NRTIs Important as Component of Antiretroviral Therapy

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An antiretroviral (ARV) regimen that does not contain a nucleoside reverse transcriptase inhibitor (NRTI) can't control HIV or increase CD4 cells as well as regimens with an NRTI, according to a study published in the *Journal of Antimicrobial Chemotherapy*. The study authors also report that the loss of limb fat was similar between people taking NRTIs versus people not taking NRTIs. The findings could challenge the theory that HIV drug combinations without NRTIs are an effective and less toxic alternative to standard regimens that do employ this class of ARVs.

There has been strong research interest in finding effective ARV combinations that do not depend on NRTIs, which would help positive people avoid the side effects of NRTIs. This is particularly important for less developed nations where the two most common NRTIs are stavudine (Zerit) and zidovudine (found in Retrovir, Combivir and Trizivir); both have been strongly linked to the loss of fat in the limbs, buttocks and face, as well as other side effects.

The French Hippocampe-ANRS 121 was designed to study the efficacy and safety of NRTI-sparing regimens, as well as the amount of limb fat loss from those regimens. Claudine Duvivier, MD, from the Groupe Hospitalier Pitié-Salpétrière, in Paris, and her colleagues from the ANRS 121 study enrolled 117 people living with HIV in sub-Saharan Africa to take either a regimen that contained two NRTIs plus a non-nucleoside reverse transcriptase inhibitor (NNRTI), two NRTIs plus a protease inhibitor (PI)—boosted by low-dose Norvir (ritonavir)—or a regimen with an NNRTI plus a Norvir-boosted PI, but no NRTIs.

The study, originally planned to last 96 weeks, was terminated early. This was because Duvivier and her colleagues found that the NRTI-sparing regimens were less likely to achieve an undetectable viral load or to have CD4 cell increases. Though this is a relatively small study, it is notable that the NRTIs contributed so much to treatment success.

Dr. Duvivier's team also found no difference in limb fat loss between the two groups who completed 48 weeks of treatment. The authors note, however, that because of the relatively small study size, compounded by the fact that patients were allowed to take any NRTIs, it was not possible to determine the individual impact on limb fat loss from any specific NRTI drug.

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