Early therapy for HIV vital

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New insight into the optimal timing of therapy for HIV infection could give patients a better chance of responding to potential cure strategies of the future.

A new study has found antiretroviral therapy administered within four months of HIV infection restores the immune system back to healthy levels. Patients demonstrated stronger and faster recovery of the body's CD4+ T-cells than patients who started therapy later. CD4+ T-cells are specialised immune cells required to fight infections and are depleted during HIV infection.

Published in *The* New England Journal of Medicine, the study, co-authored by Monash University's Associate Professor Edwina Wright with physicians from The University of Texas and the University of California, drew data of 468 patients followed over a 48-month period in the San Diego Primary Infection Cohort.

The study also found that patients with higher counts of CD4+ T-cells at the initiation of therapy demonstrated a stronger recovery of CD4+ T-cell counts than patients who start therapy later.

Associate Professor Wright said further clinical studies were needed to determine whether starting antiretroviral therapy earlier could enhance the chance of patients responding to future cure strategies.

"In the four months after HIV infection the immune system mounts an immune response and starts to recover naturally before it subsequently progressively declines. This observation tells us that there may be a narrow restorative window that could be targeted for recovery through earlier initiation of potent antiretroviral therapy," Associate Professor Wright said.

"Through early therapy, full recovery of the CD4+ T-cell count could make a critical difference to the immune system's overall health and the individuals capacity to directly fight off infections, tumours and disease. This knowledge may also better position them to be successful if any HIV curatives come along."

Associate Professor Wright said even a short deferral of antiretroviral therapy outside of the four-month window could compromise CD4+ T-cell recovery, irrespective of the CD4+ count at the time of treatment initiation.

Associate Professor Wright and colleagues at Monash University are also involved in a major new clinical trial, the START study, designed to look at the benefits of immediate versus deferred antiretroviral treatment in people with HIV infection.

The trial is being conducted in 30 countries and will recruit 4000 HIV-infected men and women. Participants will be followed for up to five years.

More information: www.nejm.org/doi/full/10.1056/NEJMoa1110187

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