Second case of apparent HIV 'cure' in a baby followed by reappearance of virus

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Researchers today report the case of a baby, born HIV-positive, who appeared to have been cured of HIV after being given early antiretroviral treatment (ART) to combat the virus, but ultimately exhibited detectable HIV infection.

The case report, published in *The Lancet*, is the second report of apparent viral remission followed by rebound in a baby given early ART treatment, after the case of the 'Mississippi baby' received widespread attention in 2013—14.

A team of researchers, including Professor Mario Clerici at the University of Milan and the Don Gnocchi Foundation in Milan, Italy, report that the baby—born to an HIV-positive mother in December 2009—appeared to have been cured of HIV at age three years, after intensive ART treatment was begun shortly after birth.

Tests to measure the amount of HIV in the child's blood (viral load) indicated that the virus had been eradicated. Notably, even antibodies to HIV had disappeared, showing that the baby was no longer seropositive and, with the agreement of the child's mother, ART was stopped.

However, two weeks later, the child's HIV tests came back positive, leading the researchers to conclude that the viral reservoirs had not been eliminated by ART, despite the virus being undetectable for more than 3 years.
There are differences between this case, and that of the Mississippi baby (as well as the 'Berlin patient' Timothy Ray Brown, thought to be the only adult to be cured of HIV); importantly, the child's immune system continued to show multiple signs of responding to HIV infection even after the viral load became undetectable, which was not the case for either the Mississippi baby or the Berlin patient.

The authors also suggest that the child's high viral load at birth, as well as an infection while in the womb, and low birthweight, may have also precluded long-lasting viral remission.

The case report concludes that, "The availability of many classes of potent antiretroviral drugs has substantially decreased HIV morbidity and mortality, but these drugs cannot eradicate the virus because they do not eliminate viral reservoirs. The search for an HIV cure continues".

More information: [www.thelancet.com/journals/lan ...](14)61405-7/abstract

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