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LETTER TO THE EDITOR

Restrictive use of labor induction in absence of proven benefit

Sir,

We read with interest the comments of both Krogh et al. and Pedersen et al. on our article “Offspring school performance at age 12 after induction of labor vs non-intervention at term: a linked cohort study.”¹⁻³


Both Krogh et al. and Pederson et al. point out the important limitation of residual confounding by indication for induction. In our study, pregnancies complicated by the most common reasons for induction at term (i.e., hypertension/pre-eclampsia, gestational diabetes and a small for gestational age fetus) were excluded to limit this indication bias as much as possible with the available data. However, we agree with the authors that part of the included inductions of delivery might be for medical reasons other than could be accounted for in our analyses, as also stated in our article. Nevertheless, most previous research is indicative of a continuously positive effect of gestational age on school performance until full term, supporting our hypothesis that the induction that reduces gestational age potentially affects school performance.

We strongly agree with Krogh et al. that randomized trials with long-term follow-up are needed to further answer this question. Attempts should be made to retrieve long-term outcomes of the large randomized controlled trials on timing of delivery and labor management published in the last two decades, including the ARRIVE, INDEX and SWEPIST trials, potentially using advanced data linkage techniques.⁴⁻⁶ Additionally, we would encourage analysis of long-term school performance outcomes in other observational cohorts, potentially using advanced data-analyses techniques such as sibling analyses and propensity score matching.

Pedersen et al. point out another interesting point: the fact that by excluding major pregnancy complications, women in the non-intervention group can no longer develop these complications—contrary to clinical practice—that may be associated with later school performance, thus potentially creating bias. We agree with the authors that this is a limitation of the observational design of the study. We did not have information on the gestational age at development of the pregnancy complication, and therefore we were not able to exclude women with pregnancy complications selectively. However, we believe that despite this limitation, the results of the study provide valuable insight in the association between induction of labor per se, reducing gestational age, and school performance,

irrespective of the presence of pregnancy complications, that were excluded from both the induction and non-intervention group in the current study. Further research is necessary to better understand the role of different pregnancy complications in this complex equation.

In conclusion, we concur with Krogh et al. and Pederson et al. that the current study has limitations inevitably linked to the observational design of the study, and no definitive conclusions on causality can be drawn from the current study. Nevertheless, we believe that in situations where there is no proven benefit of induction of labor, that is, elective labor inductions, the potentially negative effect of induction of labor—through lower gestational age or otherwise—on school performance urges us to be restrictive in inducing labor without medical indication.

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