Correspondence

Cesarean Delivery and Perinatal HIV Transmission: Waiting for Definitive Data

Sir—The authors of the recent article by the European Collaborative Study on mother-to-child transmission of HIV [1] conclude that “offering an elective Caesarean section delivery to all HIV-infected women, even in areas where HAART is available, is appropriate clinical management” [1, p. 458]. They also report an apparent protective effect associated with cesarean delivery among women with undetectable HIV RNA levels, stating “elective Caesarean section was associated with a 90% reduction in mother-to-child transmission risk (OR, 0.10; 95% CI, 0.03–0.33)” [1, p. 458]. In a multivariable analysis, shown in table 2 of the article [1], the authors found a statistically significant association between elective cesarean delivery and reduced perinatal transmission (adjusted OR 0.33; 95% CI, 0.11–0.94) among mother-child pairs in which the child was delivered during the HAART era (January 1997–present). Nonetheless, among the 759 mother-child pairs who actually received antenatal HAART, the association between elective cesarean delivery and reduced perinatal transmission failed to reach statistical significance, even in a univariable analysis (unadjusted OR 0.64; 95% CI, 0.08–5.37). Among the 560 women with undetectable HIV viral loads, there did appear to be an association between elective cesarean delivery and reduced transmission in a univariable analysis (unadjusted OR 0.07; 95% CI, 0.02–0.31). The authors performed a bi-variable analysis (no antepartum antiretroviral therapy vs. any) and reported that an elective cesarean delivery was protective, although this did not reach statistical significance (adjusted OR 0.52; 95% CI, 0.14–2.03).

In discussing the 11 infected infants born to women who received HAART, the authors state “elective Caesarean section delivery would have been the best mode of delivery for these infants” [1, p. 461]. Transmission must have occurred in utero for many of these infants, however. New data demonstrate that, during the HAART era, a higher proportion of transmissions occur in utero, as opposed to intrapartum, as observed in the pre–HAART era and in areas without access to HAART [2]. Although there is no way to determine in utero transmission prior to delivery and decide on a delivery route accordingly, cesarean delivery would clearly not have had an impact on those transmissions that occurred during the antepartum period.

Although the authors acknowledge the limitations of the study—particularly the few cases of perinatal transmission in their cohort, which precluded multivariable analysis—they, nonetheless, ultimately recommend cesarean delivery for women with undetectable viral loads and those taking antenatal HAART. I would encourage a more cautious approach to elective cesarean delivery. The increased risk of morbidity associated with cesarean delivery, compared with vaginal delivery, among all women, but particularly among HIV-infected women, may very well outweigh the marginal benefit of elective cesarean delivery. [3, 4] Furthermore, as data accumulate about the risks of trial of labor following cesarean delivery, we may need to perform multiple cesarean deliveries with each subsequent pregnancy among these women, with additional incurred risk. [5] Likewise, there exists the potential for iatrogenic neonatal pulmonary complications, given that amniocentesis to confirm fetal pulmonary maturity before proceeding with elective cesarean delivery is avoided for HIV-infected women.

Given the risk of maternal and neonatal morbidity associated with cesarean delivery, it is perhaps prudent to wait for more definite data before incorporating elective cesarean delivery into the standard of care among women taking HAART and those with undetectable viral loads.

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References


Reply to Cohan

Sir—Dr. Cohan [1] appreciates that, with widespread HAART use, there is uncer-