

## Long-term care of HIV-positive patients in general practice

The advent of anti-retroviral therapy (ART) has revolutionised the treatment of HIV to the extent that a young person living with HIV (PLWH) today, who is adherent to medication, can have a *'near normal life expectancy'*.<sup>1</sup> Therefore, HIV is becoming a chronic disease with an ethnically and culturally diverse population, increasing in age and prevalence.

As age increases, so does the likelihood of multimorbidity. There has also been a very successful move towards increased rates of HIV status disclosure to primary care providers.

This article aims to give confidence and guidance to bring about a more holistic approach to the long-term care of the PLWH.

### EARLY DETECTION

The single most important factor in longevity is early diagnosis.<sup>2</sup> Therefore, GPs need to be proactive in testing patients; even routinely in areas of high prevalence (over 0.2%). In the UK, this includes Birmingham, Brighton, Liverpool, London, and Manchester. Routine testing in these circumstances has been shown to be cost-effective. The existing UK testing guidelines include a reference table of indicative conditions and presentations.<sup>3</sup>

### NON-HIV MORBIDITY

Chronic HIV infection leads to immune dysfunction as well as immunosuppression. The immunosuppression can be reversed, somewhat, with ART, although it is thought that the immune dysfunction remains despite viral suppression. This causes more rapid onset of chronic health conditions than would be 'age appropriate' for PLWH.

### CARDIOVASCULAR DISEASE

HIV is an independent risk factor for cardiovascular disease (CVD).<sup>4</sup> CVD is also the leading cause of non-AIDS, non-infection related deaths in PLWH.<sup>5</sup> Therefore, PLWH need lifestyle advice, QRISK2 scores when aged >40 years, and screening for hypertension, diabetes, and hyperlipidaemia.

Smoking cessation advice and therapy could be beneficial.

### RENAL DISEASE

Expect faster decline to chronic kidney disease (CKD) in PLWH. This may be exacerbated by ART such as tenofovir, atazanavir, or lopinavir. Integrase inhibitors (for example, raltegravir) can cause falsely low eGFR. If in doubt, contact a renal or HIV physician.

### BONE DENSITY

HIV is an additional risk factor for reduced bone mineral density (BMD).<sup>6</sup> It is suggested that a FRAX assessment be carried out on all PLWH aged >50 years. It may be useful to check vitamin D levels and parathyroid hormone as these are commonly low.

Some ART may cause a reduction in BMD. Efavirenz can be associated with reduced vitamin D levels. Liaise with an HIV specialist if concerned.

### RESPIRATORY

PLWH are more susceptible to community-acquired pneumonia, even when treated with ART.<sup>9</sup> Presentation is similar to the HIV-negative population and standard therapy according to local antibiotic guidelines is just as effective. Pneumococcal vaccination is recommended in PLWH due to the increased risk of bacterial pneumonia. Sputum cultures may be useful including tuberculosis (TB) (in addition to chest X-ray), if there is clinical suspicion for TB. COPD and lung cancer are far more common than TB in PLWH in the UK, in part due to a higher prevalence of smoking than in the HIV-negative population.

### MENTAL HEALTH

Diagnosis, stigma, and side effects of medication take their toll, and PLWH are twice as likely to have depression.<sup>10</sup> Depression-anxiety was the most prevalent self-reported comorbidity among PLWH in the Positive Voices survey.<sup>11</sup> GPs should be vigilant for signs, as in any of their patients.

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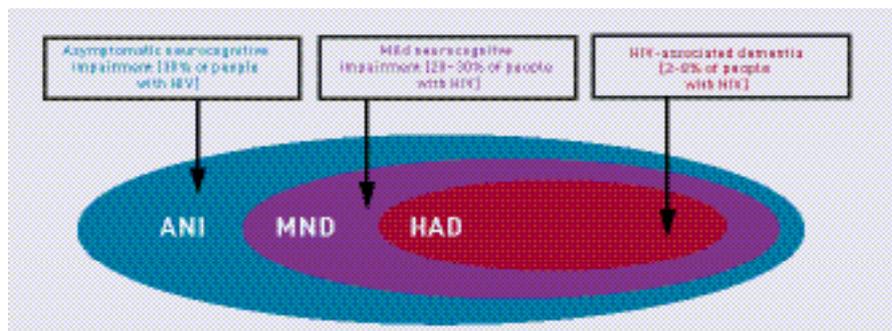


Figure 1. Spectrum of HIV-associated neurocognitive disorder (HAND). Adapted from McArthur *et al* and Antinori *et al*.<sup>7,8</sup>

Efavirenz can cause psychosis, so always check for this in PLWH presenting with sudden changes in mental health. Contact the HIV specialist urgently if this is the case.

### NEUROCOGNITIVE

Neurocognitive decline is common in PLWH, even when on ART, with an undetectable viral load.<sup>12</sup> There is an overlapping of syndromes shown in Figure 1 from asymptomatic neurocognitive impairment (ANI), to mild neurocognitive disorder (MND), to HIV-associated dementia (HAD). All can affect quality of life and adherence to treatment. Prompt referral to neurologist or HIV specialist is key if the patient reports symptoms affecting memory, executive function, or attention.

### HEPATITIS

Regular liver function tests and vigilance regarding symptoms are all that are needed here. Patients co-infected with hepatitis B or hepatitis C virus need secondary care management.

### CANCER SCREENING

HIV reduces the clearance of human papilloma virus (HPV). It is thought that HIV does not speed up the progression of cancer but the British HIV Association (BHIVA) recommends colposcopy on diagnosis, if >25 years, and annual cervical screening in the usual 25–64 years window. There are no firm plans for screening, but be aware that throat and anal cancers are also HPV-mediated.

### MEDICATION INTERACTIONS

Drug interactions with ART are common. However, a regularly updated and easy to use website, <https://www.hiv-druginteractions.org/>, makes this much easier. Any combination of prescribed and over-the-counter drugs can be checked against the patient's current ART within minutes. Patients are also encouraged to use this resource, which is also available as a smartphone app.

Common interactions to be mindful of are as follows. First, stomach acid-reducing medication can reduce the absorption of ART, so advice on timing is needed if prescribing. Second, there have been hundreds of case reports of patients developing Cushing's syndrome due to steroid use with protease inhibitor therapy and cobicistat. This is relevant as protease inhibitors boost the systemic level of steroids regardless of the route given, including topical and intrathecal. Third, some antiretroviral therapy such as efavirenz or rilpivirine can cause long QT syndrome. So, care has to be taken when prescribing concomitant medications with similar side effect profiles. Fourth, there is an increased risk of rhabdomyolysis with concurrent use of statins and protease inhibitors or cobicistat. Rosuvastatin seems to have the lowest risk of this interaction. Fifth, cobicistat and ritonavir can increase the concentration of novel oral anticoagulants (NOACs) such as dabigatran, rivaroxaban, or apixaban. Conversely, NNRTIs such as efavirenz, nevirapine, or etravirine can decrease blood levels. Therefore, some ART medication can increase bleeding risk while others can decrease the effectiveness of NOACs. Sixth, due to hepatic induction of some ART, levonorgestrel for emergency contraception needs to be 3 g dose and even so is less reliable. An IUD is the preferred method of emergency contraception. Ulipristal acetate is not effective if on enzyme-inducing drugs.

### CONCLUSION

HIV is a condition in which GPs can take a more active role in diagnosing and preventing complications. With their expert skills in managing multimorbidity, they are an integral part of the multidisciplinary team caring for PLWH. GPs can further reduce the morbidity associated with chronic HIV infection, thereby improving the quality of life for PLWH. Further reading on HIV in primary care is available at MEDFASH.<sup>13</sup>