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OPEN PEER REVIEW

Assessment of Carotid Artery Intima-Media Thickness and Lipid Profile in Term Neonates Born to Smoking Mothers

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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 · 2 Jul 2021

Referee 1 Reviewer

MAJOR REVISION 2 Jul 2021

Dear authors
Thank you for your study.
The authors have performed a prospective study in two groups of neonates born to smoking and nonsmoking mothers. They have found significantly decreased HDL cholesterol in the newborns of smoking mothers.
The authors have stated:
1. “Term newborns aged 0-30 days who were born to healthy mothers and having no 66 additional diseases were included in the study as controls.”
A blood sample from a neonate immediately after birth differs from a blood sample at age 30 days. At what age was sampling performed in the two groups?
2. The authors need to start the discussion with the most important finding of their study.
3. The authors need to elaborate on the biochemical reasons for decreased HDL cholesterol in the newborns of smoking mothers in the discussion section.
4. This manuscript does not add any new information to the literature. The authors need to state what this study adds to the currently available information in the literature.
5. The authors need to describe the limitations of the study.

Regards,
Reviewer

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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;

We greatly appreciate your comments and addressed all of them. We thank you for dedicating time to review our manuscript.

Below, please find our point-by-point responses to the comments:

1.

Q: “Term newborns aged 0-30 days who were born to healthy mothers and having no 66 additional diseases were included in the study as controls.”

A: A blood sample from a neonate immediately after birth differs from a blood sample at age 30 days. At what age was sampling performed in the two groups?

Thank you for giving us the opportunity to add the day we had blood sample.’’ *All blood samples were drawn at age of 15-30 days*’’ and this statement was added to material and method section.

2.

Q: The authors need to start the discussion with the most important finding of their study.

A: The first paragraph of discussion has been changed accordingly.

‘’Numerous studies have shown that there is an inverse association between cigarette smoking and HDL-c. As well as its impact on HDL metabolism via altering cholesterol ester transfer protein and the critical enzymes of lipid transport, HDL is susceptible to oxidative modifications by cigarette smoking, making HDL become dysfunctional later in life (16). Although exposure to smoking has been demonstrated to affect serum lipid levels and CAIMT in children there is no study in newborns to assess whether smoking may alter CAIMT and lipid profile in utero. In the present study we investigated and compared lipid levels and carotid artery intima media thickness (CAIMT) among newborns born to smoking and non-smoking mothers and found that mean HDL-c levels were lower in term newborns born to smoking mothers although mean CAIMT were similar between groups. To our knowledge, this is the first study including the youngest population who were

exposed to maternal smoking in utero and our findings showed for the first time that HDL-c levels seem to be influenced by smoking as early as in utero period compared to other parameters related to atherosclerosis.''

3.

Q: The authors need to elaborate on the biochemical reasons for decreased HDL cholesterol in the newborns of smoker mothers in the discussion section.

A: It has been elaborated in the first paragraph of discussion.

''As well as its impact on HDL metabolism via altering cholesterol ester transfer protein and the critical enzymes of lipid transport, HDL is susceptible to oxidative modifications by cigarette smoking, making HDL become dysfunctional later in life (16).''

4.

Q: This manuscript does not add any new information to the literature. The authors need to state what does this study add to the currently available information in the literature.

A: To our knowledge, this is the first study including the youngest population who were exposed to maternal smoking in utero and our findings showed for the first time that HDL-c levels seem to be influenced by smoking as early as in utero period compared to other parameters related to atherosclerosis.

5.

Q: The authors need to describe the limitations of the study.

A: All limitations were stated in the last paragraph of discussion section.

''First is the small number of subjects included. Results of the present study should be confirmed with larger series. Second limitation is the short duration of follow-up. The newborns were evaluated within the first month after delivery. Further studies including longer durations of follow-up is required as to whether CAIMT and blood lipid level of these infants have been influenced in the future. As the third limitation, we searched the smoking status of patients verbally which could involve recall bias risk. Serum cotinine level measurement, a byproduct of

nicotine, have previously been shown to accurately determine the quantity of smoking exposure. ‘’

2 Revision 1

1 comment · 20 Sep 2021

Referee 1 Reviewer

MINOR REVISION 20 Sep 2021

Thank you for your research.
1. PLEASE start your discussion with the most important finding of YOUR STUDY (not others' studies).
Regards,
Reviewer

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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.

Response letter;

ID:112313

Dear editor ;

We would like to thank you for the opportunity to revise our manuscript. We answered all the comments below point-by-point.

Reviewer 1:

1. PLEASE start your discussion with the most important finding of YOUR STUDY (not others' studies).

RESPONSE:

We corrected our discussion and started with the most important findings of our study as your suggestion. We highlighted these paragraphs in the text.

''In this study we investigated and compared lipid levels and carotid artery intima media thickness (CAIMT) among newborns born to smoking and non-smoking mothers and found that mean HDL-c levels were lower in term newborns born to smoking mothers although mean CAIMT were similar between groups. To our knowledge, this is the first study including the youngest population who were exposed to maternal smoking in utero and our findings showed for the first time that HDL-c levels seem to be influenced by smoking as early as in utero period compared to other parameters related to atherosclerosis.

Numerous studies have shown that there is an inverse association between cigarette smoking and HDL-c. As well as its impact on HDL metabolism via altering cholesterol ester transfer protein and the critical enzymes of lipid transport, HDL is susceptible to oxidative modifications by cigarette smoking, making HDL become dysfunctional later in life (16). Although exposure to smoking has been demonstrated to affect serum lipid levels and CAIMT in children, this study showed that smoking may alter lipid profile even in utero.''

3 Revision 2

0 comments

No public comments in this round.