Use of antiretrovirals in newborns

The recommendation from the US Centers for Disease Control and Prevention (CDC) for a health care worker with exposure of non-intact skin to a small volume of secretions from an HIV-infected person with an undetectable viral load is that he or she should receive 2 antiretroviral drugs for 4 weeks.[1] If the viral load of the HIV-infected person is more than 1500 RNA copies/mL and the volume of secretions is large, the health care worker should receive 3 antiretroviral drugs.[1]

In contrast, the Canadian consensus guidelines for the management of pregnancy, labour and delivery and for postpartum care of HIV-positive women and their offspring[2] recommend that infants born to women who received suboptimal or no antiretroviral therapy during pregnancy should be given only the usual 6 weeks of oral zidovudine plus a single dose of nevirapine. There is an understandable reluctance to prescribe drugs to neonates when there is limited information on efficacy, correct dose and adverse effects in this age group. However, in the section on preconception counselling, the guidelines[2] advocate the use of a wide variety of antiretrovirals during the second and third trimester of pregnancy. They also state, "In women who would benefit from antiretroviral intervention before becoming pregnant, the objective is to achieve stable, maximal suppression of the viral load before conception." Presumably, the antiretrovirals administered for this purpose would be continued throughout the first trimester. I am therefore surprised that the authors are reluctant to recommend at least a 2-week course of combination antiretrovirals for an infant with a significant risk of acquiring HIV. Surely it is worth exposing an infant to a combination of drugs that appears safe but for which we have only limited data if there is any reasonable possibility that the regimen will prevent HIV infection.

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[Five of the authors respond:]

Joan Robinson is correct in pointing out the discrepancy between the Canadian consensus guidelines for the management of pregnancy, labour and delivery and for postpartum care in HIV-positive women and their offspring[1] and the CDC guidelines for prophylaxis after needle-stick exposure.[2] However, the issue of how best to manage infants born to HIV-positive women who probably have incompletely suppressed plasma viral load at term requires further study. We attempted to develop evidence-based guidelines, and currently there are good data supporting the use of zidovudine and nevirapine in the infant; hence our recommendation. Other approaches, such as the use of more extensive combination therapies in the infant, may eventually prove helpful in specific high-risk situations, but at present, in our opinion, there is insufficient safety or efficacy data to warrant such a recommendation.

It is noteworthy that the CDC guidelines for the management of occupational exposure[2] are based largely on expert opinion, with very limited supporting data. It is also noteworthy that, with respect to this issue, the US Public Health Service Task Force guidelines for prevention of perinatal HIV transmission[3] are identical with the Canadian consensus guidelines.[1] With the currently recommended approach, vertical transmission of HIV has been reduced from about 25% to less than 1%.[4] Although it would clearly be desirable to improve further on these results, we believe that an evidence-based approach is imperative in any such efforts, especially given the increasing concerns about the safety of these medications.

More research is needed into the precise role of and optimal approach to the infant component of perinatal prophylaxis for HIV infection. However, until more data become available, we remain comfortable with the current recommendations.

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