Treat Early

Position Statement

The life changing impact of ARV treatment in preventing disease progression and delivering near normal life expectancy has been demonstrated all over the world.

In light of this, and growing evidence that untreated HIV may have detrimental effects at all stages of infection, ACON strongly supports access by people diagnosed with HIV to treatment at any stage of HIV infection.

ACON recognises that anxiety in relation to onward transmission is a significant issue for many people with HIV, and that early access to treatment to maintain an undetectable viral load is a significant strategy to ameliorate this anxiety through reducing infectiousness.

Ultimately the decision to take treatment is a personal one, and neither taking treatment nor deferring it should attract judgement or stigma. Choosing to start treatment earlier, or not, is a decision that should be made in consultation with an individual's doctor.

ACON looks forward to seeing structural barriers to treatment access removed, following the announcement on 7 July 2014 by the Federal Health Minister that from 1 July 2015 amendments will be made to the prescribing and dispensing arrangements for Pharmaceutical Benefits Scheme subsidised HIV antiretroviral therapies so that they can be made available in community pharmacies.

Background

Treatment for HIV involves taking a combination of drugs, called ARV treatment or ART, that have a very powerful anti-HIV effect and stops the virus from reproducing.

In 2012 it was estimated that that between 54% and 70% of people who knew they were HIV positive in NSW were receiving ARV treatment. The NSW HIV Strategy has a target of increasing this number to 90%, and this paper looks at the personal benefits that are likely to come with early treatment, and the areas in which more research is required.

The life changing impact of ARV treatment in preventing disease progression and delivering near normal life expectancy has been demonstrated all over the world and there is growing evidence that untreated HIV may have detrimental effects at all stages of infection.

Treatment is beneficial even when initiated later in HIV infection, however later treatment may not repair damage associated with viral replication and immune activation during early stages of infection.

Earlier treatment may prevent the damage associated with HIV replication during early stages and may also reduce the added risk of developing health problems such as cancers, osteoporosis and neurological complications.

The final results of the HPTN 052 study, a large study in low and middle income countries, has shown that early ARV treatment significantly reduced the risk of AIDS and HIV-related illness (4). Lower risk

of AIDS, tuberculosis, symptomatic HIV disease and also non-HIV related illnesses were observed in the early treatment arm of this study.

Cardiovascular disease and cognitive impairment in people with living with HIV have been linked to the increased immune activation and persistent inflammation caused by HIV when it disrupts the lining of the gut (5).

In a study on the effect of HIV on gut damage and immune activation, early initiation of ART was shown to limit these processes, thereby reducing the long term risks of cardiovascular and cognitive damage (5).

A meta-analysis on the immunological and virological benefits post-treatment of a short course of ART during primary HIV infection shows better outcomes for persons receiving early treatment (6). The authors indicate that, treatment during primary HIV infection not only increased CD4 count but also lowered viral load after treatment interruption, compared to the untreated arm (6).

The reduced impact of HIV on the body at this early stage of infection reduces the range of immunological damage that the virus imparts on the body, which should lead to improved health outcomes more generally.

Research by Le et al. (7) has shown that early initiation of ART, within 4 months following acute HIV infection, greatly enhances the likelihood and strength of CD4 cell count recovery. An RCT from the US demonstrated that a 48-week course of ART commenced early after infection affords a slower subsequent decline of CD4 count or the need for ART commencement and affords a lower HIV viral load during follow-up off therapy, compared to no ART (8).

The Setpoint study, also an RCT, which examined early ART initiation, demonstrated improved immunologic outcomes which also delayed the need for subsequent ART (9).

HIV Treatment and Mortality Risk

Recent research(1) shows that people who take effective antiretroviral therapy and are able to sustain an undetectable viral load and a CD4 cell count of over 500 have the same life expectancy as HIV negative people of the same age and sex.

This finding comes from a study involving 3280 people with HIV, 80% of whom were men. 53% of all participants were resident in the USA, 40% in Europe and 5% in Australasia. In this study, even those patients who began treatment later in the course of infection (<200 CD4) had only a slightly increased mortality risk (1.14) compared to the general population, as long as they were able to sustain UVL and CD4 counts above 500.

An earlier study conducted in Denmark(2) among 2267 people with HIV found that those on effective therapy, and without co-infections or co-morbidities such as problematic drug or alcohol use, had the same probability of surviving to 65 years of age as HIV negative people of the same age and sex.

Another Danish study(3) found that among 2921 people with HIV receiving HIV care matched to 10,642 HIV negative controls, smoking had a greater impact on prognosis than HIV-related factors.

HIV positive current smokers had a four times higher risk of mortality than HIV positive non-smokers.

Taken together, these studies underline the importance of increasing access to treatment and to effective health promotion and care programs which support people with HIV to maintain treatment adherence and make healthier life choices.

Undetectable Viral Load and Transmission

Having an undetectable viral load (UVL) greatly reduces the risk of HIV transmission. This was first outlined in the 2008 Swiss Statement and has since been clearly established in large international studies.

HPTN 052 (1) looked at two treatment strategies to prevent the sexual transmission of HIV in heterosexual HIV-serodiscordant couples, and the European PARTNER study investigated HIV transmission in couples where an HIV positive partner was taking effective HIV treatment.

Both studies have shown the effectiveness of antiretroviral treatment (ART) in preventing HIV transmission, with the interim results of the PARTNER study showing that no cases of HIV were transmitted either by anal or vaginal sex where the HIV positive partner had an UVL. Importantly, 40% of PARTNER study participants were gay men (2).

Many men report feelings of fear and anxiety relating to onward transmission of HIV, contributing to one third of participants in the Seroconversion Study reporting abstaining from sex after diagnosis. In addition to the improved health outcomes for PLHIV outlined above having an undetectable viral load, with the associated reduction in transmission risk, can help to ameliorate these fears and anxieties.

Access to ARV

To ensure that the health benefits, outlined in this paper, for PLHIV are realised, action needs to be taken to ensure easier access to HIV antiretroviral treatment. Currently ARV treatments are only available through hospital pharmacies, or limited postal schemes.

The announcement by the Health Minister on July 7 2014 that from 1 July 2015 amendments will be made to the prescribing and dispensing arrangements for Pharmaceutical Benefits Scheme subsidised HIV antiretroviral therapies so that they can be made available in community pharmacies is a welcome commitment.

Despite this, there are still PLHIV who are legally living in Australia with no access to subsidised ART's through the PBS or alternative funding arrangements. These groups include: international students, people on working visas, and partners of Australian citizens.

Other international jurisdictions including the UK, Portugal, Canada and Brazil have public health funding that ensures free ART's to all PLHIV.

ACON would like to see a similar public health funding model for PLHIV in Australia.

Footnotes:

1 Rodger AJ et al. Mortality in well controlled HIV in the continuous antiretroviral therapy arms of the SMART and ESPRIT trials compared with the general population. AIDS 27: 973-979, doi: 10.1097/QAD.0b013e32835cae9c, 2013
2 Obel N et al. Impact of non-HIV and HIV risk factors on survival in HIV-infected patients on HAART: a population-based nationwide cohort study. PLoS One 6 (7): e22698. Doi:10/1371/journal.pone.0022698, 2011
3 Helleberg M et al. Mortality attributable to smoking among HIV-1-infected individuals: a nationwide population-based cohort study. Clin Infect Dis, online edition. DOI: 10.1093/cid/cis933, 2012
4 Grinsztejn B et al. Effects of early versus delayed initiation of antiretroviral treatment on clinical outcomes in HIV-1 infection: results of from the phase 3 HPTN 052 randomised controlled trial.Lancet Infect Dis 14: 281-90, 2014.
5 Schuetz A et al. Early ART initiation prevents disruption of the mucosal barrier and subsequent T-cell activation. 21st Conference on Retroviruses and Opportunistic Infections, Boston, abstract 77, 2014
6 Chen J et al. Immunological and virological benefits resulted from short-course treatment during primary HIV infection: a meta-analysis. PLoS One 8(12): e82461. doi: 10.1371/journal.pone.0092461, 2013
7 Le T, Wright EJ, Smith DM, He W, Catano G, Okulicz JF, et al. Enhanced CD4+ T-cell recovery with earlier HIV-1 antiretroviral therapy. N Engl J Med. 2013; 368(3): 218-30.
8 Fidler S, Porter K, Ewings F, Frater J, Ramjee G, Cooper D, et al. Short-course antiretroviral therapy in primary HIV infection. N Engl J Med. 2013; 368(3): 207-17
9 Hogan CM, Degruttola V, Sun X, Fiscus SA, Del Rio C, Hare CB, et al. The setpoint study (ACTG A5217): effect of immediate versus deferred antiretroviral therapy on virologic set point in recently HIV-1-infected individuals. J Infect Dis. 2012; 205(1): 87-96

Note: *This paper contains general commentary and does not constitute medical advice. You should discuss your particular circumstances with your medical practitioner*