Prevention of HIV-1 infection with early antiretroviral therapy


The exciting evidence generated by this paper – that antiretroviral treatment of HIV infection definitively reduces the risk of onward transmission of the virus by 96% – was rightly dubbed Science magazine’s ‘Breakthrough of the Year’ in 2011.12

It has long been known that the probability of sexual transmission of HIV is strongly correlated with concentrations of HIV in blood and genital fluids.3 4 Effective antiretroviral therapy (ART) produces prolonged and sustained suppression of HIV replication (ART) produces prolonged and sustained suppression of HIV replication (ART) produces prolonged and sustained suppression of HIV replication (ART), indicating the prevention benefit of treatment might only be fully realised if ART is given above the CD4 threshold currently recommended by the World Health Organization. ART can now definitively be lauded as a powerful HIV prevention tool, and further prospective work is ongoing to investigate the extent of its effect. But ART can only be afforded to those who are aware of their HIV status, and to only a proportion of those who need it. ‘Treatment as prevention’ can join one of many proven bio-behavioural prevention tools now available to us (HIV testing, safer sex education, condom use, male circumcision). These tools need to be employed in combination: only through ‘combination prevention’ will the epidemic be curtailed.

Competing interests None.

Provenance and peer review Commissioned; internally peer reviewed.

doi:10.1136/jfprhc-2012-100379

References