Children with HIV can develop virus that is resistant to their antiretroviral therapy (it will not respond to that drug). This is often due to poor adherence to medications, and once resistance develops, it will not go away. Usually, different medicines can treat resistant virus. We wanted to see how often children with perinatal HIV have resistant virus and to identify risk factors (warning signs) that someone might develop resistant virus.

**WHO PARTICIPATED**

234 youth in AMP participated in this study.

**WHAT WE DID**

Some youth had already had their blood tested to see if they were resistant to any HIV medications. For others, we sent a previous sample of their blood to be tested for drug resistance.

We studied how common antiretroviral drug resistance was among youth in AMP. We also compared youth in AMP to everyone else tested for resistance by the same laboratory (mostly adults). This was to show how common resistance was among all HIV-infected people in the U.S. We also looked to see if we could predict which children developed resistance.

**WHAT WE FOUND**

Antiretroviral resistance was much more common among youth in AMP compared to adults in the U.S. born with HIV.

Some youth had already had their blood tested to see if they were resistant to any HIV medications. For others, we sent a previous sample of their blood to be tested for drug resistance.

Children with higher viral load before or when starting cART were more likely to develop drug resistance later.

Antiretroviral resistance was common among AMP participants, with 3/4 of all youth resistant to at least one drug. Resistance to newer drugs was less common.

The most important risk factor for developing drug resistance was having a higher viral load when starting combination antiretroviral therapy (cART).

**WHAT WE LEARNED**

Antiretroviral resistance is more common among children and youth with perinatal HIV than among adults with HIV. Children with a higher viral load when starting cART are at a higher risk of developing resistance. They should be closely monitored for resistance and encouraged to take their medications.


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