

Author's response to reviews

Title: Dutch women with a low birth weight have an increased risk of myocardial infarction later in life: a case control study

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Author's response to reviews:

Reviewer 1.

Background 'fetal origins of adult disease': we added this to the manuscript

Methods:

1. I assume the additional questionnaire was study-specific. May be this could be clarified.

We added to the text:

Questions elicited information on birth weight, waist and hip circumference and data on the menstrual cycle.

2. second paragraph, 1st sentence: used to [analyze] ? model

Yes, indeed. We completed this sentence.

3. the ethics approval can be moved to the end of the methods section.

We deleted this sentence from the manuscript, since the approval was stated in the original article to which we refer.

Questions:

Were blood samples taken for the purposes of this study (such as blood cholesterol)?

The blood samples were taken to study the classical risk factors for myocardial infarction in young women.

We added this in the text as follows:

An additional standardized questionnaire was sent to all 218 patients and 769 controls from whom also blood samples had been taken for determination of metabolic risk factors (diabetes and hypercholesterolemia).

Was the decision to categorize the birth weight in quintiles made a priori? It may also be useful to report <2000g as a dichotomous variable as this is the traditional (or WHO!) definition of low birth weight.

We agree that the traditional WHO definition is a better cut-off to categorize the birth weight of the children.

We added the calculations and data in the text.

The decision to categorize the birth weights in quintiles was to study whether there was a dose response effect between birth weight of the children and the risk of first myocardial infarction for the mother.

Results:

It may be visually better to put the results from the model in a table.

We added a Table 2 to the manuscript with the odds ratio's according to the birth weight categories.

Discussion:

I feel that the strengths and weaknesses of the study design could be discussed more in-depth. Could there be residual confounding that is not picked up? What kinds of biases could be operating (in addition to recall of birth weight and around 30% missing data).

Every newborn in the Netherlands has a "growth book" in which the birth weight is registered, therefore under- or overestimation of the birth weight is very unlikely.

We added to the discussion that we did miss information on gestational age.

It may be useful to suggest more rigorous research formats to confirm/verify these results.

Considering all the data gathered from different populations and examined with different methodology and regarding that all data are pointing in the same direction, we may skip the suggested sentence: it might otherwise enrage scientists....

Reviewer 2:

A potential weakness of this paper is the lack of data on length at birth as some women may have been

genetically small with both lower birth weights and lengths. Availability of those data would allow for calculation of the ponderal index or BMI at birth. However, I think these data may not be available at this time.

Indeed, these data are not available. Therefore we were not able to calculate BMI at birth in this Dutch population.