Update on the ’Mississippi Child,’ Once Thought Cured of HIV

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The clinicians responsible for caring for the “Mississippi Child,” who they once believed was functionally cured of HIV, have published an update on her case in a letter to the New England Journal of Medicine.

In 2013, the team reported on the case of a baby born in 2010 in Mississippi to an HIV-positive mother who received no prenatal care and was diagnosed with the virus during the premature delivery. Because the infant was at high risk of contracting the virus, clinicians began her on an atypically aggressive antiretroviral regimen within 30 hours of birth. The child was kept on the regimen until 18 months of age, when she and her mother were lost to care. When they returned after several months, the clinicians were amazed to find that, despite the child’s having been off treatment for that time, she maintained an undetectable viral load.

Highly sensitive tests could only detect traces of viral genetic material in the child’s body, and it appeared that she did not have any virus capable of replicating. However, in July 2014 her care team announced that, following 28 months without ARVs, the child had experienced a viral rebound at age 4. She was put back on treatment.

In their letter, clinicians state that the child had no other known risk factors for HIV, such as breastfeeding or sexual abuse. When comparing the child’s newly emerged virus to a sample taken from her mother 24 months after giving birth, they found it was 99 percent genetically identical. Additionally, there was very little genetic variability in the girl’s viral population—just 0.1 diversity—which is in line with what researchers expected after so much time had passed since the virus replicated.

The researchers believe the girl was infected during gestation, not during delivery. So, despite the fact that treatment was begun so soon after birth, there was still time for the virus to establish a reservoir.

Meanwhile, the IMPAACT P1115 study aims to treat almost 500 HIV-positive newborns as soon as possible after delivery, either with just ARVs or with ARVs and other immunotherapies. The goal is to learn more about extended periods of viral suppression that take place in the absence of HIV treatment, as well as to work toward a functional cure. Before they complete this research, the clinicians believe the best course of action for treating HIV-positive newborns is to keep them on

ARVs indefinitely.

To read the HIVandHepatitis story, click here.

To read the NEJM letter, click here.
