Reviewer's report

Title: Modifiable exposures to air pollutants related to asthma phenotypes in the first year of life in children of the EDEN mother-child cohort study

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Reviewer: Denis Zmirou-Navier

Reviewer’s report:

Minor Essential Revisions
While the associations between maternal smoking or exposure to traffic exhaust during pregnancy and asthma phenotypes, as very early outcomes (4 months), are grounded on an appropriate time sequence, the causal link is less evident for 8 or 12 months outcomes, given the strong relationships that exist between in utero and early months exposures.

To back their conclusion, the authors should more extensively justify in the discussion section how they could disentangle in utero and first year exposures. The sentence (line 309-10) "From the statistical point of view, the evolution of asthma phenotypes as well as effect modifiers and potential confounders were taken into account" is far too elusive for this important matter.

Among the points to be clarified as far as this time sequence is concerned is the observation of surprising differences between in utero and first year exposure prevalences to traffic-related air pollution (28 and 21% respectively, line 186-188). This variation may be due to differences in the study sample (not all families accepted the one year interview) or to changes in places of residence. This also should be discussed.

The new sentence added line 300 is unclear: "Another limitation of our study is that no causality could be established but in the cases of prenatal maternal smoking and in utero life exposure to traffic-related air pollution that preceded the asthma outcomes."

The paper still needs extensive idiomatic editing (including for the one French term "Comission Nationale de l'Informatique et des Libertés" where "Commission" must replace Comission.

Discretionary Revisions
Surprisingly, a French paper on this issue of early astma onset is not cited
Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'