The risk of placenta accreta spectrum in women with in vitro fertilization in different populations

We would like to thank Du et al for their interest in our manuscript entitled “In vitro fertilization as an independent risk factor for placenta accreta spectrum.” Their communication outlines results from their program suggesting that in vitro fertilization (IVF) is not an independent risk factor for placenta accreta spectrum (PAS) in that subgroup of women with a previous cesarean delivery (CD). Given the differences in population demographics, practice patterns, history of CD, diagnosis of PAS, methodology of IVF, sample size, and data analysis, this may well be correct for their environment and population, but not representative of any different population.

In our cohort, in the specific subgroup of women with a history of CD (n=5464), PAS was diagnosed in 213 patients (3.8%) regardless of the presence of placenta previa or IVF compared with 5.4% stated in Dr Du’s letter. The IVF rate in this subgroup of patients was also lower in our population (n=57 [1%] vs n=192 [2%]). Furthermore, in our cohort, 2751 (50%) had had at least 2 previous CDs, which we believe significantly distinguishes our patient sample from the 706 (7%) with at least 2 previous CDs mentioned in Dr Du’s letter. Considering the significant role of CD as a major risk factor for PAS, as reflected in our cohort (Table 3 of the original article), this represents a major confounder and essentially negates any attempted direct comparison.

Regarding the type of hysterotomy made at the time of CD (in women with only 1 previous CD), Du et al report a lower risk of PAS in women with a history of a transverse lower uterine incision. They have not provided an appropriately adjusted odds ratio, and thus, it is not clear if they have sufficient power to make such a conclusion. We look forward to seeing this study in print with a full description of the methods and materials.

In conclusion, we agree that further investigation in larger studies will help to clarify the role of IVF as an independent risk factor for PAS. The data presented by Du et al may well be valid for their population, a group of patients that seem to be fundamentally different than ours. Until such time, as we have adequate data with a large enough sample size to allow generic counseling, we suggest that individual patient counseling should be based on the best available evidence from patients with the same demographic and historical background.

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Categorization of cerebral palsy cases: a different perspective

TO THE EDITORS: Nakao et al1 rigorously categorized electronic fetal monitoring (EFM) for 1069 cases of severe cerebral palsy (CP). However, our interpretation of their data is somewhat different than the authors. They concluded that, on admission, approximately 30% of cases were already damaged. Accurately identifying such cases would suggest that better strategies for antepartum assessment and action are needed. Some cases of CP certainly have genetic origin and are not preventable, but other cases of CP might have benefited from earlier intervention. We believe that using our
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We thank Drs Evans and Britt for their Letter to the Editors’ regarding our original paper in the American Journal of Obstetrics & Gynecology.2

They expressed concerns about the potential underestimation of the preventability of cerebral palsy. We agree with their opinion that fetal heart rate (FHR) monitoring has limitations from a preventability point of view. Our conclusion that 16% of cases with R-Hon pattern could be preventable was solely based on intrapartum FHR monitoring. Another assumption was that acute FHR evolution, that is, R-PD, might not be preventable. Of course, there might be many possible ways to reduce cerebral palsy cases.

For antenatal causes (bradycardia and NR-NR), we should emphasize more intensive detection of risk factors for cerebral palsy. Prenatal ultrasound screening for umbilical cord abnormalities and fetal growth restriction or early warming in the outpatient setting for symptoms suggesting hypoxia-ischemia (ie, decreased fetal movement or abdominal pain) might be beneficial for cases with an antenatal onset. These include maternal, fetal, and obstetrical risk factors, as specified in Drs Evans and Britt’s Fetal Reserve Index (FRI).1,3

For intrapartum causes (R-RD), simulation training of an immediate delivery and prompt neonatal resuscitation should be performed. Rapid tocolysis with nitroglycerin could be useful for controlling uterine hypercontraction, which is also included in the FRI. We presumed the 20% R-R class to be because of a prepartum or postpartum etiology, although the etiology was unknown in many cases.2

Regarding a postnatal etiology, which accounted for 20% of our cerebral palsy cases, almost half the cases were because of neonatal sepsis followed by intracranial hemorrhage, hypoglycemia, and other causes.2 Infants with cerebral palsy caused by postnatal complications in our data were delivered with a median umbilical arterial pH of 7.32 (interquartile range [IQR], 7.20–7.36). We believe that the research data of Nakao et al1 are an important contribution, but we suggest that for patients who come into labor, without evidence of existing damage, most CP cases are at least potentially within the control of healthcare providers to maximize the likelihood of good outcomes. What happens after patients arrive and before mothers and babies leave are critical issues amenable to provider influence.

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M.I.E. has patents on the Fetal Reserve Index.

REFERENCES

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