Child ’Functionally Cured’ of HIV?

April 30, 2013 By Benjamin Ryan

In March, word spread around the globe about what appeared to be the first documented case of an infant “functionally cured” of HIV. A baby born to an HIV-positive Mississippi woman was put on an atypically aggressive antiretroviral (ARV) treatment shortly after birth. The baby remained in care for 18 months, then disappeared from care for five months; when the baby resurfaced, tests showed that the child maintained an undetectable viral load despite having been off ARVs. The child’s viral load remained undetectable for the 10 months leading up to the researchers’ announcement. (Highly sensitive tests could still detect trace evidence of the virus, hence the term “functional” cure as opposed to a “sterilizing” cure, which is when the body is completely rid of HIV.)

Skeptics questioned whether the baby was ever infected at all—a position that “mystifies” Rowena Johnston, PhD, vice president and director of research at amfAR, The Foundation for AIDS Research, which sponsored the baby’s researchers. The clinicians followed standard procedures when diagnosing the child, so she argues, “if you want to question whether this infant was infected, you have to question whether any infant was infected.”

Others have said this was not the first case of an infant clearing the virus, pointing to published cases from the mid-1990s. However, scientists subsequently questioned the validity of that research, arguing the diagnostic tools at the time were too unreliable and that other cases of viral remission in infants were proved to involve contaminated samples or laboratory error.

The most intense debate has been over whether the child was functionally cured or instead just received an unusually aggressive prophylaxis that prevented a non-established infection from taking hold. This argument partly revolves around an apparent lack of clarity in the scientific community about whether someone must already have an established viral reservoir in order to be considered functionally cured once the virus is cleared. The child was born with a viral load of about 20,000, but scientists do not know if a reservoir was established. All signs indicate that there is now no reservoir.

Robert F. Siliciano, PhD, a professor of medicine at Johns Hopkins, believes that the baby was indeed functionally cured of HIV and that one need not begin with a reservoir to achieve a cure. He projects that the child’s functional cure was made possible because infants are born without memory T-cells, which are a key component of the latent reservoir. Since the baby was

aggressively treated before there was a potential for HIV to infect these cells, the door was opened for a functional cure.

Deborah Persaud, MD, a pediatric infectious disease researcher at Johns Hopkins Children's Center, who is heading up the research studying this child, says the case study is a "proof of principle" that a functional cure may be possible, adding that much more research is needed. Stay tuned…

© 2026 Smart + Strong All Rights Reserved.
http://beta.docker.poz.com/article/mississippi-baby-cure-23871-4240