). Taking into account these prevalence rates, and according to (α =0.05 and P= 85%, d=0.05), the sample size was calculated to be 196 participants, which in the present study is considered to be 220 participants (110 exposed cases and 110 unexposed controls). The sample size was measured using the following formula for sample calculation:

$$\text{Sample size}=\frac{Z_{\frac{\alpha}{2}}^{2}\times P(1-P)}{d^{2}} \Longrightarrow \begin{array}{c} 1.96 \\ ¿ \\ ¿ \\ ¿2\times 0.85(1-0.85) \\ ¿ \\ 0.05 \\ ¿ \\ ¿ \\ ¿2 \\ ¿ \\ ¿ \end{array}$$

Comment 3. In table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval.

Response: We thank the reviewer for this comment. Table 1 was revised accordingly.

OPEN PEER REVIEW

Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Hossein Ansari: Reviewer | **Revision** (1) 11 Dec 2021

1-The data for table 2 should be analyzed using logistic regression.
2-The sample size calculation should be explained completely based on a study in two groups
3-In table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval, you can add 0..5 to cells that value is zero

Hossein Ansari: Associate Editor | **Revision** (1) 11 Dec 2021

1-The data for table 2 should be analyzed using logistic regression.
2-The sample size calculation should be explained completely based on a study in two groups
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Ramazan Mirzaei: EIC | **Revision** (1) 13 Dec 2021

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2-The sample size calculation should be explained completely based on a study in two groups
3-In table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval, you can add 0..5 to cells that value is zero

OPEN PEER REVIEW

Revision (2)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Dear EIC:

Thank you for your email dated 27 DEC 2021 enclosing the reviewers' comments. We have carefully reviewed the comments and have revised the manuscript accordingly. Our responses are given in a point-by-point manner below. Changes to the manuscript are shown in yellow. We hope the revised version is now suitable for publication and look forward to hearing from you in due course.
Sincerely,
Dr. Raheleh Rafaiee

Response to Reviewer 1:

Thank you for reading our manuscript and reviewing it, which will help us improve it to a better scientific level. Our response follows.

Comment 1: The title should be changed and revised. For example," The relationship between the occurrence of chronic Hepatitis B virus infection in parents and their vaccinated children".
Response: As suggested, the title of the manuscript has been revised to more effectively convey the central idea of the manuscript.

Comment 2: If the exposure status is based on the infection in the parents, this study is a retrospective cohort study the researchers are conditioned on exposure and the outcome is the incidence of hepatitis B in vaccinated children. This study is not a Case-Control study not at all.
Response: The reviewer is correct, and we have revised it according to the comment. Please see the methods section.

Comment 3: This study has been carried out in two groups. So the sample size calculation should be explained completely based on a study in two groups.
Response: The information about the method used to calculate sample size was added to the method section (Please see page 3). According to the prevalence rates in several previous studies, the prevalence of HBsAg positivity in the Iranian population was about 3.5%, P= 3.5%, α=0.05, and Power=80, the sample size was calculated to be 110 participants in each group. The sample size was measured using the following formula for sample calculation:

$$\text{Sample size} = \frac{Z_{\frac{\alpha}{2}}^{2} \times P(1-P)}{d^2}$$

Comment 4: In table 1, the authors should mention the name of statistical tests and RR with a 95 confidence interval.
Response: We did our best to provide the needed calculation. It was not possible to estimate relative risk (RR) for HBsAg and HbcAb. Because there was no positive individual in the unexposed group (d_0=0). The estimated relative risk of HBsAb was added to the result section. Please see page 3.
RR compares the risk of an event (disease, injury, risk factor, or death) among one group with the risk among another group. These data are summarized in the two-by-two table so called because it has two rows for the exposure and two columns for the outcome. Here is the general format to calculate RR:

Risk Ratio Calculations

If, after follow up, the following is seen:

Exposure	Disease: Yes	Disease: No	Total
Yes	d_1	h_1	$n_1 = d_1 + h_1$
No	d_0	h_0	$n_0 = d_0 + h_0$
Total	$d=d_1+ d_0$	$h=h_1+ h_0$	$n=d+h$

Then, Simple Cumulative incidence(risk ratio(RR) = $$\frac{\text{risk in exposed}}{\text{risk in unexposed}} = \frac{d_1/n_1}{d_0/n_0}$$

Comment 5: The data for table 2 should be analyzed using logistic regression.
Response: It would have been interesting to explore this aspect. However, in the case of our study, it seems slightly out of scope. Due to unavailable backup of data and time constraints, we would ask your permission not to include the abovementioned analysis. The title of table 2 was revised.

Response to Reviewer 2:
We would like to thank the reviewer for the careful and thorough reading of this manuscript and for the thoughtful comments and constructive suggestions, which help to improve the quality of this manuscript. Our responses are as follows.

Comment 1: Is it determined whose parents "mother or father" were hepatitis B carriers? Vertical transmission from mother during delivery may be the cause of the positive result.
Response: Although we agree that this is an important consideration, we have no documentation about the vertical transmission of HBV infection. However, in our study, the number of HBsAg-positive mothers in the exposed group was low (17.27%) and many of the infected children had infected fathers. It is a potential limitation of the study. To the reviewer's concerns, we have added a brief explanation of the limitations. Please see page 6.

Comment 2: Has injection of HBsAb effect in the result of HbcAb positive in the case group?
Response: The reviewer raised a good question. No, has not. HBsAb is an antibody against hepatitis B Surface Ag and HBcAb is an antibody against hepatitis B Core Ag.

Response to Reviewer 3:

We appreciate you and the reviewers for your precious time in reviewing our paper and providing valuable comments. It was your valuable and insightful comments that led to possible improvements in the current version. Our response follows.

Comment 1: The study design is a Case-Control study, while the direction of the study is from exposure to the outcome (positive HBsAg test for children). This study is a historical cohort type, not Case- Control).
Response: The reviewer is correct, and we have revised it according to the comment. Please see the methods section.

Comment 2: Line 56: … an intermediate … instead of a intermediate …
Response: Revised accordingly.

Comment 3: Line 70: Zahedan University of Medical Sciences.
Response: Revised accordingly.

Comment 4: In Tables 1 and 2, describe the stars (***) next to P Values.
Response: The Tables were revised according to the comment.

Comment 5: Line 146 and 149, HBcAb instead of HbcAb (use a unique terminology in the whole text).
Response: Accordingly, throughout the manuscript, we have revised all abbreviations.

Comment 6: In case-control studies, the Odds Ratio (OR) is used to express the power of the relationship, which has not been calculated and reported in this article. Given that the type of study should be a historical cohort, the Risk Ratio (RR) or (OR) can also be used. (As a suggestion).
Response: There was not possible to calculate RR for HBsAg and HbcAb. Because there was no positive individual in the unexposed group (d_0=0). The estimated relative risk of HbsAb was added to the result section. Please see page 3.

We tried our best to improve the manuscript and made some changes in the manuscript. We appreciate for Editors/Reviewers' warm work earnestly and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

OPEN PEER REVIEW

Revision (2)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

Hossein Ansari: Associate Editor | **Revision** (2) 18 Dec 2021

Dear EIC:
This article has been modified based on the opinions of the reviewers and is suitable for publication in the journal.

Ramazan Mirzaei: EIC | **Revision** (2) 24 Dec 2021

Dear Author

According to reviewer comments, Your article has been accepted for publication
Best Regards